On the problem of Syriac “influence” in the transmission of Greek science to the Arabs:

the cases of astronomy, philosophy, and medicine

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Abstract

The answer to the question of why the role of Syriac in transmitting Greek science into Arabic is negligible in astronomy but important in philosophy and medicine lies in the history of Syriac science. There was little imperative to transmit Greek astronomy into Syriac because Babylonian astronomy was dominant and received in Syriac. Conversely, there was an imperative to transmit Greek philosophy, due to the lack of anything comparable in Syriac and a need that arose in the late fifth century. Medicine is an in-between case – there was a well-established Mesopotamian medical system, yet Greek sources were translated and integrated with it. This integration was rejected by Arab translators, the effects of which impacted modern scholarship. This analysis explains why influence varies by field and highlights how the modern study of the Syriac sciences has neglected their Mesopotamian background and focussed on how they received and transmitted Greek sources.

Keywords

Arabic, astronomy, Bardaiṣan, Graeco-Roman, medicine, Mesopotamian, philosophy, Sergius, Syriac

Introduction

In a recent study, Daniel King states:[[1]](#footnote-1)

The role that Syriac literature played in conveying to the Arabs of the Middle Ages the “inheritance” of the Greek sciences has become an increasingly contested field over the last decade or so. The presence of such influence is hardly in doubt. Not so the precise demarcation of its nature and extent, or whether “influence” is even the most appropriate expression for this interaction. Although a degree of ethnic pride is inevitably involved in such discussions, the principle obstacle to a clear-sighted solution remains the simple lack of evidence, so much of Syriac literature having been lost to the twin ravages of time and sword. One can say at least, however, that the importance of Syriac intermediaries was considerably more marked in some scientific and philosophical disciplines than in others: medicine and astronomy respectively offer examples of each. Within the domain of the philosophical curriculum the Syrians had more to offer by way of Aristotle than of Plato, and more of logic that of, say, metaphysics.

King thus raises a number of important questions, some of which I will attempt to address in this paper. I will attempt to explain why it is that the “influence” of Syriac is less marked in the field of astronomy in comparison with the other sciences, particularly medicine and Aristotelean philosophy. I will argue that a much clearer picture emerges when we consider the legacies of *both* the Mesopotamian *and* the Greek sciences in Syriac. Given the problem of the lack of sources, mentioned by King, it will be necessary to look in not so obvious places for our evidence. Having said that, I believe the cumulated effect of the evidence is sufficient to establish a viable hypothesis.

Astronomy

Let us first consider the field of astronomy and attempt to discern why the role of Syriac in transmitting Graeco-Roman astronomy to the Arabs is minimal. Valuable work on astronomy in Syriac sources has been accomplished, both in relation to the sixth and seventh centuries and the Islamic period.[[2]](#footnote-2) But we are concerned here with what had happened before this, in the very earliest and most obscure phase of Syriac literature.[[3]](#footnote-3) In order to do this, therefore, we need to think laterally and consider what may at first appear to be a not so relevant source – namely, Bardaiṣan’s *Book of the Laws of Countries*.

Bardaiṣan lived from 154 to 222/3 CE. A pagan convert to Christianity, he was born in Edessa and raised in the court of Abgar the Great. Towards the end of his life, he left Edessa and travelled. We know he visited Armenia, about which he wrote a history, and that he may have died at the fortress at Ani. His ideas diverged sufficiently from what was considered orthodoxy, so, when trying to learn about the man and his teachings, we are often left to sift through evidence provided by hostile witnesses.[[4]](#footnote-4)

The *Book of the Laws of Countries*, written by Bardaiṣan’s pupil Philippus, recounts a debate between Bardaiṣan and another pupil, Awida, over free will and pre-determinism, which is why it is sometimes referred to as Bardaiṣan’s *Dialogue on Fate*. It is significant for a number of reasons, not least because it could represent the earliest surviving example of original Syriac literature. Thus it gives us an incredible insight into the Syriac cultural milieu prior to its reception of Graeco-Roman literature – an insight that is particularly useful regarding astronomy.[[5]](#footnote-5)

In the context of a discussion of why people sin, we read:[[6]](#footnote-6)

ܒܪܕܝܨܢ ܐܡܪ ܂ ܩܖ̈ܝܢ ܠܟ ܟܬܒ̈ܐ ܕܟ̈ܠܕܝܐ ܕܒܒܒܠ ܆ ܗܢܘܢ ܕܒܗܘܢ ܟܬܝܒ ܡܢܐ ܣܥܖ̈ܝܢ ܟܘ̈ܟܒܐ ܒܡ̈ܘܙܓܝܗܘܢ ܒܒܝܬ ܝ̈ܠܕܐ ܕܒ̈ܢܝܢܫܐ ܆ ܘܟ̈ܬܒܐ ܕܐܓܒ̈ܛܝܐ ܕܒܗܘܢ ܟܬܝܒܝܢ ܙܢܝ̈ܐ ܟܠܗܘܢ ܕܓܕܫܝܢ ܠܒ̈ܢܝ ܐܢܫܐ ܀ ܥܘܝܕܐ ܐܡܪ ܂ ܩܖ̈ܝܢ ܠܝ ܟ̈ܬܒܐ ܕܟܠܕܝܘܬܐ ܂ ܐܠܐ ܠܐ ܝܕܥ ܐܢܐ ܐܝܠܝܢ ܐܢܘܢ ܕܒ̈ܒܠܝܐ ܆ ܘܐܝܠܝܢ ܕܐܓ̈ܒܛܝܐ ܀ ܒܪ ܕܝܨܢ ܐܡܪ ܂ ܗܘܝܘ ܝܘܠܦܢܐ ܕܬܖ̈ܝܗܘܢ ܐܬܖ̈ܘܬܐ ܂ ܥܘܝܕܐ ܐܡܪ ܂ ܝܕܝܥܐ ܨܒܘܬܐ ܕܗܟܢܐ ܗܝ ܀

Bardaiṣan said, “Have you read the books of the Chaldaeans that are in Babylon, in which it is written what influence the stars in their constellations exercise upon the horoscopes of people? And the books of the Egyptians in which are written all the things that befall people?” Awida said, “I have read Chaldaean books, but I do not know which are Babylonian and which are Egyptian.” Bardaiṣan said, “The doctrine of both of them is the same.” Awida said, “It is known that it is so.”

It is clear from this brief exchange that, regardless of whether an astral tradition originated in Babylonia or Egypt, it was the Chaldaeans who were considered to be the most authoritative source and in possession of the legacy of both traditions.[[7]](#footnote-7) Furthermore, both traditions were considered to be identical. This latter point was certainly not true, but Bardaiṣan’s assertion probably reflects the perceptions of his day. It is possible that the relative simplicity of the Babylonian system, compared to the Egyptian system, resulted in the former achieving dominance in the Syriac-speaking milieu.[[8]](#footnote-8)

Of course, by the time of Bardaiṣan, the term *kaldāyāʾ* (ܟܠܕܝܐ) “Chaldaean” had long ceased to refer to an ethnic group living in Babylonia and had come to mean someone skilled in the arts for which that ethnic group was famed, especially magic, divination and the astral sciences. Having said that, two further passages from Bardaiṣan’s dialogue with Awida help us identify the specific tradition being discussed.

The first comes in the middle of a lengthy proof that the stars are not as powerful as often assumed. Following a list of customs and laws, arranged by nationality and region, Bardaiṣan suddenly quotes from an apparently well-known book:[[9]](#footnote-9)

ܟܬܒܐ ܕܟ̈ܠܕܝܐ ܂ ܟܬܝܒ ܒܟܬܒܐ ܕܟ̈ܠܕܝܐ ܂ ܕܐܡܬܝ ܕܣܝܡ ܗܪܡܝܣ ܥܡ ܒܠܬܝ ܒܒܝܬܐ ܕܗܪܡܝܣ ܂ ܥܒܕ ܨܝܖ̈ܐ ܘܓ̈ܠܘܦܐ ܘܛܖ̈ܦܙܝܛܐ ܂ ܒܒܝܬܐ ܕܝܢ ܕܒܠܬܝ ܐܡܬܝ ܕܗܘܝܢ ܂ ܥܒܕܝܢ ܒܣ̈ܡܐ ܘܖ̈ܩܕܐ ܘܙܡܖ̈ܐ ܘܦܘ̈ܐܛܐ ܂

*The Book of the Chaldaeans.* It is written in the *Book of the Chaldaeans* that, when Mercury stands with Venus in the house of Mercury, it makes sculptors and painters and money-changers, but when they are in the house of Venus, they make perfumers and dancers and singers and poets.

Bardaiṣan is presented here as quoting directly from a work called the *Book of the Chaldaeans*, which appears to be some kind of reference work for the astral sciences.[[10]](#footnote-10) Although now lost, the *Book of the Chaldaeans* was evidently a Syriac work. When we compare the planetary terminology used in this excerpt – *harmīs (*ܗܪܡܝܣ) for Mercury and *beltī* (ܒܠܬܝ) for Venus – with later Syriac sources, we observe the same combination of Greek loanword for Mercury and historic Semitic term for Venus.[[11]](#footnote-11) It would appear, therefore, that, already by the second century CE, a learned astral tradition was present in Syriac.

 Of course, this raises the question of which astronomical system was represented by the *Book of the Chaldaeans*. We are able to answer this by means of a description that occurs later in Bardaiṣan’s dialogue:[[12]](#footnote-12)

ܐܡܪ ܐܢܐ ܠܗ ܂ ܠܢ ܐܒܘܢ ܒܪ ܕܝܨܢ ܂ ܗܠܝܢ ܐܦܝܣܬ ܂ ܘܝܕܥܝܢܢ ܕܫܪܝܖ̈ܬܐ ܐܢ̈ܝܢ ܂ ܐܠܐ ܝܕܥ ܐܢܬ ܕܐܡܪܝܢ ܟ̈ܠܕܝܐ ܂ ܕܐܪܥܐ ܡܦܠܓܐ ܗܝ ܠܡ̈ܢܘܬܐ ܫܒܥ ܕܡܬܩܖ̈ܝܢ ܩ̈ܠܡܐ ܂ ܘܫܠܝܛܝܢ ܥܠܝܗܝܢ ܥܠ ܡ̈ܢܘܬܐ ܆ ܚܕ ܚܕ ܡܢ ܗܠܝܢ ܫܒ̈ܝܥܝܐ ܂ ܘܒܚܕ ܚܕ ܡܢܗܘܢ ܆ ܡܢ ܐܬܖ̈ܘܬܐ ܣܓܝ ܨܒܝܢܐ ܕܫܘܠܛܢܗ ܂ ܘܗܘ ܗܢܐ ܡܬܩܪܐ ܢܡܘܣܐ ܂ ܐܡܪ ܠܝ ܂ ܠܘܩܕܡ ܕܥ ܒܪܝ ܦܝܠܝܦܘܣ ܂ ܕܠܦܘܪܣܐ ܗܘ ܕܛܘܥܝܝ ܐܫܟܚܘܗ ܗܕܐ ܡܠܬܐ ܟ̈ܠܕܝܐ ܂ ܐܦܢ ܓܝܪ ܦܠܝܓܐ ܗܝ ܐܪܥܐ ܠܫܒܥ ܡ̈ܢܘܢ ܆ ܐܠܐ ܒܚܕܐ ܚܕܐ ܡܢܗܘܢ ܡܢ ܡ̈ܢܘܬܐ ܂ ܢܡ̈ܘܣܐ ܣ̈ܓܝܐܐ ܕܦܖ̈ܝܫܝܢ ܚܕ ܡܢ ܚܕ ܡܫܬܟܚܝܢ ܂ ܠܐ ܗܘܐ ܓܝܪ ܫܒ̈ܥܐ ܢܡ̈ܘܣܝܢ ܡܫܬܟܚܝܢ ܒܥܠܡܐ ܠܡܢܝܢܐ ܕܫܒܥܐ ܟܘܟ̈ܒܝܢ ܂ ܘܐܦܠܐ ܬܖ̈ܥܣܪ ܠܡܢܝܢܐ ܕܡ̈ܠܘܫܐ ܂ ܘܐܦ ܠܐ ܬܠܬܝܢ ܘܫ̈ܬܐ ܠܡܢܝܢܐ ܕܕܩ̈ܢܣܐ ܂

I said to him, “O father Bardaiṣan, you have convinced us of these things and we know that they are true. But you know that the Chaldaeans say that the earth is divided into seven parts that are called climes, and that each one of these Seven rules over the parts, and in each of the regions the will of his government rules and this is called law?” He said to me, “First, know, my son Philippus, that the Chaldaeans have invented this doctrine to bolster up their fallacy. For even if the earth is divided into seven parts, yet in each one of the parts many laws are found that differ from one another. For we do not find seven laws in the world according to the number of the Seven stars, nor Twelve according to the number of the signs of the Zodiac, nor thirty-six according to the number of the decanal stars.”

References to the Seven and the Twelve are not distinctive enough to help us. But a distinctive and important feature of this passage is its use of the term *malwāšāʾ* (ܡܠܘܫܐ) “sign of the Zodiac” (compare also Mandaic **maluaša**), which is a loanword that probably derives from Akkadian mul *lumāšu*.[[13]](#footnote-13)

The reference to the thirty-six decans is also significant. We should resist the urge to identify a link with the ancient Egyptian notion of decans, and instead see this as a reflex of the ancient Mesopotamian tradition of “Astrolabes” or “Three Stars Each” Texts. This tradition, which probably originated in Mesopotamia in the second millennium BCE, relates to an ideal rather than astronomically correct twelve-month year, with each month being assigned three stars. Once again, the simple or ideal nature of this scheme appears to underlie its appeal and hence longevity.[[14]](#footnote-14)

The *Book of the Chaldaeans*, therefore, was probably a Mesopotamian astral text that preserved in Syriac a body of tradition that had been transmitted from Akkadian. This should not surprise us, given that a similar phenomenon has been observed in respect of the other two major Aramaic literary dialects of Late Antiquity, i.e. in both Mandaic and Jewish Aramaic texts.[[15]](#footnote-15) Thus Jonathan Ben-Dov states, in the context of his discussion of Aramaic cultural mediation in the transmission of Babylonian astronomy to the Jews in Antiquity:[[16]](#footnote-16)

The “Aramaic hypothesis” is well accepted among scholars of apocalypticism, who assume that Babylonian science books existed in Aramaic prior to their appearance in Judaea... Aramaic mediation has not only been assumed by scholars of apocalypticism. The renowned Assyriologist Leo Oppenheim also held that the Arameans facilitated the spread of Mesopotamian knowledge – especially astronomy and divination… An important role must also be assigned to Aramaic in the transmission of Mesopotamian astronomy and divination to India through the auspices of the Persian Empire, although the background of this transmission is still obscure.

Given this wider context and the statements of Bardaiṣan and his students about the dominance of the Chaldaeans in the astral sciences, it seems reasonable to conclude that, in the first centuries of the Common Era, there was very little need for Syrians to look west for astral sources. The Syriac cultural milieu was in possession of what was considered to be the very best astral sciences, and it appears that these were transmitted directly from Akkadian into several varieties of Aramaic, including Syriac.

The cultural and economic imperatives that could have made looking west for astral knowledge were simply lacking in Bardaiṣan’s day – culturally, there was no need on account of a millennia-old, readily understandable body of tradition, while, economically, the Chaldaeans had the prized reputation, so a foreign product would probably have been considered inferior.[[17]](#footnote-17) Thus, when later Arabic writers engaged with Greek astronomical sources, they would have found comparatively little in Syriac.

Philosophy

When we turn to the field of philosophy, however, we find that the cultural and economic imperatives that were lacking for astronomy were very much present. While there was a millennia-old Wisdom tradition in Mesopotamia, comprising narratives, lengthy poems and lists of proverbs, there was nothing comparable to the Aristotelean philosophical system. This cultural deficit was all the more significant because of the importance of Aristotelianism for the great theological debates of the first few Christian centuries and especially for the Chalcedonians.[[18]](#footnote-18)

Up until the Council of Chalcedon (451 CE), such debates raged in Greek, which was the common tongue across Christendom. With the reigns of Justin I (r. 518-527 CE) and Justinian I (527-565 CE), however, the new imperial policy of enforcing Chalcedon on the eastern churches hastened the schism between Chalcedonians and non-Chalcedonians.[[19]](#footnote-19) This, in turn, appears to have prompted the latter increasingly to choose to reinforce their theological distinctiveness by using a vernacular rather than Greek, which was the language of Chalcedonian orthodoxy. It is not a coincidence, therefore, that the late fifth and early sixth centuries witnessed a dramatic rise in Syriac scholarship, and the first translations of Aristotle from Greek into Syriac by Sergius of Resh ʿAina (d. 536 CE).[[20]](#footnote-20)

Educated at Alexandria, and appointed *archiatros* of Resh ʿAina, Sergius had a remarkable life and career as a priest, theologian, physician and diplomat. His role in the theological controversies of his day is itself controversial, and his death in Constantinople, while returning from a mission to Rome to secure the support of Pope Agapetus against the Monophysites, was seen by his enemies as God’s retribution for his treachery. He is said by Bar Hebraeus to have been the first to translate Greek scientific and philosophical works into Syriac, perhaps even making a systematic attempt to translate the entire Alexandrian curriculum.[[21]](#footnote-21)

Sergius considered Aristotle to be the foundation of all the sciences. For example, in his introductory work on the Purpose of Aristotle’s Categories, Sergius wrote the following to his colleague Theodore:[[22]](#footnote-22)

ܟܕ ܗܟܝܠ ܡܕܡ ܡܕܡ ܡܢ ܡܟܬܒܢ̈ܘܬܗ ܕܓܠܝܢܘܣ ܐܣܝܐ ܡܦܫܩܝܢ ܗܘܝܢ ܡܢ ܡܡܠܠܐ ܕܝܘܢ̈ܝܐ ܠܒܪܬ ܩܠܐ ܕܣܘܖ̈ܝܝܐ... ܫܐܠܬܢܝ ܕܡܢ ܐܝܟܐ ܟܝ ܢܣܒ ܠܗ ܓܒܪܐ ܗܢܐ ܥܠܬܐ ܘܫܘܪܝܐ ܕܪܕܝܘܬܐ ܂ ܘܩܢܐ ܡܠܘܐܐ ܕܐܝܟ ܗܢܐ ܡܢ ܢܦܫܗ ܐܘ ܡܢ ܐܢܫ ܐܚܪܝܢ ܡܢ ܡܟܬܒܢ̈ܐ ܕܩܕܡܘܗܝ ܂ ܐܢܐ ܕܝܢ ܠܘܬ ܗܠܝܢ ܦܢܝܬ ܦܬܓܡܐ ܠܪܚܡܬ ܝܘܠܦܢܐ ܕܒܟ ܕܪܫܐ ܕܫܘܪܝܐ ܘܥܠܬܐ ܕܟܠܗ ܪܕܝܘܬܐ ܐܪܝܣܛܘܛܗܠܝܣ ܗܘܐ ܂ ܠܘ ܒܠܚܘܕ ܠܓܠܝܢܘܣ ܘܠܐ ܚܖ̈ܢܐ ܚܒܖ̈ܘܗܝ ܐܣܘ̈ܬܐ ܐܠܐ ܘܐܦ ܠܟܠܗܘܢ ܡܟܬܒܢ̈ܐ ܘܦܝܠܣ̈ܘܦܐ ܡܫܡܗ̈ܐ ܕܗܘܘ ܡܢ ܒܬܪܗ ܂

When, therefore, we were translating various books of the physician Galen from Greek into Syriac…[[23]](#footnote-23) you asked me, “From where indeed did this man receive the means[[24]](#footnote-24) and beginning of education? And did he acquire an abundance such as this from himself or from another man – from writers who were before him?” And I, regarding these (words), replied, for the love of learning that is in you, “The chief of the beginning and means of all education was Aristotle, not only for Galen and his other fellow doctors, but also for all renowned writers and philosophers who were after him.”

There was, therefore, a clear cultural imperative for the works of Aristotle to be translated from Greek into Syriac, particularly in the turbulent times in which Sergius lived and worked.

In addition to this obvious cultural imperative, there was clearly an accompanying economic imperative. Sergius himself was apparently well paid for his translations,[[25]](#footnote-25) which probably partly explains this later accusation that was levelled at him by Pseudo-Zachariah: “and he was avaricious in respect of the love of money” (ܝܥܢ ܗܘܐ ܕܝܢ ܒܪܚܡܬ ܟܣܦܐ).[[26]](#footnote-26)

In contrast to what we observed in respect of astronomy, therefore, there were powerful cultural and hence economic imperatives that necessitated the translation of Aristotelian philosophy from Greek into Syriac. This, in turn, enabled Syriac engagement with Aristotle to play a larger role, in comparison with astronomy, in subsequent Arabic scholarship. I think this, in many ways, already explains King’s main observation (quoted in the introduction to this paper), but it still leaves the question of medicine, to which we now turn.

Medicine

I would argue that, although King is correct to classify Syriac medical translations alongside Aristotelian philosophy in terms of their influence on subsequent Arabic scholarship, the entire Syriac medical tradition actually represents an “in between” case, sharing important features with both astronomy and philosophy.

 In order to demonstrate this, we may begin by returning to the account of Bardaiṣan’s dialogue, which opens with the following statement that sets the scene:[[27]](#footnote-27)

ܡܢ ܩܕܡ ܝܘܡ̈ܬܐ ܥܠܝܢ ܗܘܝܢ ܠܡܣܥܪ ܠܫܡܫܓܪܡ ܐܚܘܢ ܂ ܘܐܬܐ ܐܫܟܚܢ ܬܡܢ ܒܪܕܝܨܢ ܂ ܘܟܕ ܓܫܗ ܘܚܙܐ ܕܫܦܝܪ ܥܒܝܕ ܫܐܠܢ...

Recently, we had gone to visit our brother Shemashgram, and Bardaiṣan came and found us there. And after he (i.e. Bardaiṣan) had examined him (i.e. Shemashgram) and seen that he was faring well, he asked us…

We are thus told that a group of believers went “to visit” Shemashgram. The verb used here is from the root S-ʿ-R (ܣܥܪ), which is often used in the sense of “to care for, look after, heal.” The context makes it clear that this is indeed a medical visit, as the first thing that Bardaiṣan does when he arrives is to examine Shemashgram – i.e. G-Š (ܓܫ) “to grope,” which can refer to a physical examination by means of touch – and to establish his state of health. This is, in itself, very significant, especially for those interested in the history of healthcare in the near east in antiquity and late antiquity – perhaps the earliest piece of Syriac literature opens with an account of Christian ministers practising medicine, a fact that appears to have gone unnoticed in previous analyses of this text.

 Given this, we are left with an important question: Which medical system was Bardaiṣan using? While there is nothing in the rest of his dialogue that makes this clear, the answer seems obvious: We can safely assume, and admittedly this is an assumption, that the origins of his medical system were the same as the origins of his astronomical system – indeed, there is no good reason to assume otherwise. The most likely scenario is that Bardaiṣan was using the millennia-old near eastern medical tradition that consisted of herbal remedies, exorcisms and prayers. In a recent study of ancient near eastern medicine, Barbara Böck summarises this system as follows:[[28]](#footnote-28)

One of the characteristic features of Ancient Babylonian medicine is its holistic approach to disease, which could be circumscribed as encompassing healing and curing. In a broad sense healing addresses the wellbeing of a patient in religious, and consequently, social and psychological terms, while curing refers to the actual treatment and removal of an illness… Ancient Babylonians healed and cured the body and soul with prayers, exorcism and the administration of medicinal substances, which they knew to influence certain functions of the body.

Moving forward around two millennia, the Syriac *Book of Medicines* displays a remarkably similar approach, with passages of herbal remedies interspersed with magical passages. There is no reason, therefore, to suppose that the late-antique near east would have witnessed anything drastically different to the ancient and medieval near east.

 Having said that, there is one enormous caveat to this proposition – namely, the introduction of Graeco-Roman medicine into the near east, particularly with the translations of Sergius in the sixth century CE. As I have discussed elsewhere, this resulted in a potential clash between two competing systems, both of which were very strong in terms of their cultural and economic imperatives.[[29]](#footnote-29) On the one hand, there was the millennia-old indigenous near eastern medical system, which was practical and based on empiricism. On the other hand, there was the “new science,” i.e. Graeco-Roman humoral medicine, which was highly theoretical and came complete with an accompanying philosophical system. Rather than the Graeco-Roman system replacing the indigenous near eastern system, however, it appears that the two were merged together. The Syriac *Book of Medicines*, with its numerous quotations from Galen interspersed with indigenous herbal remedies, is the perfect example of this accommodation between the two systems.[[30]](#footnote-30)

 The Syriac medical tradition represents, therefore, a combination of what was observed in respect of astronomy and Aristotelian philosophy. On the one hand, it shares with astronomy the foundation of a highly-valued, millennia-old near eastern tradition. But, on the other hand, it shares with Aristotelian philosophy the prestige associated with the incorporation of a highly theoretical, all-encompassing system of thought.

The difference between medicine and philosophy, of course, which would have necessitated the persistence of the near eastern element, is the empirical nature of near eastern medicine – indeed, the Syriac medical recipes are often accompanied by statements such as “another (remedy) that is proved by experience and is useful” (ܐܚܪܢܐ ܕܡܢܣܝ ܘܚܫܚ).[[31]](#footnote-31) The first of these verbs, *nasiy* (ܢܣܝ) “to try, test,” is semantically equivalent to Akkadian *latāku* “to try, test,” while the second, *ḥšaḥ* (ܚܫܚ) “to be useful,” is equivalent to Akkadian *damāqu* “to prosper, execute efficiently.” This is significant because the above Syriac phrase should probably be taken to be a calque of the Akkadian phrase *ana X damiq latku* “for X it is good, it is tested,” a commonly used expression in the Mesopotamian medical system.[[32]](#footnote-32) While it is true that such phrases do occur in both the Greek and Arabic traditions (e.g. πεπειραμένον “tested by experience” and *mujarrab* [مجرب] “tested by experience”), and that the nature of drugs bearing such labels as truly tested is open to doubt,[[33]](#footnote-33) there is certainly evidence that allows us to situate the Syriac tradition alongside the Akkadian as part of a continuum of Mesopotamian practical medicine.

While Galen may have been prestigious, therefore, and thus lent a certain degree of respectability to a medical practitioner,[[34]](#footnote-34) Syriac medicine still retained what was known to work in practice. So the cultural and economic imperatives necessitated that both the near eastern and Hellenistic elements were brought together. In an earlier paper, I summarised the Syriac *Book of Medicines* thus:[[35]](#footnote-35)

It seems, therefore, that the Mesopotamian medical compendia did not simply abridge and reorganise Hellenistic medical lore, but also incorporated those aspects of indigenous medicine that were still thought to be efficacious… The Syriac Book of Medicines is an invaluable witness to the mechanics of reception. It shows how Mesopotamian herbals persisted in the face of the arrival of Graeco-Roman science. It also shows how this new science was received and amended to suit its new cultural, material and religious context.

If Ḥunayn is anything to judge by, however, this combination of Galenic material with near eastern herbal lore was not well received by later Arabic translators. Ḥunayn described seeing such a Syriac text in his discussion of the fortuna of Galen’s *On Easily Procurable Drugs* (*De Remediis Parabilibus*):[[36]](#footnote-36)

ولم يقتصر المفسرون للكتب على هذا حتى أدخلوا في هذا الكتاب هذيانا كثيرا وصفات بديعة عجيبة وأدوية لم يرها جالينوس ولم يسمع بها قط ... كانت مضرته من منفعته ... وسألني بعض أصدقاىي أن أقرأ الكتاب السرياني وأصححه على حسب ما أرى أنه موافق رأي جالينوس ففعلت .

And the commentators of the books are not content with this until they have incorporated into this book much folly and marvellous wonderful recipes and drugs that Galen had never seen nor heard about… it does more harm than good… And one of my friends asked me to read the Syriac book and to correct it in accordance with what I consider is appropriate for the opinion of Galen – and so I did.

It is clear, therefore, that Ḥunayn came across a Galenic pharmacological text that contained elements that would have been foreign to Galen. He was thus very disturbed by the interpolation of another body of tradition, namely traditional near eastern “folk” remedies, which he regarded as having rendered the resulting Syriac text dangerous. In his view, it was necessary for a “clean” text to be produced, i.e. for those “unscientific” aspects to be removed – a task Ḥunayn claimed to have accomplished.

Ḥunayn’s description of the reception of Galen’s *On Easily Procurable Drugs* in the Syriac tradition very much accords with what we find in the Syriac *Book of Medicines*. Moreover, the disdain with which Ḥunayn treated the indigenous near eastern component of Syriac medicine turned out to be very contagious. For example, in his introduction to the Syriac *Book of Medicines*, Budge summarised its contents thus:[[37]](#footnote-37)

The first section of the Book of Medicines consists of Lectures upon Human Anatomy, Pathology, and Therapeutics, to each of which is added a series of prescriptions of the most detailed character… These Lectures were translated from Greek into Syriac… The second section of the Book of Medicines is astrological in character, and was included in the manuscript by some student or scribe who could not free himself from the trammels of the beliefs of some of his contemporaries. Not satisfied with the medical system of Hippokrates he had recourse to omens, portents, spells… The third section contains four hundred prescriptions, many of them of a most extraordinary character; these must have been written by “physicians” who were both ignorant and superstitious…

The contrast between Budge’s treatment of the first section, which is very much based on Galen, and the second and third sections, which reflect the text’s Mesopotamian background, is striking. Budge clearly valued the Graeco-Roman heritage preserved in Syriac, while expressing a severe disdain for the near eastern material.

Similarly, William Wright, who was Budge’s teacher at the University of Cambridge, displayed a similar approach when assessing the value of Syriac literature. The following quotation, which displays both the racism and anti-Semitism that was typical of Cambridge a century ago, is indicative:[[38]](#footnote-38)

We must own – and it is well to make the confession at the outset – that the literature of Syria is, on the whole, not an attractive one. As Renan said long ago, the characteristic of the Syrians is a certain mediocrity. They shone neither in war, nor in the arts, nor in science. They altogether lacked the poetic fire of the older – we purposely emphasize the word – the older Hebrews and of the Arabs. But they were apt enough as pupils of the Greeks; they assimilated and reproduced, adding little or nothing of their own.

It is clear that, for Wright, the only material of value preserved in Syriac is that translated from Greek, with everything else being mediocre.

While scholarship is clearly aware of its problematic past and is now much more progressive, I would argue that such assumptions still shape the questions we ask and our approach to the field, which has tended to focus on the reception of the classical heritage in the Orient while neglecting the persistence of oriental traditions. In this respect, therefore, Ḥunayn can be said to have set the agenda for how modern scholarship has approached the study of Syriac literature in general and the Syriac sciences in particular – the near eastern elements have been disregarded and despised, with only the Greek elements being valued.

Conclusion

In our study of the Syriac sciences, we struggle with two unavoidable obstacles. The first, as mentioned by King, is the dearth of sources. The second is the fact that, when analysing the near eastern context for the Syriac sciences, we are compelled to consider cuneiform texts, which are beyond the majority of scholars. This paper has attempted to demonstrate that a close reading of the extant Syriac sources can still prove useful – for example, Bardaiṣan’s *Book of the Laws of Countries* provides evidence for the persistence of near eastern astronomy. Furthermore, while challenging, analysing the Syriac sources alongside their Akkadian counterparts has clear potential – for example the above discussion of the terminology of empiricism.

Unfortunately, we have seen how a historic prejudice has added a third and unnecessary obstacle to the study of the Syriac sciences. It remains incumbent upon us to attempt to redress this – when we analyse the Syriac sciences, we must consider *both* their near eastern *and* Graeco-Roman elements. Not only will this mean that a more enlightened approach is taken, but it will also enable us to appreciate better the differences in influence that can be discerned for the Syriac sciences on the later Arabic sciences.

To return to the question raised at the start of this paper, it becomes clear that, when we consider the Mesopotamian heritage in Syriac, the reason why the role of Syriac in transmitting Greek science to the Arabs varied so much between different fields becomes obvious. Mesopotamian astronomy was dominant in pre-Islamic Syriac sources, whereas Aristotle and Galen (among others) were, for specific reasons, systematically transmitted from Greek into Syriac prior to the advent of Islam. The Arabs, therefore, would not have been able to utilise Syriac translations of Greek astronomical sources to the extent that they could medical and philosophical sources.

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1. King, “Grammar and Logic in Syriac,” pp. 101-102. [↑](#footnote-ref-1)
2. See most recently Villey, “Qennešre et l’astronomie” for the former and Takahashi, “L’astronomie syriaque” for the latter. [↑](#footnote-ref-2)
3. Sebastian Brock refers to the first three centuries of the Common Era as “the most obscure period of Syriac literature”; see Brock, *Brief Outline*, p. 13. [↑](#footnote-ref-3)
4. For an analysis of the man and his work, see Drijvers, *Bardaiṣan of Edessa*. [↑](#footnote-ref-4)
5. For the Syriac text with an English translation, see Drijvers, *The Book of the Laws of Countries*. [↑](#footnote-ref-5)
6. Drijvers, *The Book of the Laws of Countries*, pp. 38-41. [↑](#footnote-ref-6)
7. See also Drijvers, *The Book of the Laws of Countries*, pp. 26-29. [↑](#footnote-ref-7)
8. Such a phenomenon has been observed by Jonathan Ben-Dov in respect of Second Temple period Jewish Aramaic astronomical traditions. In the context of his analysis of *1 En* 82:9-20, which is part of the Enochic Astronomical Book (AB), Ben-Dov discusses the phenomenon of stars as heads of seasons or other periods of time, and states: “This custom spread from Egypt into numerous other Ancient Near Eastern texts. Whereas the Egyptian texts employ far more elaborate classifications than those attested in the Jewish sources, the cognate Mesopotamian practice appears simpler and thus more corresponds to the material from AB”; see Ben-Dov, *Head of All Years*, pp. 25-26. [↑](#footnote-ref-8)
9. Drijvers, *The Book of the Laws of Countries*, pp. 50-51. [↑](#footnote-ref-9)
10. See also Drijvers, *Bardaiṣan of Edessa*, p. 163. [↑](#footnote-ref-10)
11. E.g. in the planetary section of the Syriac *Book of Medicines*; see Budge, *Syriac Book of Medicines*, pp. 470 (text) and 552 (translation). [↑](#footnote-ref-11)
12. Drijvers, *The Book of the Laws of Countries*, pp. 54-55. [↑](#footnote-ref-12)
13. See Kaufman, *Akkadian Influences*, p. 67; contra Müller-Kessler, *Die Zauberschalentexte*, p. 182, who prefers Akkadian \**mulmāšu* < Sumerian **mul.maš**. [↑](#footnote-ref-13)
14. See Hunger and Pingree, *Astral Sciences in Mesopotamia*, pp. 50-57; see also Horowitz, *The Three Stars Each*, especially p. 8 regarding its ideal nature and longevity. [↑](#footnote-ref-14)
15. For Mandaic, see Rochberg, “Babylonian Origins,” pp. 243-245, who presents compelling evidence that suggests that the Mandaeans possessed at least partial translations of the earlier cuneiform material; for more examples, see also Bhayro, “Cosmology in Mandaean Texts.” For Jewish Aramaic, see Ben-Dov, *Head of All Years*, who discusses this phenomenon in great detail; see also Bohak and Geller, “Babylonian Astrology,” who present a case involving a later medieval Jewish text, and add: “This is not simply a general case of borrowing general ideas, motifs, or words, but we have here a concrete example of a collection of accurate renditions of the same concepts being transmitted through similar or even identical wording, while crossing linguistic and geographic boundaries” (p. 620). [↑](#footnote-ref-15)
16. Ben-Dov, *Head of All Years*, pp. 259-263. [↑](#footnote-ref-16)
17. See the excellent account by David Pingree, which not only documents the ways in which the Greeks, Egyptians, and Indians were indebted to the Mesopotamian astronomy in the Neo-Assyrian, Achaemenid, and Hellenistic periods, but also gives several examples of Greek authors acknowledging their debt to the Babylonians; Pingree, “Legacies in Astronomy.” [↑](#footnote-ref-17)
18. For the centrality of Aristotelianism for the arguments of the Chalcedonians, see Krausmüller, “Aristotelianism and the Disintegration,” pp. 151-153, and p. 164, where he states: “the champions of Chalcedon remained fixated on Aristotle until the end of the Christological discourse in the late seventh century.” [↑](#footnote-ref-18)
19. For an excellent assessment of the significance of the events of 451 CE and 518 CE, and their long term consequences, see Menze, *Justinian and the Making of the Syrian Orthodox Church*, pp. 275-276. [↑](#footnote-ref-19)
20. See the list in Brock, *Brief Outline*, pp. 120-122. [↑](#footnote-ref-20)
21. For a brief introduction to Sergius, with further literature, see Bhayro, “Sergius of Reš Aina (500 – 536 CE).” [↑](#footnote-ref-21)
22. The text is from Birmingham Mingana 606, fol. 52*r-v*, a scan of which was kindly sent to me by Daniel King; an English translation was previously published in Brock, *Brief Outline*, pp. 202-203; a French translation was published in Hugonnard-Roche, *La logique d’Aristote*, p. 168. [↑](#footnote-ref-22)
23. There follows here an important discussion of Sergius’s translation technique, which I have discussed elsewhere – see Bhayro, “Syriac Medical Terminology.” [↑](#footnote-ref-23)
24. Or “cause, necessity, argument, subject.” [↑](#footnote-ref-24)
25. See Bos and Langermann, “The Introduction of Sergius,” p. 181. [↑](#footnote-ref-25)
26. For the text of Pseudo-Zachariah on Sergius, see Brooks, *Historia Ecclesiastica*, pp. 135-138. [↑](#footnote-ref-26)
27. Drijvers, *The Book of the Laws of Countries*, pp. 4-5. [↑](#footnote-ref-27)
28. Böck, *The Healing Goddess Gula*, pp. 192 and 194. [↑](#footnote-ref-28)
29. See Bhayro, “Theory and Practice,” which includes a comparison with an analogous scenario, namely the clash between traditional Vietnamese medicine and Chinese medicine in the fourteenth century CE. [↑](#footnote-ref-29)
30. For a discussion of the way in which the Galenic material was used in the Syriac *Book of Medicines*, see Bhayro, “The Reception of Galen’s *Art of Medicine*.” For a discussion of the strategies employed to ensure that the indigenous system persisted, see Bhayro, “Theory and Practice.” [↑](#footnote-ref-30)
31. Budge, *Syriac Book of Medicines*, pp. 61 (text) and 65 (translation). [↑](#footnote-ref-31)
32. For Akkadian terminology relating to empiricism, see Steinert, “‘Tested’ Remedies in Mesopotamian Medical Texts,” especially pp. 117 and 125 for the use of *ana X damiq* with *latku*. See also Johnson, “Introduction,” in the same volume, who addresses some of the comparative issues. [↑](#footnote-ref-32)
33. I am grateful to Peter Pormann for bringing these terms, and the issues surrounding their use, to my attention. [↑](#footnote-ref-33)
34. For the use of Galen’s name, pseudepigraphically in order to lend authority to indigenous near eastern remedies, see Bhayro, “Theory and Practice.” [↑](#footnote-ref-34)
35. Bhayro, “The Reception of Galen’s *Art of Medicine*,” p. 139. [↑](#footnote-ref-35)
36. Bergsträsser, *Ḥunain ibn Isḥāq*, pp. 30-31 (German translation) and ٣۷- ۳۸(Arabic text). [↑](#footnote-ref-36)
37. Budge, *Syriac Book of Medicines*, pp. v and xi. [↑](#footnote-ref-37)
38. Wright, *Short History*, pp. 1-2. [↑](#footnote-ref-38)