



Aethiopica 15 (2012)

International Journal of Ethiopian and
Eritrean Studies

BASIL LOURIÉ, St. Petersburg, Russia

Miscellaneous

Kéntros, another Term of Mesopotamian Origin in the Ethiopian Astronomy

Aethiopica 15 (2012), 225–227

ISSN: 2194–4024

Edited in the Asien-Afrika-Institut
Hiob Ludolf Zentrum für Äthiopistik
der Universität Hamburg
Abteilung für Afrikanistik und Äthiopistik

by Alessandro Bausi

in cooperation with

Bairu Tafla, Ulrich Braukämper, Ludwig Gerhardt,
Hilke Meyer-Bahlburg and Siegbert Uhlig

Miscellaneous

Kéntros, another Term of Mesopotamian Origin in the Ethiopian Astronomy

BASIL LOURIÉ, St. Petersburg, Russia

Among the otherwise unknown concepts of the traditional Ethiopian astronomy there are two apparently Greek notions, *kékros* and *kéntros*. In fact, none of them is witnessed by the Greek sources. Even the word κέντρον, an important term in Greek astrology, was never used in the available Greek texts, with its technical meaning similar to that of Ethiopic *kéntros*.¹

Otto Neugebauer provided the most complete description of usage of both terms in Ethiopic, but he was unable to propose any etymology. The basic meaning of *kékros* is 1/60 and the basic meaning of *kéntros* is 1/30 of some (different) intervals of time.²

As I have demonstrated elsewhere, the term *kékros* goes back to Akkadian *kukkaru* through a lost Greek intermediary (*κέρκος). The basic meaning of *kukkaru* is a circle (disc) with sexagesimal partition implied; Ethiopic *kekros* became the name of each one of its 60 parts. Moreover, the Ethiopic term *gize* ‘time’ in technical meaning (‘two hours’) is (*pace* Neugebauer) a part of a terminological system ultimately of Mesopotamian origin corresponding to Akkadian *bēru* (‘double hour’).³

Now I would like to demonstrate that the term *kéntros* is also a part of the same terminological system of Mesopotamian origin accepted in Ethiopia through a lost Greek intermediary. The word itself is not Akkadian and is obviously the Greek word κέντρον (‘horn’, ‘centre’ etc.) with the incorrect masculine ending *-os* instead of the neuter ending *-on*. In Greek, we presently do not know its usage related to the number 30. However, it is *a priori* likely that the word *kéntros*, together with *kékros*, a part of the terminological system of Mesopotamian origin, has some Akkadian prototype too. It is especially likely because the number 30, being one half of 60, is also an important number in the sexagesimal number system.

Indeed, we have in Akkadian several words with the meaning ‘half’ which are used as well as equivalents of Sumerian ^{ba-a}EŠ, i.e. the sign 30: *mišlu*,

¹ NEUGEBAUER 1979: 175.

² Ibid.: 175–177.

³ LOURIÉ 2010: 419–423.

muttatu, *zūzu*, and *bamtu*.⁴ Only one of them, *mišlu*, also has the meaning ‘midpoint, centre’,⁵ that is, the same meaning as Greek κέντρον. In different dialects of Aramaic the same root *mšl* is known with meanings ‘fork’⁶ and ‘awl, punch’,⁷ also close to the basic meaning of the Greek word (‘horn’).

Therefore, in Akkadian *mišlu*, we have a term combining the meanings “30” and “midpoint, centre”, exactly in the same manner as does the Ethiopic avatar of Greek κέντρον. *Mišlu* has the meaning of a unit implying trigesimal partition, which is, in turn, one half of a larger unit implying sexagesimal partition (*kukkaru*). Ethiopic *kéntros* is the name of each one of these 30 parts, in the same manner as Ethiopic *kékros* is the name of each one of the 60 parts of the corresponding unity. The existence of a Greek intermediary in this passage of the notion of *mišlu/kéntros* from Akkadian to Ethiopic is self-evident. Therefore, we have to admit there is one more meaning of the Greek term κέντρον in the Hellenistic period or earlier, although unattested in the texts preserved in Greek.

The source of borrowing of *kéntros* remains obscure. Neugebauer’s hypothesis that this notion is implied in an Aramaic manuscript of the *Astronomical Book* of Enoch from Qumran (4Q211, fr. 1, cols. ii-iii),⁸ supported by Matthias Albani⁹ and Jonathan Ben-Dov¹⁰, has now been proven wrong by Henryk Drawnel.¹¹

Bibliography

- ALBANI, M. 1994, *Astronomie und Schöpfungsglaube: Untersuchungen zum astronomischen Henochbuch* = Wissenschaftliche Monographien zum Alten und Neuen Testament 68, Neukirchen – Vluyn: Neukirchener Verlag.
- BEN-DOV, J. 2008, *Head of All Years: Astronomy and Calendars at Qumran in their Ancient Context* = Studies on the Texts of the Desert of Judah 78, Leiden – Boston, MA: Brill.
- DRAWNEL, H. 2011, *The Aramaic Astronomical Book (4Q208–4Q211) from Qumran: Text, Translation, and Commentary*, Oxford: Oxford University Press.
- LOURIÉ, B. 2010, “Between Babylonia and Ethiopia: Some Thoughts about a Recent Book on the Qumranic Calendars”, *Scrinium. Revue de patrologie, d’hagiographie critique et d’histoire ecclésiastique* 6, pp. 413–432.

⁴ REINER 1968: 190.

⁵ OPPENHEIM – REINER (eds.) 1977: 126–129.

⁶ SOKOLOFF 1992: 335; ID. 2009: 849.

⁷ PAYNE SMITH 1903: 307.

⁸ NEUGEBAUER 1979: 169.

⁹ ALBANI 1994: 62.

¹⁰ BEN-DOV 2008: 195.

¹¹ DRAWNEL 2011: 413–419.

Kéntros, another Term of Mesopotamian Origin in the Ethiopian Astronomy

- NEUGEBAUER, O. 1979, *Ethiopic Astronomy and Computus* = Österreichische Akademie der Wissenschaften. Philosophisch-Historische Klasse, Sitzungsberichte 347; Veröffentlichungen der Kommission für Geschichte der Mathematik, Naturwissenschaften und Medizin H. 22, Wien: Verlag der Österreichischen Akademie der Wissenschaften.
- OPPENHEIM, A. L. – E. REINER (eds.) 1977, *The Assyrian Dictionary of the Oriental Institute of the University of Chicago*, X: M, Part II, Chicago, IL – Glückstadt: Oriental Institute.
- PAYNE SMITH, J. (MRS. MARGOLIOUTH) 1903, *A Compendious Syriac Dictionary founded upon the Thesaurus Syriacus of R. Payne Smith, D.D.*, Oxford: The Clarendon Press.
- REINER, E. 1968, “Thirty Pieces of Silver”, *Journal of the American Oriental Society* 88, pp. 186–190.
- SOKOLOFF, M. 1992, *A Dictionary of Jewish Palestinian Aramaic of the Byzantine Period* = Dictionaries of Talmud, Midrash and Targum II, Ramat-Gan: Bar Ilan University Press.
- 2009, *A Syriac Lexicon: A Translation from the Latin, Correction, Expansion, and Update of C. Brockelmann’s Lexicon Syriacum*, Winona Lake, IN – Piscataway, NJ: Gorgias Press & Eisenbrauns.

Summary

The Ethiopic term *kéntros* “1/30” goes back to Akkadian *mišlu* through a lost meaning of the Greek astronomical term κέντρον.