

Jonathan Ben-Dov, Wayne Horowitz and John M. Steele, eds., *Living the Lunar Calendar* (Oxford and Oakville: Oxbow Books, 2012). Pp. viii + 387. £ 32. ISBN: 978-1-84217-481-4

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The book under review contains a series of articles dedicated to different aspects of time measurements related in most cases to the movement of the moon. The articles presented in the book were prepared for the conference that in the winter of 2010 took place in the Bible Lands Museum in Jerusalem. They also “consider the effect of the great forces of ancient history on the calendar: politics, identity, social cohesiveness, cultural hybridity, and ultimately the basic questions of human civilizations, namely how does mankind enforce order on the endless flow of natural phenomena” (p. 1). Thematically, the articles fall, according to the subdivision of the redactors, into five thematic sections. The first one discusses scientific indeterminacy of the calendar and political intervention. The second set discusses schematic data versus observational rulings; the third one tries to answer the question concerning what should be done in a tradition-oriented society when the underlying calendaric system is out of sync with the real passage of time. The next section revisits several axioms of the lunar calendar, the most important of which seems to be the first sighting of the new crescent at sunset. Finally, there are several articles dedicated to early lunar reckonings as attested mostly in Mesopotamian cuneiform sources. Of special interest is the article by James Walton that uses methods of archaeoastronomy in order to reconstruct lunar observations carried out in the area of New Mexico and Colorado around the 8th-12th centuries AD. The articles are listed in an approximate chronological order, the place of honor being given to Mesopotamian data (W. Horowitz, Y. Bloch); the following contributions are dedicated to Minoan calendar symbolism (S. Beckman), early Greek lunisolar cycles (R. Hannah), a Neo-Platonic interpretation of day 30 in Hesiod’s *Works and Days* (P. Marzillo), beginning of Greek lunar month in relation to Egyptian lunar months (L. Depuydt), lunar calendars at Qumran (J. Ben-Dov), tame and wild time in the Qumran and Rabbinic calendars (R.H. Feldman), rabbinic

new moon procedure (S. Stern), development of the Rabbinic lunar calendar (L. Schiffman), harmonization of the lunar year with the Julian calendar by Anatolius, bishop of Laodicea (D.P. Mc Carthy), medieval Christian perceptions of the Jewish lunisolar calendar (C.P.E. Nothaft), Christian calendrical fragments from Turfan (M. Dickens and N. Sims-Williams), lunar tables in Medieval Russia (M.L. Gorodetsky), telling the time by the moon by American indigenous people (S. Iwaniszewski), lunar ceremonial planning in the ancient American Southwest (J. Walton), adjusting calculations to the ideal in the Chinese and Japanese calendars (S. Tsumura), living with a lunar calendar in Mesopotamia and China (J.M. Steele). The articles are written by eminent specialists in the field, and are mostly concentrated on particular topics mostly related with lunar time measurements in the ancient world. Since it is not possible to review all the articles, my attention will focus on the contribution of prof. J. Ben-Dov, “Lunar Calendars at Qumran? A Comparative and Ideological Study” (pp. 173-189).

In his article dedicated to lunar calendars at Qumran, Ben-Dov intends to analyze the presence in the Qumran manuscripts of two separate calendrical traditions: one which concentrates on the liturgical use of the schematic 364-day calendar, and the other, lunar count that is also represented by several important manuscripts. He intends to answer the question concerning the reasons for the coexistence in the Dead Sea Scrolls of two different time counts. In order to make his position more meaningful he makes a recourse to the Egyptian luni-solar calendar from the second century BC, and stresses the ideological elements that can be deduced from the use of the calendrical texts by the Qumran community. He stresses that the 364-day year was in the Qumran scrolls connected with routine temple work or religious festivals, which proves that the Qumran covenanters practiced its special schematic calendar, although any intercalation rule for it cannot be established. He also points to a formal literary parallelism between 4Q320 frg. 1 i 6 – ii 14 and a Greco-Egyptian text (p. Ryl IV 589) which gives the list of new moons according to the civil calendar. The formal parallelism with the Egyptian text becomes for Ben-Dov an occasion to claim that, similarly to Egyptian calendrical texts, which synchronized the lunar data with the civil calendar, the lunar count, synchronized in 4Q320 with the 364-day calendar, maintained a normative aspect for the Yahad authors (p. 180). It is, however, impossible to prove that these calendrical texts played any religious or cultic function within the Qumran community.

Pointing to the Babylonian background of 4Q320-4Q321 with the use of “Lunar Three” data attested in late cuneiform tradition, Ben-Dov suggests that these Qumran calendrical texts were recorded for astronomical purposes

Jonathan Ben-Dov, Wayne Horowitz and John M. Steele

rather than for cultic ones (p. 181). He also points out that although these fragmentary manuscripts attest to a Mesopotamian cultural influence, this influence has undergone considerable changes of adaptation to a new cultural context. Thus there are considerable differences between 4Q320-4Q321 on the one hand and Mesopotamian astronomical texts on the other. The Qumran texts refer to schematic lunar phenomena, as opposed to real records in the Babylonian sources; the former present lunar phenomena within the context of the 364-day year, while the latter give the lunar data according to the functioning luni-solar system.

Although Ben-Dov refuses to accept any religious or cultic interpretation for 4Q320-4Q321, he eventually muses on calendrical ideology that might lie behind these texts at Qumran (p. 182-184). He is convinced that the Qumran covenanters used both the 364-day year and lunar calculations, “but they denied any normative force to the lunar data they collected” (p. 182). This statement of Ben-Dov’s, however, is not substantiated by any argument, for in fact there is not any argument attested in the scrolls themselves that could lead to such a conclusion. We simply do not know today what kind of normative status did the Qumran scribes assign to calendrical texts in general. If they had denied any normative force to the lunar data, how it is possible to explain excruciatingly long computations of periods of lunar visibility in 4Q208 and 4Q209? In fact, Ben-Dov does not even mention these manuscripts in the course of his exposition. It is also difficult to accept his claim that “the lunar phases are here (in the 364-day calendar tradition, HD) more imaginary than real, more schematic than observable, and are in fact secondary to the dominant calendrical role of the priestly *mishmarot*” (p. 183). The author did not elaborate which lunar elements in the 364-day tradition he intended to refer to; in fact, there are no lunar elements in the 364-day tradition, as it is based on *1 Enoch* 72 where the movement of the sun is discussed, not that of the moon. If he intends to refer to 4Q208 and 4Q209 together with *1 Enoch* 73-74, texts that do present lunar calculations, he still has to prove that these texts are “secondary to the dominant calendrical role of the priestly *mishmarot*.” I personally do not see any reason to accept such an opinion. It is also difficult to accept his opinions that lunar phases in that tradition are more imaginary than real. A recent contribution by D. Duke and M. Goff (“The Astronomy of the Qumran Fragments 4Q208 and 4Q209,” *Dead Sea Discoveries*, forthcoming) shows how the lunar pattern present in 4Q208 and 4Q209 is sophisticated and close to actual lunar data.