India specialists. If one's topic of study is the manner in which artists from one culture perceived and represented aspects of another, then it should at least be helpful to have some independent knowledge of the artists' subject matter. I do not say "objective" (let us suppose objectivity to be illusory), but different: to serve as a gauge, against which the British depictions can be measured. De Almeida and Gilpin might of course have used contemporary Indian perceptions and representations as that gauge, but plainly Indian perspectives do not interest them: only two of the book's 240 illustrations show works by Indian artists. Failing that, they might have used their own knowledge of the places depicted, but they do not seem even to have read very much about them: their copious Bibliography includes only four books on Indian art and architecture. Occasional arresting adjectives – such as their description of banyan trees as "droll" (p. 42) and the Mughal court as "decadent" (pp. 40, 55, 72) – confirm that the authors have little view of India outside of that presented by the imperialist depictions of it that they seek to deconstruct.

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Astronomical Diaries and Related Texts from Babylonia. Volume V: Lunar and Planetary Texts. By Hermann Hunger, Abraham J. Sachs, and John M. Steele. pp. xii, 399. Vienna, Verlag der Osterreichischen Akademie der Wissenschaften, 2001.
doi:10.1017/S1356186306246844

The first and longest-running data collection project in world history began in the mid-eighth century BCE and petered out some time around the turn of the first millennium. It entailed monthly observations of a range of planetary and lunar events that eventually comprised over 200,000 data points, of which tens of thousands survive (Hunger, 1999: p. 82). The volume under review is the latest contribution to a major edition of that dataset, compiled for the most part from cuneiform tablets from the ancient city of Babylon now held in the British Museum. The first three volumes edited astronomical observational 'diaries' covering the period 652 BCE – 61 BCE (Sachs and Hunger, 1988–1996); the fourth will contain undatable fragments; and this, the fifth, comprises around a hundred records of lunar and planetary events both observed and predicted over the period 747 BCE – 10 BCE.

Like the previous volumes in the series, it is handsomely produced with transliterations and translations on facing pages, detailed footnotes, useful concordances, and photographs of all the tablets on good quality plates at the back. There is no introduction or explanatory commentary, except for a useful discussion of the eclipse texts in an appendix by John Steele. Hermann Hunger provided however an excellent introductory overview of the different Babylonian astronomical genres a few years ago (Hunger, 1999), while more recently Francesca Rochberg has written a delightful and hugely stimulating study of Babylonian celestial scholarship (Rochberg, 2004).

For the most part the tablets themselves give precious few clues as to their authors and origins. Most are from British Museum expeditions to Babylon and nearby Borsippa in the 1870s and 80s, excavated without much regard to provenance or context. A few are from places further south: the findspots of nos. 57 and 63, and 74 and 82, have been identified as the cities of Nippur and Uruk respectively. Two tablets have colophons, or paratextual information about the scribes who wrote them. The colophon

of no. 60, an observational record of Jupiter for the years 387–346 BCE, reads:

> Appearances of Jupiter which are from year 18 of Aršu, who is called king Artaxerxes, until month IV of year 13 of Umakuš, who is called king Artaxerxes. A copy of tablets and writing boards [of] diaries belonging to Mr [. . .], son of Mušallim-Bēl [. . .] written. Tablet of Mr [. . .], son of Marduk-šāpik-zēri [. . .]. Hand of Bēlšunu, son of [. . .].

So we see that the tablet has been compiled from a variety of older tablets and wooden writing boards (none of which survive archaeologically). There are three people involved: the owner of the original astronomical diaries; the owner of the new tablet; and the copyist. Now, the first two individuals can be identified with some certainty as Bēl-apal-iddin, son of Mušallim-Bēl, and his grandson Iddin-Bēl, son of Marduk-šāpik-zēri, both of the Mušēzib family. This family is known from colophons on about a dozen astronomical tablets – diaries, procedural instructions, calculated tables, celestial omens – of the late fourth century BCE (Britton and Walker, 1991). None gives a profession or any affiliation with a temple, but the fact that all their names pay homage to Marduk (also Bēl, 'Lord') suggests a close association with Babylon. A recently published administrative record from Marduk's temple in Babylon lists barley allotted to fourteen astronomers (*ṭupšar Enūma Anu Enlil*) over the course of a year (Beaulieu, 2006). To me, at least, that is a surprisingly large team. None of the extant names listed can be identified with any of the Mušēzib men in our colophon, but Beaulieu (2006: p. 19) proposes a date for it of Artaxerxes III 6 = 353 BCE, exactly within the chronological range of original astronomical observations from which our tablet was compiled. Thus it is likely that at least one of the astronomers receiving grain from Marduk's temple was responsible for making and recording at least some of the observations of Jupiter collected and collated a couple of generations later by the Mušēzib family. Those men are closely associated with major innovations in mathematical astronomy. Indeed our putative copyist Iddin-Bēl is also known to have copied for his father Marduk-šāpik-zēri one of the earliest datable mathematical instructions for calculating the movements of Jupiter, Saturn, and Mars using the method now known as System A. Is it possible, then, that the Mušēzibs were collecting this observational data to help build or check their new mathematical astronomy? We can only speculate; the actual relationships between observational and mathematical astronomical texts are, with some exceptions, not yet known for certain (Rochberg-Halton, 1991).

One spectacular exception is no. 74 in this volume, a fascinating record of planetary events and lunar eclipses whose positions are recorded uniquely to within a degree of longitude. (Usually astronomical observations are recorded with respect to a set of reference stars or, later, to the zodiacal signs.) It covers the period 250–240 BCE but was written about fifty years later in Uruk. The colophon reads:

> Tablet of Anu-bēlšunu, son of Nidinti-Anu, lamentation priest of Anu, descendant of Sîn-lēqi-unninni, the Urukean. Hand of Anu-aba-utēr, his son, astronomer. Uruk, month IX, the 14th, year 121, king Antiochus. [. . .] planets [. . .] moon.

The tablet has been meticulously studied by Steele (2000), who showed that it was compiled from data calculated through mathematical astronomy, in order to produce horoscopes. Indeed Anu-bēlšunu, described in this colophon as a lamentation priest of the sky-god Anu, is well known as the copyist or owner of fourteen astronomical and liturgical tablets in the period 230–190 BCE (Pearce and Doty, 2000), including a horoscope that he wrote for himself (Beaulieu and Rochberg, 1996). In Hellenistic Uruk the lamentation priests' primary duties were to propitiate the gods at times of disturbance such as temple renovations or eclipses (Linssen, 2004). It seems that the Sîn-lēqi-unninni family began to develop their prodigious abilities in mathematical astronomy primarily after the fiasco of a mistimed eclipse ritual in 530 BCE saw them hauled up in front of the temple authorities (Beaulieu and Britton,

1994). The last datable astronomical and liturgical tablets from Uruk were written by their descendants, Anu-bēlšunu's grandsons, nearly four hundred years later in the 160s BCE.

If the compilation of the Babylonian astronomical observations represents a phenomenally long-term scholarly undertaking then so does their publication. Scale drawings of over a thousand tablets in the series were made by Theophilus Pinches and Johannes Strassmaier from the 1870s onwards, which were collected for publication by Abraham Sachs in the mid-twentieth century (Pinches et al., 1955). As twenty-first-century technologies move on apace I trust that it will not be long before the entire edition is published as a searchable online corpus. That would enable previously unidentified fragments to be placed within the dataset and allow a sophistication of analysis hitherto unattainable. This volume represents the latest phase in a phenomenal effort of collaborative scholarship which is transforming the accessibility and comprehensibility of a hitherto neglected but crucially important achievement in Middle Eastern intellectual history. Its authors are to be wholeheartedly congratulated.

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