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# PLEIADES PERCEIVED: MUL.MUL TO SUBARU\*

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AS YOU ALL KNOW, HISTORY BEGINS AT SUMER. But many of us must also have noticed that these days all the automobiles seem to come from Japan.

From MUL.MUL to Subaru—even in an “Oriental Society,” the juxtaposition may appear to be nothing more than an attempt to link together the unyokeable. Can any web be spun that will tie together the Sumerian word for the asterism of the Pleiades, at one extreme of the so-called “Orient,” and at the other the modern Japanese word *subaru*, which also means “the Pleiades,” and which most recently has yielded, *via* the customary American deformation of Japanese phonology, the name for one of the many imported automobiles that now flood our roads—in this instance, the popular product of Fuji Heavy Industries, Inc. sold in this country under the name “Subaru.”

Such genuinely integrating themes are few. Yet we must continue, at least on certain occasions, of which I presume this to be one, to search them out, if there is actually to be, in any legitimate or coherent sense of the collocation, an “Oriental Society” that somehow manages to be greater than the sum of its disparate parts. And when finally we do locate such unifying themes, they are almost always found to be associated with the world—or worlds—above us. Give or take the relatively trivial differentials introduced by considerations of latitude, it is only when we turn toward the vault of the heavens that we are likely to find not only a uniformly identifiable but also a reliably unaltered physical panorama against which to frame our generalizations. What we see there today is what they saw there then, give or take such relatively minor considerations as the precession of the equinoxes. By and large, the differences that we shall note will be differences in the means and modes, and in the ends of our own perception, rather than differences in what is actually being perceived. What is there above us is what has always been up there: all that appreciably alters is the way in which we perceive it. But then perhaps this, this “way in which we perceive it,” might itself serve as a useful paradigm both for the mission, as well as for the method, of an “Oriental Society” such as ours.

Why the Pleiades? They are not the brightest nor visually the most striking asterism for most observers

of the night. What we know today about the Pleiades is rather more striking than what we see, and far and away more exciting than anyone in earlier human history ever saw or imagined that they saw in this asterism. “[W]e know now that the Pleiades star-group is really an ‘open cluster’ of stars all moving with the same speed in the same direction . . . its brightness . . . largely due to the 1400 small stars of which it is composed, apart from the six or seven normally visible as pin-points of light to the naked eye.”<sup>1</sup> Ancient perceptions of this asterism have been many and varied. Their most important differences have hinged upon whether it was perceived as consisting of six stars or of seven. In the best-known Greek version, there were seven—the daughters of Atlas and Pleione, sisters of the Hyades. But even modern observers, with modern optical aids, display no particularly impressive amount of consensus on this point. Contrast the modern description of the asterism as consisting of “1400 small stars,” which I have just read, with another of equal authority that claims of the Pleiades, “large telescopes photograph an open cluster of 3,000 stars wrapped in faint luminous dust clouds, travelling together through space like a flock of birds.”<sup>2</sup> Six or seven, 1400 or 3000, the question seems to remain as open today as in classical antiquity. The Greeks at least had a good explanation for their sometimes different perceptions. The star that was frequently dim, or even invisible, was for them Electra mourning for Troy, or Merope hiding herself in shame for having wedded a mortal:

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<sup>1</sup> Jos. Needham with the collaboration of Wang Ling, *Science and Civilisation in China, Vol. 3: Mathematics and the Sciences of the Heavens and the Earth* [hereafter cited: Needham] (Cambridge, 1959), p. 274.

<sup>2</sup> W. Kyselka & R. Lanterman, *North Star to Southern Cross* (Honolulu, 1976), p. 41.

they did not blame either their telescopes or their eyesight for the discrepancies.

In classical antiquity the importance of the Pleiades was both mythic and functional—mythic, because of the position in which the six (or seven) sisters found themselves in the sky *vis-à-vis* the lusty Orion; functional, because of the location of the asterism in the left-leg of Taurus, whose eye 5000 years ago marked the vernal equinox. For the Babylonians the sun stood in Aries at this equinox. But before that it had been in Taurus; and it was surely from the asterism's proximity to this literally epoch-marking constellation that the Pleiades uniformly derived its principal functional interest, not to mention its widely respected mythic authority, throughout the worlds of Asia, east and west alike.

Neither Indo-European nor Altaic perceptions of the asterism need detain us long. The question of the etymology of Skt. *kṛttikā* 'the Pleiades' remains open. Some still find here, with the Petersburg lexicon, a root 'skin, hide', but most would rather now involve the word with verbs meaning 'twist, spin, braid, plait'.<sup>3</sup> All that need be mentioned in this connection is the somewhat surprising fact that in the canonical early Tibetan equivalents for the Indic names of the 28 *nakṣtra* (corresponding to the similarly numbered Chin. *hsiu* 宿 '[lunar] mansions'), as we find them in the *Mahāvvyutpatti*, the essential Sanskrit-Tibetan bilingual lexicon and encyclopedia begun in 814 and completed before 836,<sup>4</sup> the Tibetan translation for the Pleiades does not embody a calque upon any of the many possible etymologies for the original Indic term, with which apparently the Tibetans of the early ninth century were either unfamiliar, or, if they did know them, did not believe. Instead the *Mahāvvyutpatti*, like modern spoken Tibetan, appears to preserve an independent and presumably also an earlier and original Tibetan expression *sm̄in drug*. Here Tib. *drug* 'six' is clear enough, but *sm̄in* raises problems. Most likely it is to be understood as a variant of *sme* 'spot, macula', cf. Tib. *sm̄in bdun*, var. *sme bdun* 'Ursa Major,' with *bdun* 'seven'.<sup>5</sup>

<sup>3</sup> A. Scherer, *Gestirnnamen bei den indogermanischen Völkern* (Indog. Bibl., Reihe 3: Untersuchungen; Forschungen zum Wortschatz der indog. Sprachen 1) (Heidelberg, 1958), pp. 141–42.

<sup>4</sup> C. Vogel, *Indian Lexicography (A History of Indian Literature, Vol. V, Fasc. 4)* (Wiesbaden, 1979), pp. 381–82.

<sup>5</sup> *Mahāvvyutpatti*, ed. Sakaki Ryōzaburō (Kyoto, 1916; reprinted 1962), § CLXVI, no. 3187: "Kṛttikā, Smin-drug." For the proposed etymology of the difficult *sm̄in*, which in

The terms for the Pleiades in the languages generally called "Altaic"—in the present context, Turkic, Mongolian, and Tungus—also have disappointingly little to tell us, even though early observation of the asterism and equally early utilization of its position for calendrical purposes may easily be established for many sectors of the Altaic domain. If the Manchus ever had an early inherited term for this asterism, they had forgotten it by the time of their conquest of China. The texts know only Ma. *moko* 'the Pleiades', a curious (and obviously late) portmanteau coinage juxtaposing a borrowing from Chin. *mao* 昴 'the Pleiades' with Ma. *coko* 'chicken; cock (as the tenth of the 'earthly branches')'.<sup>6</sup>

The Tungus dictionaries of our Soviet colleagues frequently confuse terms for Ursa Major with terms for the Pleiades. Whether this is carelessness on the part of their compilers or genial confusion on the part of their Tungus informants can only be guessed. The Russian-Lamut dictionary edited by the late Vera I. Tsintsius and L. D. Rišes has no entry for "the Pleiades," but in first place under "Ursa Major," and only then followed by the expected, general Tungus for that other constellation,<sup>7</sup> it significantly registers Lam. *ilkun*, the form that again turned up two decades

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*sm̄in drug* can hardly be either the verb *sm̄in-pa* 'to ripen' or the noun *sm̄in-ma* 'eye-brow,' cf. *sme bdun* 'Ursa Major' (but *sm̄in bdun* generally, e.g., in Jäschke) in the Tibetan translation of Mo. *doluyan äbüyän* 'id.' in the MS edited and translated in B. Laufer, "Zur buddhistischen Literatur der Uiguren," *T'oung Pao* 8 (1907), 393; *sm̄in drug* and *sme bdun* also both appear in the text translated in F. W. Thomas, *Tibetan Literary Texts and Documents Concerning Chinese Turkestan Part I* (Oriental Translation Fund, n.s., 32) (London, 1935), p. 276.

<sup>6</sup> Equally curious portmanteau coinages are all that we have for the entire list of the twenty-eight lunar mansions in Manchu; see *TMS* under the various terms, and for the Pleiades *TMS* 1.543b. Ma. *moko* in this sense is also attested in the canonical *Wu-t'i Ch'ing-wen-chien* 五體清文鑑 (ed. Tamura Jitsuzō et al., Kyoto, 1966), p. 6 no. 99, where it is equated with Tib. *sm̄in druk* (-k sic!), 'Mo.' *kirtik* (which is of course only a Mongolisation of the Skt.), and a curious "Uighur" form *kalpu yuldus* that deserves study separately. Similarly, the *Mōkogo daijiten* of Hiyama Kōshirō 樋山光四郎 (Tokyo, 1933), Vol 2, p. 1640b-c, registers Mo. *hiridik* (sic! once again, the Skt.) = Ma. *moko* = Tib. *sm̄in drug* = 'Skt.' *karika*. On the Mongolian term(s) for 'the Pleiades,' see also note 14 *infra*.

<sup>7</sup> V. I. Tsintsius and L. D. Rišes, *Russko-ëvenskij slovar'* (Moscow, 1952), p. 578a, s.v. 'sozvezdije Bol'soj Medveditoy'.

later in the great Tungus comparative dictionary of Prof. Tsintsius and her many collaborators, albeit once more there only in the sense of “Ursa Major.”<sup>8</sup> But etymologically Lam. *ilkun* ‘the Pleiades’ can hardly be other than a Tungus cognate (its final *-n* showing that it is not a direct or at any rate a very proximate loan<sup>9</sup>) for the general, and much discussed, Turkic *ülkär, ülgär* ‘the Pleiades.’

Tkc. *ülkär, ülgär*, which in this fashion so mysteriously intrudes itself silently into the pages of the two Tsintsius dictionaries, was itself the subject of a surprisingly extensive etymological literature during the 1960s.<sup>10</sup> This literature tells little about the history of the word, but it does display many of the dangers of speculative etymology when pressed to its limits, or even a little beyond, in a semantic field such as this.

Each of the principal Turkological investigators, notably Bazin, Németh, and Clauson, first decided on the basis of non-linguistic materials what “*ülkär* must have meant originally,” and then went on to show how the details of his *a priori* etymology might be supported from within the word in question. Hence all their etymologies are, in a word, essentially teleological: one can always find, in this fashion, what one is looking for if one looks hard enough.

Bazin, for example, first decided what the proto-Turks “must have seen” in this asterism, and also how they “must have perceived” its function. Then he seized upon a hypothetical proto-Turkic root \**ül-* ‘divide, distribute, go shares in,’ from which he subsequently derived the form(s) in question as consisting of a deverbal verb in intensive \**-k-* onto this \**ül-* plus the so-called “aorist in *-är*,” on the grounds that for

the early Turks the principal role of the asterism was “obviously” its functional one in marking the equinox, i.e., in dividing, distributing, and marking the portions of the year according to the seasons.

All this is of course entirely circular, and in a sense also completely self-defeating. Had Bazin instead initially “decided” that the Pleiades had reference among the early Turks not to ‘dividing’ or ‘distributing’ the portions of the year but instead to marking the ripening of the autumn harvest—a direction of speculation for which much support would easily be forthcoming from other and not particularly remote portions of Asia—he could have operated, not with his hypothetical root \**ül-*, but with another \**ül-* that might equally plausibly be extracted from Tar., Kazk. *ülgür-* ‘to come at the right time; to ripen’ and cognate forms.<sup>11</sup>

It would not do, however, only to stress the failure of Bazin and the other Turkologists of the 1960s to provide a convincing etymology for *ülkär, ülgär*. Their views were necessarily bound to be unconvincing because of the inherent circularity of their methodology. But there is nevertheless much that may still usefully be gleaned from the literature on this subject, particularly from a paper that Bazin published in 1963.<sup>12</sup> There he stressed the functional role of the Pleiades asterism as it has survived in modern Anatolia, and at the same time also the essential and surprisingly clear-cut Mesopotamian origins of these same functions.

Principally of course Bazin was still interested in evidence that would bolster his unfortunately teleological etymology of Tkc. *ülkär* as ‘the divider, the splitter up into shares.’ But together with this, and as an essential portion of the evidence for Babylonian inheritances still visible in the Turkic terminology, Bazin also and quite importantly cited the role of the Pleiades in fixing the occurrence of the notorious intercalary month (*Plejadenschaltregel*), a functional role for this asterism attested already in the Sumerian texts assembled by Fr. Gössmann.<sup>13</sup> As we shall see,

<sup>8</sup> TMS 2.360b, s.v. Ev. *heglen*.

<sup>9</sup> Nevertheless, one looks in vain for this striking Turkic-Tungus lexical correspondence set in the list of “17 . . . Wörter . . . , welche rein tü.-tu. Vergleiche darstellen” so carefully culled—and demolished—in G. Doerfer, *Mongolo-Tungusica (Tungusica, Bd. 3)* (Wiesbaden, 1985), pp. 238–42, though we are there promised that these seventeen sets are the only ones available in the literature “wobei die Vergleiche entweder plausible sind, weil lautgesetzlich exakt oder aber zumindest bisher für plausible gehalten worden sind” (p. 238).

<sup>10</sup> Conveniently and completely cited in E. V. Sevortjan, *Etimologičeskij slovar’ tjurkskix jazykov, Obščetjurkskie i mežtjurkskie osnovy na glasnye* (Moscow, 1974), 1.630–31, q.v. for complete citations of all the relevant Turkological literature. What Sevortjan remarks near the end of his article on *ülkär*, though there with specific reference to C. Brockelmann, might well go with equal force for the bulk of these contributions: “. . . trudno soedinit’ vmeste.”

<sup>11</sup> M. Räsänen, *Versuch eines etymologischen Wörterbuchs der Türksprachen (Lexica Societatis Feno-Ugricae XVII, 1)* (Helsinki, 1969), p. 520b.

<sup>12</sup> L. Bazin, “Über die Sternkunde in alttürkischer Zeit,” *Abh. der Geistes- u. Sozialwiss. Kl., Akademie der Wiss. u. der Lit. in Mainz*, Jhg. 1963, Nr. 5, 14 pp.

<sup>13</sup> Bazin, loc. cit., p. 9; Fr. F. Gössmann, *Planetarium Babylonicum oder die Sumerisch-Babylonischen Stern-namen* (Rome, 1950), p. 208a: “Wenn am 1. Nisan Plejaden und Mond in Konjunktion stehen, so ist dieses Jahr normal; wenn erst am 3. Nisan, so ist dieses Jahr ein Schaltjahr.”

this was an important and significant observation, even though unfortunately it had its origins in the French scholar's continued attempts to substantiate his own original (and originally) teleological etymology.<sup>14</sup>

To find our way out of the circular maze into which these attempts at Altaic etymology inevitably seduce us, we require outside, third-party, non-teleological evidence uninvolved in the "conflict of interest" that all the Turkological contributions, but especially those of Bazin and Németh in their 1960s papers on *ülkär*, exhibit. We shall see that sort of evidence as available from the resources of epigraphy and iconography from the peripheral as well as from the central Sinitic cultural spheres. But so long as this remains unavailable from the Altaic world, little can be done either to affirm or deny any of the many etymologies for Tk. *ülkär*, *ülgär*, and by the same token for Lam. *ilkun* as well, at least in the surprisingly absolutist terms in which they were so vigorously disputed in Altaistic circles two decades or more ago.

To do that, we must leave India, Tibet, and Central Asia of the Altaic peoples reluctantly behind us, and plunge resolutely ahead into China.

From China we have, as we might expect, a rich variety of early materials all bearing directly upon our subject. Many of these have already been exploited in the literature, notably by Professor Edward Schafer in his stimulating and indispensable volume on Chinese astronomical lore, *Pacing the Void: Tang Approaches to the Stars* (Berkeley, 1977), others earlier by Joseph Needham in vol. 3 of his *Science and Civilisation in China* (1959; note 1 *infra*). A century earlier the

redoubtable Gustave Schlegel first recounted in a European language much of the rather later Chinese lore about our asterism in his *Uranographie chinoise* (1875; note 20 *infra*), an account that is still of considerable utility, particularly now that we have learned to discriminate among the different levels that co-existed within Schlegel's Chinese sources.

These three existing accounts provide a solid point of departure for surveying the perception of the Pleiades throughout the ancient Sinitic culture. All that remains is to supplement the contributions of Schafer and Needham in particular in a few matters of detail, notably in the areas of etymology, epigraphy, and iconography.

Fortunately we are also not without friends when we set out to bridge the enormous gulf that separates China from the ancient Orient. Much solid work has already been accomplished here upon which we today may build. Carl Bezold (1859–1922), not only a distinguished Assyriologist but also in his youth a scholar of Chinese,<sup>15</sup> in 1919 carefully scrutinized the astral omens and their interpretations recorded in the 1st-century B.C. *Shih chi* of Ssu-ma Ch'ien; he concluded that "native Chinese astronomy/astrology was probably modified by the Babylonian by at least the sixth century B.C. . . . Mesopotamian and Chinese visions of the sky share a number of constellations. The relations of the moon and planets with certain asterisms are similar; so is the significance of the brilliance and color of Venus; and certain omens, especially those with an emphasis on war, victory, civil strife, drought, and rain, are much alike."<sup>16</sup>

Needham found Ssu-ma Ch'ien's Chinese description of the Pleiades as *mao t'ou* 鬣頭 'hairy head(s),' more literally, 'mane head(s),' to be of particular interest, believing that the term might reflect a particularly accurate and especially early perception of the Pleiades as an "open cluster" of stars.<sup>17</sup> Actually, in this Chinese categorization of the asterism from the first century B.C. what we have is another instance of the same second-hand Babylonian elements surviving in Chinese astronomy to which Bezold first drew

<sup>14</sup> The Mongolian designations for "the Pleiades" present a great number of difficult problems whose solution may only be hinted at here; the forms include WMo. *bečid* 'the Pleiades' (F. Lessing, et al., *Mongolian-English Dict.* [Berkeley, 1960]), p. 94a), and *mečid* 'monkeys, apes; galaxy,' *mečid odu(n)* 'Pleiades; comet' (ibid., p. 531a), all generally alleged to have come from Sogdian (thus Lessing, op. cit., p. 93b), and also to have some connection with 'ape, monkey' as '9th year of the 12-year cycle.' But the putative Sogdian original for this most curious lexical constellation is never cited, and surely the hypothesis of L. Bazin, in "Les mots turcs et mongols de la constellation des 'Pléiades,'" *Acta Orient. Hung.* 10.3 (1960), 296–97, is the weakest link in the entire range of the literature on this question. This whole question of "the Pleiades" in Mongolian needs to be reopened; in the meantime, it is hardly an accident that the Ch'ing authors of the *Wu-t'i* pentaglot avoided all these words entirely (cf. note 6 *supra*); apparently the forms puzzled them then as much as they do us now.

<sup>15</sup> Cf. the obituary notice by H. Zimmern, *ZDMG* 77 (1923), 121–36 for Bezold's career, and p. 129 for his interest in Chinese.

<sup>16</sup> Schafer, p. 10. But his references to "Bezold 1920" throughout, and to the *Festschrift für Friedrich Hirth* . . . (p. 328) are incorrect; for the correct citation of Bezold's paper, which was published in *OAZ*, 8 (1919), 42–49, see Needham, p. 747.

<sup>17</sup> Needham, p. 275.

attention in 1919, yet curiously enough one not mentioned by him at the time. The metaphor of a “mane” in the perception of the Pleiades, or more precisely the metaphor of the bristles on the hump of the heavenly Zebu<sup>18</sup> who becomes our Taurus, will immediately speak to the Assyriologist. Ssu-ma Ch’ien’s *mao-t’ou* is transparently little more than a Chinese calque upon Assyrian *zappu* ‘bristle, animal hair; comb; the Pleiades, “conceived as the ‘mane’ of Taurus”’ (*CAD* 21.50). If indeed Chin. *mao-t’ou* ‘mane head(s)’ as a categorization of the Pleiades preserves, as Needham has suggested, any significant degree of early exactness or penetration of astral observation, the same is surely due to the ancient Orient, not to China. Once more, history begins at Sumer, or at least somewhere in the land between the rivers.

So there remain these three to be explored in the context of the Sinitic culture and its perception of the Pleiades: etymology, epigraphy, and iconography. But it is the first of these three, etymology, that is particularly cogent to our investigation, and yet for all that chronically ignored in the literature.

Chinese *is*, after all a language. It has words. Words in all languages, Chinese included, have etymologies, even though we are of course not always fortunate enough to be able to establish them in a convincing fashion. But etymological questions are seldom if ever raised in discussions of Chinese. When the Chinese language comes to be an issue, etymological investigation is almost uniformly displaced by questions of epigraphy. Immediately there is much talk about how this or that word in Chinese is or has been written, with neither energy nor enthusiasm left over even to enter upon the quite different and far more important question of where this or that Chinese word—and not the graphs or glyphs with which it is written—came from, in a word, the question of what is its etymology, i.e., its history.

Schlegel’s *Uranographie* of 1875 was in effect a single-minded tract in two volumes, prepared to marshal evidence in support of his thesis that “Chinese astronomy was the origin of all astronomy,” not only in the Western world but in Sumer and Babylonia as well. As Needham remarks, “most of his arguments, however, [today] seem very far-fetched.”<sup>19</sup> Especially

far-fetched, we must add, when as far too frequently, and as particularly in the case of the Pleiades, Schlegel indulged in his own unsupported epigraphic speculations by elaborating upon the equally insubstantial and totally unsupported speculations of late Chinese sources whose authors—quite like Schlegel himself—did not have at their disposal authentically antique specimens of the script upon which to base their hypotheses—even assuming that such hypotheses about the mental process of the earlier scribes could actually tell us anything about the origin of the linguistic forms, the Chinese *words*, involved—which they of course cannot and do not.

For the Pleiades in Chinese, Schlegel erected a truly formidable structure of sheer speculation. He began with a Han dynasty rewriting of the character now used to write Chin. *mao* ‘the Pleiades.’ But this was a most unfortunate point of departure, as it now turns out, since the Han and all subsequent graphic configurations of this character prove to have virtually nothing to do with the oldest attested forms that subsequently have become available to us from authentic pre-Han inscriptions on bones and bronzes. Upon what is thus clearly a spurious beginning Schlegel erected an equally spurious “epigraphic etymology,” or more precisely, a chain reaction of graphic etymologies, starting with ‘the sun over a closed door,’ then progressing in turn through ‘the moment when the sun sets’ to ‘sets completely’ to ‘completely’ to ‘the completion of all things’ to ‘autumn’ to ‘the autumnal equinox.’<sup>20</sup>

This lapidary chain led Schlegel directly into the arms of his obsessive thesis, the “proof” of the Chinese origins of all astronomy. Back in time even beyond his ‘sun over a closed door,’ he further postulated by *lucus a non lucendo* logic ‘the sun over an open door,’ and from there it was but a short step to postulating a graphic contrast between the rising sun at the vernal

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Schlegel’s time there was on the face of the matter nothing at all far-fetched about any of this. The problem is, of course, that such early imaginative excesses have ever since tended to give a bad name to all subsequent attempts to explore connections between the Far East and the ancient Orient, which in turn is frequently a serious impediment to otherwise potentially fruitful investigation of important problems.

<sup>20</sup> G. Schlegel, *Uranographie chinoise, ou Preuves directes que l’astronomie primitive est originaire de la Chine, et qu’elle a été empruntée par les anciens peuples occidentaux à la sphère chinoise; Ouvrage accompagné d’un atlas céleste chinois et grec* (Leiden, 1875, 2 vols.; reprinted Taipei, 1967), I, 351–56.

<sup>18</sup> Interestingly, though largely irrelevantly, this word is also apparently “oriental”: ‘Zebu’ is Tibetan *zeba*, *zeu* ‘hump,’ taken over as Fr. *zébu* on the occasion of the exhibition of a specimen of *Bos indicus* at the Paris Exposition of 1752.

<sup>19</sup> Needham, pp. 173, 273. I have taken the liberty of interpolating “[today]” into the citation to point out that in

equinox and the setting sun at the autumnal. With this leap of imagination Schlegel believed that he had precisely established the period of some 4,000 years necessary for the precession to alter the role of the Pleiades from that of a vernal to that of an autumnal equinoctial marker; and in evident glee at having finally worked all this out he wrote, "Les preuves que nous avons avancées ici sont tellement fortes et positives, qu'aucun bon esprit ne peut s'y refuser."<sup>21</sup>

Unfortunately for Schlegel, we now know that there is absolutely nothing to any of this. The oldest epigraphic evidence for the Chinese character used to write the word *mao* 'the Pleiades' (Fig. 8 [2], left) has nothing at all to do with the sun either setting or rising, and nothing either to do with doors either open or closed. It has, as its signfic or determinative element, three stars, represented as encircled dots, above a presumably phonetic element, nothing more.

Obviously, this writing does tell us something about how the Chinese scribes millennia ago perceived the Pleiades—and we shall also see in a moment how closely their perception as embodied in this writing correlates with the Chinese iconographic evidence—but it tells us nothing about the etymology of the word involved, Chin. *mao*—nor, alas, as Schlegel so strongly believed, about the high antiquity and ultimate priority of Chinese astronomical science.

Needham, for his part, and a full 75 years after Schlegel, was still content simply to note that the oldest written form used to write Chin. *mao* is a "graph of a group of stars"<sup>22</sup>—but of the word Chin. *mao* itself he says nothing. Some of us are not so easily satisfied.

For Chin. *mao*, B. Karlgren has reconstructed the most antique linguistic form that may be recovered by application of the comparative method to Chinese, also by taking into consideration the internal historical-phonological evidence preserved within the script itself, as *\*mlôg*. Because of its initial labial-liquid cluster this word *\*mlôg* is unlikely to be cognate within Chinese with *mao* 'mane', the word with which Ssu-ma Ch'ien glosses it in the *Shih chi*. By Han time

the two forms had pretty well converged, but we now know that they were originally very different, *mao* 'the Pleiades' < *\*mlôg* against *mao* 'mane' < *\*mog*.<sup>23</sup> When Ssu-ma Ch'ien "explained" *mao* 'the Pleiades' as *mao-i'ou* 'mane head(s)' he was at once passing on the tradition of an extremely ancient astral perception that had earlier come into China from Mesopotamia, and also making a quasi-etymological or paronomastic pun. But he was not telling us the etymology for Chin. *\*mlôg*, because he did not know it. Nor was he telling us that *\*mlôg* is "cognate with" *\*mog*,<sup>24</sup> because the concept of one linguistic form being "cognate with" another was quite as foreign to Ssu-ma Ch'ien as Karlgren's reconstructions themselves would have been.

Old Chin. *\*mlôg* 'the Pleiades' is, we must recall, attested impressively early. We know it from Chinese sources that at the latest must be referred to the eighth or ninth centuries B.C.<sup>25</sup> But even these texts, notably the *Shih ching*<sup>26</sup> and the *Yao tien* of the *Shu ching*,<sup>27</sup> unquestionably embody far earlier materials that were themselves compiled for the express purpose of preserving and handing down in their turn data based upon observations made in far earlier ages—just as the cuneiform tablets of the astronomical library of Uruk in Seleucid time were written in order to hand down the Babylonian knowledge of the heavens from still earlier periods—in which, let us note, they have succeeded beyond their scribes' wildest hopes.

At any rate, the Chinese *Yao tien* compilation has preserved more than one observation of Babylonian origin going at least as far back as 3000 B.C. In fact, Needham has described this text as being "part of the traditional patrimony of knowledge about the heavens derived from Babylonian sources."<sup>28</sup> Given this chronology, then, and in view of the evidence of the texts

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face value the long discredited folk-etymology for the *graph* Chin. *jun* 閫 'intercalary, intercalation' as showing a king (王) sitting or standing in a gate or court (門) in order to perform intercalation, quite ignoring the *word*, < *\*niyên*, plainly a secondary morphological derivate from *\*niyêr* 'two,' so that 'to intercalate' was in Chinese merely 'to double,' and had nothing to do with kings, gates, or courts.

<sup>23</sup> B. Karlgren, *Grammata Serica* (BMFEA 12) (Stockholm 1940), no. 1114g & h, 'the Pleiades'; no. 1137e, 'mane.'

<sup>24</sup> Pace Schafer, p. [77], note 2.

<sup>25</sup> Needham, p. 177.

<sup>26</sup> Needham, p. 244 with notes 5 and d; Legge, *Ch. Cl., The Shih King*, p. 423.

<sup>27</sup> Needham, pp. 177, 245–46.

<sup>28</sup> Needham, p. 177.

<sup>21</sup> Schlegel, I, 354.

<sup>22</sup> Needham, Table 24 No. 18, at p. [236]. Particularly in view of Needham's magnificent mastery of science of every description, one wonders not so much why but how he has remained deaf to the siren call of linguistics. Even an elementary textbook introduction would have saved him from this and other embarrassing passages; e.g., his astonishing claim that "a full phonetic alphabet needs 46 [graphs]" (p. 239 note g), with no mention of which language is involved in this *ex cathedra* ruling. Similarly, he accepts on

and their dates, is it utterly feckless and totally without historical-linguistic utility at least to entertain the possibility that in Old Chinese \**mlôg* ‘the Pleiades’ we have the echo of some unknown intermediate form or forms ultimately related to Sumerian MUL ‘star’, as borrowed and reborrowed, finally to result in the Sinitic name for the asterism that was, throughout Asia east and west alike, so frequently perceived and spoken of as “*The star*,” κατ’ ἐξοχήν?

Our colleagues who study the ancient Near and Middle East will be quick to point out many of the difficulties that for the moment at least appear to stand in the way of this etymology. They will assure us that any astronomical knowledge that may have voyaged eastward from Mesopotamia must have done so at a time when Akkadian and not Sumerian was the culture language. They will be troubled that it should be the Sumerian singular MUL ‘star’ and not the reduplicated MUL.MUL ‘the Pleiades’ that seems to have entered into Chinese. And surely they will not think at all well of an attempt to find in the final troublesome, and frankly still unexplained final \*-g of the Old Chinese form some trace of the so-called Sumerian genitive, an etymological suggestion that apparently would put us in the same direct line of Assyriological fire that was so volubly directed against Falkenstein’s “Genetivische Verbindungen” etymology for the godname ‘Marduk’ by Karl Oberhuber in his revision of Bruno Meissner’s paperback handbook on cuneiform.<sup>29</sup>

Nevertheless, something may eventually be salvaged from this at present extremely tentative etymology for Chin. *mao* ‘the Pleiades.’ The Chinese word for ‘pomegranate’—which happened to be in Old Chinese a form of almost identical phonological configuration with the Pleiades designation, i.e., another \**mlôg*—was folk-etymologized at the time of its historically well-attested borrowing from Semitic because it was perceived to be an object resembling some variety of tumour or similar growth.<sup>30</sup> The Chinese word *mao*

may very well have similarly been folk-etymologized at the time of its borrowing from ultimately Sumerian origins so as to go along with original Chinese words of similar phonetic shape meaning ‘net,’ ‘fish-trap,’ and other basket-like devices for catching, and holding alive, small game and animals.<sup>31</sup>

This variety of folk-etymology itself, of course, constitutes yet another important variety of evidence for the perception of the Pleiades. But even more significantly, it also provided the interlingual lubrication necessary for the process—apparently always a very difficult and friction-ridden operation in the case of Chinese—of taking over the foreign term for ‘the Pleiades,’ whatever that may have been and wherever it may have come from, and naturalizing it as Chin. *mao*, just as metaphorical folk-etymologizing in terms of tumours played the same essential lubricating role in the naturalization of the clearly Semitic originals for the Chinese word for ‘pomegranate’ approximately three millennia later.

In all this, we ought never to forget the several striking instances that P. Kunitzsch pointed out in his 1959 dissertation,<sup>32</sup> not only of Babylonian but actually even of Sumerian lexical designations for specific asterisms having survived, often much altered but still clearly visible linguistically, through Ptolemy and into the works of the Arabic polymaths, notably (but of course not exclusively) into the catalogue of fixed stars of ‘Abd ar-Rahmān aš-Šūfī (ca. 964), and from Arabic compilations eventually into such well-known “European” designations as Altair, Regulus, and particularly Spica.<sup>33</sup> All of these terms, as Kunitzsch demonstrates, still show not only their Babylonian but also their Sumerian origins and identity, lexically as well as astronomically. When F. Hommel wrote in 1891 of the origin and antiquity of the Arabic star names with particular attention to the terms for the “moon stations,” he had even this long ago stressed this grand continuity.<sup>34</sup> Many of his details, as Kunitzsch found in 1959, now require revision. That is only natural. But the main line of Hommel’s 1891 thesis survives intact. Perhaps by the

<sup>29</sup> B. Meißner & K. Oberhuber, *Die Keilschrift (Sammlung Göschen*, Bd. 708, 708a, 708b) (Berlin, 1967), p. 153b; A. Falkenstein, *Das Sumerische (Handb. des Or. 1:2:1,2:1)* (Leiden, Köln, 1959), p. 32.

<sup>30</sup> R. A. Miller, “The Etymology of Chinese ‘liu’ ‘Pomegranate,’” *Language* 27 (1951), 154–58. It is discouraging in the extreme to read Donald Harper’s uncomprehending (and largely incomprehensible) attempt, *JAOS* 106 (1986), 141 n. 8, to overthrow this loanword etymology for Chin. *liu* ‘pomegranate,’ particularly the provision that it made for the semantic incorporation of a fortuitously homophonic Chinese etymon.

<sup>31</sup> B. Karlgren, *Grammata Serica*, no. 1114x ‘fish trap,’ with which cf. the citations in note 26 *supra*. On a curious semantic resemblance in Indo-European, see Scherer, *Gestirnnamen*, p. 142.

<sup>32</sup> P. Kunitzsch, *Arabische Sternnamen in Europa* (Wiesbaden, 1959).

<sup>33</sup> Kunitzsch, pp. 16, 138–39, 168–69, 146–47.

<sup>34</sup> F. Hommel, “Über d. Ursprung und d. Alter d. arabischen Sternnamen und insbesondere d. Mondstationen,” *ZDMG* 45 (1891), 592–615.



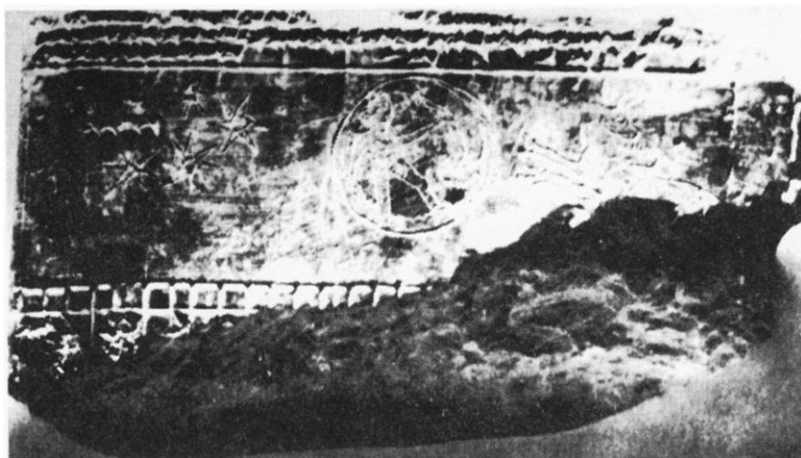


Fig. 1. Pleiades, Marduk, & Taurus. (VAT 7851). From E. F. Weidner, "Gestirn-Darstellungen auf babylonischen Tontafeln," 1967 (cf. note 40), Taf. 1.

time, now only a few years in the future, when our colleagues will surely be celebrating the centenary of Hommel's justly celebrated contribution, we may for our part be able to add some small element of jubilation to those festivities by having pointed out, in old Chin. *\*mlôg* 'the Pleiades' yet another far-ranging echo of the same materials that Hommel first identified, culled, and scrutinized almost a century ago.

And, wherever Chin. *mao* < *\*mlôg* came from—and it must surely have come from somewhere—we now need look no further than this Sinitic form for the origin of the much-mooted Altaic *ülkär*, *ülgär*, and *ilkun*, so obviously are these words all early loans from still earlier Chinese forms into Turkic and Tungus, or more precisely, into "Altaic," particularly in the light of the well-documented Sumerian allomorphs /ul/ and /wul/ for MUL.<sup>35</sup> The tortuous vicissitudes of all instances of initial *\*m-* in Altaic historical phonology, whether in inherited materials or in loans, need not be rehearsed here,<sup>36</sup> except to note that what we already know of the developments of such labials in all these languages supports the proposed etymology. The *\*-g* of *\*mlôg* finds its immediate representation in the Altaic forms in question (and incidentally shows that the borrowing was from Chinese into Altaic, not

the other way around<sup>37</sup>). Only the final, suffixal elements *\*-Vr* and *\*-Vn* need accounting, but this is a task of no great difficulty.<sup>38</sup>

But interesting as these etymological questions are, it is necessary to pass on from Chinese etymology into the equally seductive arena of Chinese iconography. Instead of speculating about the pictorial content of graphs and glyphs which may very well not be pictures at all, particularly at the relatively late stage of their development at which we generally find them in China, surely we ought to look with greater attention at what are undeniable and unquestionable pictures. Such documents may even prove to be of primary philological import, as the Assyriologist will be quick to remind us, recalling E. F. Weidner's reliance upon an iconographic representation of a seven-star asterism in order to demonstrate for the first time the precise lexical meaning of the late Babylonian gloss *zappu* for Sum. MUL.MUL.

The tablet in question is a famous one from the Berlin collections VAT 7851, looted in the first years

<sup>35</sup> Evidence for these allomorphs is to be identified in the writings UL, UL<sub>2</sub>, and UL<sub>8</sub>.UL<sub>8</sub> (P. A. Deimel, *Šumerisches Lexicon* [Rome, 1950], Vol. IV, pp. 63a, 105b).

<sup>36</sup> On the vicissitudes of Proto-Altaic *\*m-*, along with the parallel labial *\*b-*, see N. N. Poppe, *Vergleichende Grammatik der altaischen Sprachen, Teil I, Vergleichende Lautlehre* (Weisbaden, 1960), pp. 340–36, 20–21.

<sup>37</sup> On the "reality" of Karlgren's reconstruction of original Chinese final *\*-g* in this and parallel words, cf. Old Chin. *\*liôg* 'willow' borrowed as Trc. *lük*, Khotanese Saka *đük* (R. A. Miller, *Accounts of Western Nations in the History of the Northern Chou* [Berkeley, 1959], p. 21 note 27; *Monumenta Serica* 27 [1968], 426–27).

<sup>38</sup> E.g., it would be a simple matter to explain these suffixes in terms of inheritance from the rich Proto-Altaic system of markers for plurality, cf. G. J. Ramstedt, ed. P. Aalto, *Einführung in die altaische Sprachwissenschaft, II, Formenlehre* (MSFOu 104.2) (Helsinki, 1952), pp. 53–59.

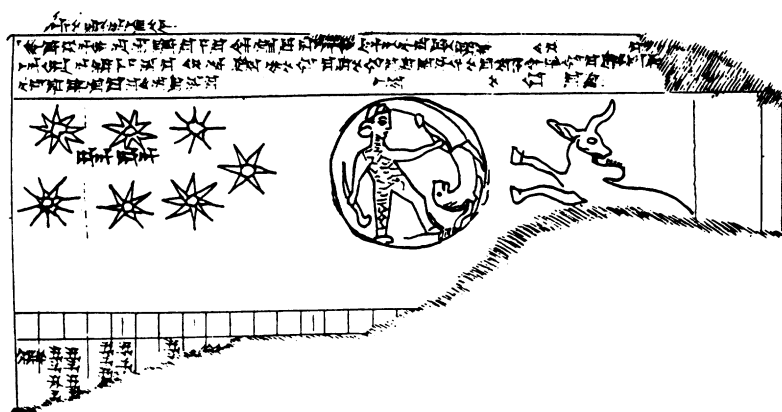


Fig. 2. Pleiades, Marduk, & Taurus. (VAT 7851). From *ibid.*, Taf. 2.

of this century from the great South Babylonian tablet-library of Uruk, and dating from the Seleucid Period, i.e., sometime in the last three centuries B.C. (Figs. 1, 2). E. F. Weidner, first writing about this document in 1919, commented upon its extraordinarily clear representation of the moon, which makes clear what the Babylonian imagination found to be of enchantment in the mysterious passage of the moon's disk;<sup>39</sup> a half-century later he returned to the tablet further to explore its iconography as a source for understanding the "imagination-rich inhabitants of Mesopotamia" in even more detailed terms.<sup>40</sup> Marduk, the archetypical "Man-in-the-Moon," is shown between the Pleiades on the left and Taurus on the right, slaying a lion-like animal, the whole intended as a figure for the victory of the new moon over the old. Taurus is shown as a rearing-up, humpbacked bovine, the Zebu or *Bos indicus*, while on the left we have an almost startlingly plain and uncomplicated map of seven stars linked together by single lines, and unequivocally labelled MUL.MUL or <sup>MUL</sup>zappu, 'the Pleiades'.

In his 1977 book on Chinese astral perceptions and lore, Schafer cited only one genuinely antique iconographic representation of the Pleiades. This came from a star-map discovered on the ceiling of a T'ang tomb excavated during the period 1963–65 by the Sinkiang Uighur Autonomous Region Museum Staff, later published in somewhat inadequate detail in the

principal Chinese archeological journal.<sup>41</sup> The tomb in question, No. 65TAM 38 in the serial-numbering of the excavations, is to be dated sometime between the mid-7th and mid-8th century. Its contents had largely been vandalized long before its modern excavation, but left intact were a set of mural paintings in high T'ang style, showing "the lascivious and indolent life of luxury in which the inhabitant of the tomb once lived, in sharp contrast to the stark realities of the slave-labor-masses of the period,"<sup>42</sup> and a painted ceiling star-map. Schafer, reproducing the drawing of this ceiling from *Wen Wu* (his Fig. 2, our Fig. 3), wrote of it, "We are fortunate in having a chart of the whole sequence of twenty-eight asterisms<sup>43</sup> as they were envisaged by the men of mid-T'ang preserved on the ceiling and upper walls of a burial chamber recently excavated at Turfan (ancient Qoço) in Chinese

<sup>39</sup> E. F. Weidner, "Babylonische Hypsomatabilder," *OIZ* (1919), Nr. 1/2, 10–16.

<sup>40</sup> E. F. Weidner, "Gestirn-Darstellungen auf babylonischen Tontafeln," *Sitzungsber. österreich. Akad. d. Wissenschaften, Phil.-hist. Klasse*, 254. Bd., 2. Abhandlung, 1967, 56 pp. mit 17 Tafeln.

<sup>41</sup> *Wen Wu* No. 209 (1973.10), 7–27. *Pace* Schafer, p. 327, this article is not anonymous; it is signed by its author Li Cheng 李征. Schafer also refers to the site of the tomb that contains the star-map ceiling variously as "Qoço" or "Turfan." The article actually reports on excavations of a number of tombs in two different sites, one named Qaraqoča (哈拉和卓), the other Astana (阿斯塔那), both in Turfan *hsien*. The tomb 65TAM 38 with the star-map ceiling is at the Astana site, not Qaraqoča.

<sup>42</sup> *Ibid.*, p. 19b.

<sup>43</sup> I.e., the twenty-eight *hsiu*, lunar mansions or 'lodgings,' each of which was distinguished by and named after a specific asterism. In this and parallel contexts it is always well to keep in mind the essential distinction between the *hsiu* = *nakštra* as distinguished by and named after, e.g., the Pleiades on the one hand, and the asterism of the Pleiades proper on the other.

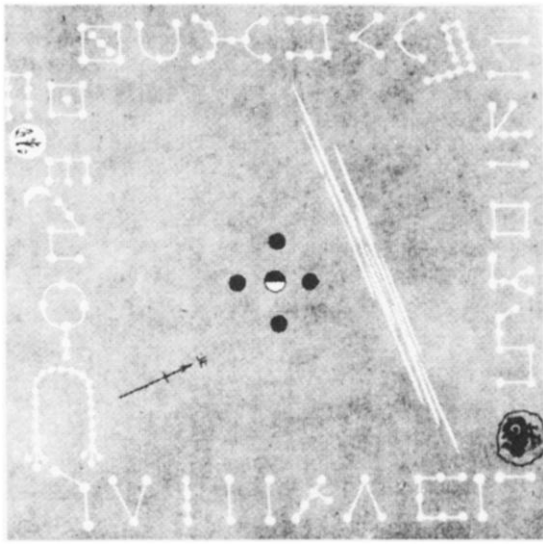


Fig. 3. Astana Tomb 65TAM 38 Ceiling Star Map (Chinese Turkestan). From Fig. 23, p. 18 in *Wen Wu* no. 209 (1973.10).

Central Asia. The lodgings are shown as geometrical patterns in white, with the component stars represented by dots connected by (usually) straight lines."<sup>44</sup>

In this star-map the Pleiades is represented by the six-star drawing to be found third from the left on the top row of the figure, forming a box, as it were, open to the left. Unfortunately the *Wen Wu* publication of this precious document gave no photographs of the star-map ceiling, only the single ominously neat and clear drawing of its constellations and asterisms that Schafer and I both reproduce. Nor is there any way in which to verify how accurately this drawing reproduces what was actually found in the tomb. But even putting all good faith in this, the little that we have, it seems difficult to associate the icon of the Pleiades preserved in this Turkestan tomb with any perception of the Pleiades as a 'mane,' i.e., to identify any hint of

<sup>44</sup> Schafer, p. 79, but reading "Astana" for his "Qočo" as explained in note 41 *supra*. Important hints for further study of all the early Far Eastern star-maps found in tombs may be gleaned from I. Ecsedy, "The Oriental Background to the Hungarian Tradition about 'Attila's Tomb,'" *Acta Orient. Hung.* 36 (1982), 129–53; see in particular her remarks about how "[t]he 'star-lit ceiling' of the 'chamber of coffin' also played a role in the underground, mostly 'reversed' (night-bound) immortality of royal persons in the Far East . . ." (p. 150).

the old metaphor associating these stars with the bristled-hump of the Taurus-Zebu.

The *cul-de-sac* configuration of the asterism in this drawing appears to speak instead in the direction of an entry in the 11th-century Middle Turkish bilingual of al-Kāšyarī, where the author documents an Old Turkic collocation for a specific variety of military stratagem. This was an ambush technique apparently well-known among the early Uighur fighting forces, called *ülkär čärig* 'the Pleiades maneuver.'<sup>45</sup> This term, and the perception behind it, would together certainly go far toward explaining the curiously un-mane-like configuration of the Pleiades icon found on the ceiling of this tomb; what we would then have there would be a drawing of the *cul-de-sac* ambush formation of the early Turkish armed forces, their *ülkär čärig*. Nor would such a Turkic explanation for the icon be in the least surprising; after all, even though the tomb where it was found is of T'ang date and contains much evidence for Chinese culture and civilization, it is at the same time from Turkestan, a place that was—and is—not called that for nothing.

Meanwhile, and from the other extremity of the Sinitic culture sphere, we happen to have equally early iconographic evidence for a quite different, very Chinese, and very mane-like perception of the Pleiades. This is to be found on another tomb-ceiling star-map, not included in Schafer's book and indeed little known outside of contemporary Japanese archeological circles.

The icon in question comes from Japan, found in a tomb of almost the same date as the Turkestan find, the Takamatsuzuka 高松塚 tumulus (*kofun* 古墳) in the vicinity of Nara, excavated for four days in late March 1972 and then hurriedly resealed and never again entered. Fortunately a number of excellently detailed color photographs of the contents of the tomb, and particularly of its mural and ceiling paintings, were taken during the brief period when the chamber was open. Even more fortunately these have been published and are generally available, together with a large literature of detailed studies on their evidence by Japanese scholars in several different disciplines.

<sup>45</sup> Mahmūd al-Kāšyarī, *Divān Luḡat at-Turk*, ed. C. Brockelmann, *Mitteltürkischer Wortschatz nach Mahmūd al-Kāšgaris Divan Luḡat at-turk (Bibl. Or. Hung., I)* (Budapest-Leipzig, 1928), p. 236; cf. also the citations in *DTS*, p. 625a, and G. Clauson, "Early Turkish Astronomical Terms," *UJBr* 35 (1964), 363. (Sir Gerard believed that *ülkär* "was originally a military term meaning 'ambush,' then used metaphorically for . . . the Pleiades," but that course of semantic development seems improbable.)

For the star-map ceiling, which in this tomb was worked with *ca.* 1 cm. gold-leaf stars connected with red lines, we have the luxury of at least three different published versions with which to work: a color photograph made while the tomb was open (Fig. 4, here reproduced in black-and-white), and two separate drawings by two different Japanese scholars based upon that photograph (Figs. 5, 6). Each of the two drawings differs in details, depending upon precisely what the scholar concerned felt he was able to see in the original color photograph. But taking these three sources together we have, at the very least, a much more reliable guide to what is actually to be found in the ceiling star-map than, e.g., we have for the Turkestan tomb now known only through the single available secondary drawing.

Incidentally, the somewhat complicated asterism to be found in the center of the Takamatsuzuka ceiling probably explains why this important archeological find was resealed so soon after its discovery in 1972, and also why it has never been reopened for further study. Both Japanese law and Japanese custom strictly forbid archeological study of “Imperial Tumuli,” i.e., burial sites that either early history or later tradition associate with specific figures in the imperial line. The Takamatsuzuka tumulus was, a century ago, generally identified as the burial place of the forty-second sovereign in the line “Emperor Monmu” 文武 (traditional dates [683–707]). Later this tradition was discredited by the Japanese authorities, permitting the 1972 opening of the site. But as soon as a preliminary drawing of the ceiling star-map found in the tomb was published, a perceptive Japanese scholar of the history of Chinese astronomy pointed out in a newspaper article that this central asterism, corresponding to the Chinese *Tzu wei yüan* 紫微垣 ‘Purple Forbidden Enclosure,’<sup>46</sup> was employed, at least in Chinese and Korean tombs, only when the occupant was a royal or imperial personage.<sup>47</sup> This promptly led to the resealing of the tomb, and has placed it off-limits to scholarship thereafter, since to the Japanese authorities it suggested that perhaps the original attribution of this burial to “Emperor Monmu” had been correct after all.<sup>48</sup>

<sup>46</sup> Needham, p. 259; Schafer, p. 47 (“Wall of Purple Tenuity”).

<sup>47</sup> The offending newspaper piece was published in the *Yomiuri* evening editions for 12 April 1972, and is reprinted in Suenaga Masao, ed., *Asuka Takamatsuzuka kofun* (Tokyo, 1972), pp. 234–35.

<sup>48</sup> Unfortunately virtually all that is available on this tomb and its suddenly aborted excavation in a Western language



Fig. 4. Takamatsuzuka Tumulus Ceiling Star Map (Japan). From Plate 8 in unpaginated front-matter of *Bukkyō Geijutsu*, *Ars Buddhica* No. 87, August 1972.

At any rate, what we have in this drawing of the Pleiades (Figs. 4, 5, 6; Fig. 8[B]) is startlingly close to the late Babylonian drawing of the asterism from Uruk. Here we see nothing of the Turkic armies’ *cul-de-sac* with its six-stars as depicted in Turkestan.

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are two articles by J. Edward Kidder, Jr., “The Newly Discovered Takamatsuzuka Tomb,” *Monumenta Nipponica* 17 (1972), 245–51, and “Asuka and the Takamatsuzuka Tomb,” *Archeology* 26 (1973), 24–31. Both must be used with caution, and never without verifying what they say with the Japanese literature. This is in part because Kidder is not generally reliable in his second-hand accounting of Japanese sources (e.g., in the second of the two articles cited, his account, p. 30, of the ceiling star-map is largely misleading, particularly what is said there about Korean parallels, directly contradicting what the Japanese sources say; even misleading is his single laconic reference to the star-map in *Mon. Nipp.* 27, 247, where for “constellations” we must understand “asterisms”). But more serious is Kidder’s consistent championship of the official Japanese ideological position on such matters, cf. his truly astonishing allegation in *The Japan Times*, 15 June 1986, to the effect that “No known archaeologist [in Japan] has given up for fear of finding the ‘truth’. . . none has ever stopped digging because he was afraid of what he would discover or the results [grammar sic!] would upset his theories or discredit his or his country’s reputation”! Such rigid adherence to the official orthodoxy means of course that Kidder must jump quite rapidly when the “line” changes, as indeed from time to time it does. In 1972 he wrote of the Takamatsuzuka tomb, “If it had in any way

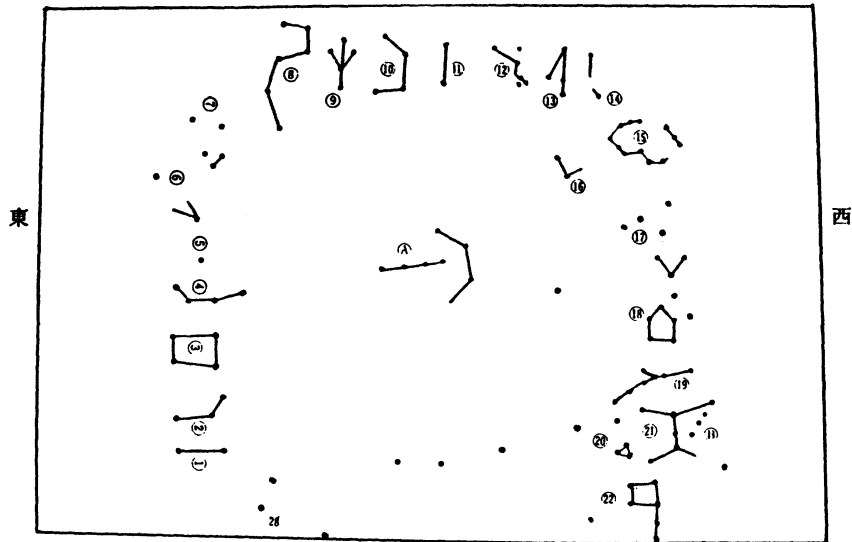


Fig. 5. Id., drawing by Yoshida Mitsukuni. From loc. cit., p. 59.

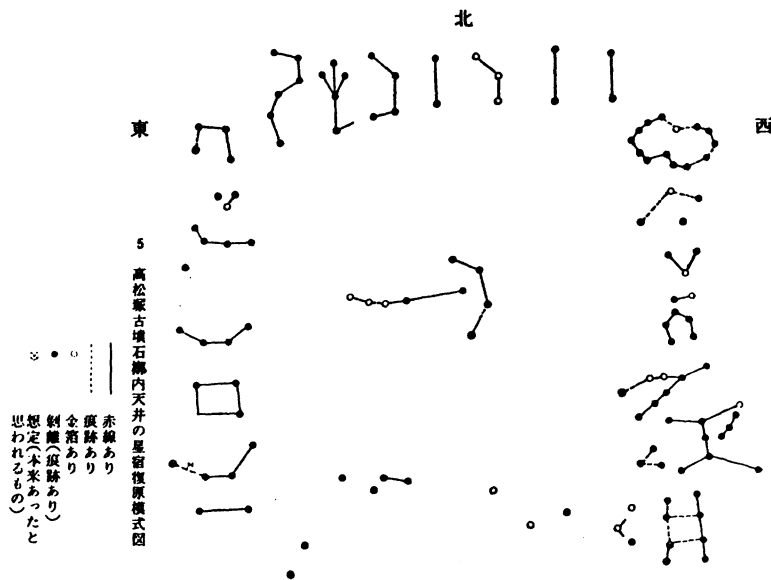


Fig. 6. Id., drawing by Suenaga Masao. From loc. cit., p. 9.

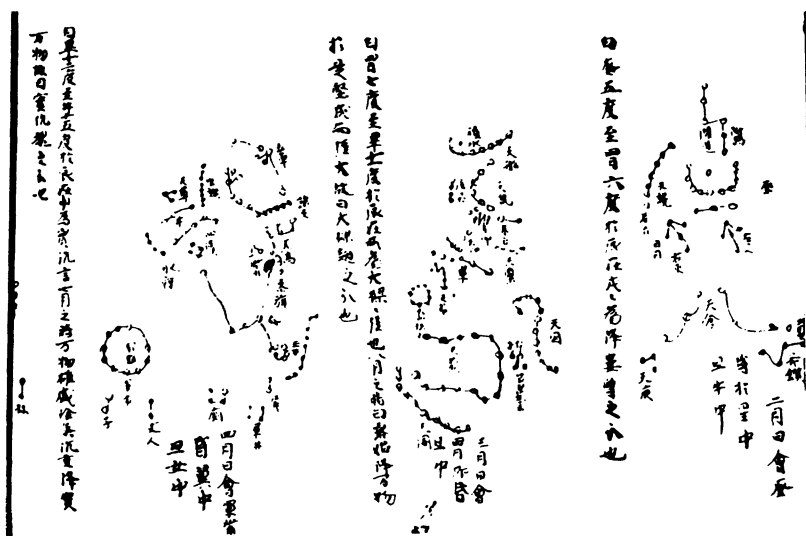


Fig. 7. Tun-huang Star Map (Brit. Mus. MS 3226, Stein Coll.). From Fig. 5, p. 34 in *Wen Wu* No. 185 (1966.3).

Instead, we have the classic tricorn-topped rectangle with the full seven-star inventory of the ancient Orient, together with the additional important detail of a plume or spur at its termination. Perhaps Schafer, in his understandable enthusiasm for a genuine relic appearing to preserve the Chinese asterisms as they were “envisaged by the men of mid-T’ang” somewhat overplayed his hand. In the Turkestan tomb the painting is without question the painting of the “men of T’ang”; but the shapes of the stars, at least the configuration of the Pleiades, are those of the Uighur fighting forces. To find out how the Pleiades were

been identified with the imperial family it would not have been touched” (*Mon. Nipp.*, 27, p. 245). As we have seen, even at the time this was incorrect. The tomb had been identified as an “imperial burial,” but the identification had been discredited. But with the publication of the newspaper piece about the star-map (note 47 *supra*), that earlier identification was once again taken seriously by the authorities, the excavation was aborted, and the tomb was resealed. Kidder for his part has now had to cut his cloth to fit the new wind blowing from the Imperial Household Agency, most recently writing that the Takamatsuzuka tomb “is presumed to have been the burial place of an intimate member of the royal family [sic! what does this mean?] who died around A.D. 695” (*Mon. Nipp.*, 42 [1987], p. 57). His lapsus in writing “royal,” not “imperial” here will, one suspects, not pass unnoticed by the powers-that-be; watch the pages of *Monumenta Nipponica* for the expected apology.

actually “envisaged by the men of mid-T’ang” we must go, not to Turkestan, but—as is so often the case—to early Japan.

Similarly redolent with the ancient Oriental perception of the Pleiades as the mane of the heavenly Zebu is the configuration of the asterism found in the star-map of Ch’ien Le-chih 錢樂之 (*fl.* A.D. 424–453), a particularly significant exemplar since we have it available in a notably early MS from the Tun-huang caves, now Brit. Mus. MS 3226, and probably to be dated *ca.* A.D. 940 (Fig. 7). This unique MS is of special interest because its putative dating makes it virtually a contemporary of the *Kitāb al-kawākib al-tābita*, the catalogue of the fixed stars by ‘Abd ar-Rahmān aṣ-Ṣūfī of *ca.* 964. Needham was waxing unduly if understandably enthusiastic about this MS when he wrote that “it is almost certainly the oldest extant star-chart from any civilisation”; but we will certainly wish to agree with him that it is “a precious possession.”<sup>49</sup> In Brit. Mus. MS 3226 the Pleiades appear as a most curiously drawn set. Four stars are individually and clearly visible, the fourth partially linked to the others by a zig-zag line that, along with a comb-like figure at the bottom-right of the asterism, echo the up-down bristle-comb of the Zebu-Taurus

<sup>49</sup> Needham, pp. 264 note c, 276. The entire Brit. Mus. MS 3226 is now reproduced and studied in Hsi Tse-tsung 席澤宗, “Tun-huang hsing-t’u 敦煌星圖,” *Wen Wu* No. 185 (1966.3), 27–38.

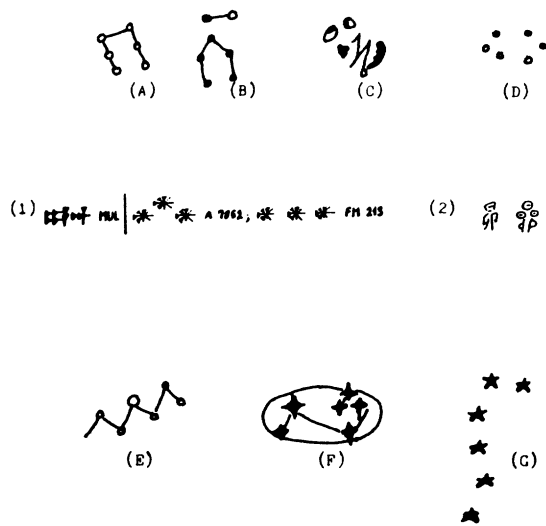


Fig. 8. Pleiades Perceived. (A) detail, Astana tomb ceiling. (B) detail, Takamatsuzuka tumulus ceiling. (C) detail, Tun-huang star map. (D) detail, *Shih-lin kuang-chi* (Sung; see text). (E) detail, *T'ien-yüan li-li ch'üan-shu* (Ch'ing; see text). (F) Subaru automobile logo. (G) McCulley Street (Honolulu) bar logo. (1) Sumerian written forms, from Gelb, *MAD* (see text and note 53). (2) Chinese written forms, from Karlgren, *Gr. Ser.* (see text and note 53).

(midway in the center panel of Fig. 7; cf. the redrawn detail of the Pleiades from this ms in Fig. 8 [C]).

The considerable iconographic variation in the various early Sinitic perceptions of the Pleiades may conveniently be surveyed in the collected iconographic evidence of Fig. 8. (A) is the Pleiades as the Uighur military ambush, redrawn from the Astana Turkestan tomb ceiling and re-oriented toward north at the top of our figure. (B) is the Pleiades as the heavenly mane, redrawn from the Takamatsuzuka tomb ceiling and similarly re-oriented. (C) is the Pleiades as seen in Brit. Mus. ms 3226 from Tun-huang; when viewed, as here in juxtaposition with (A) and (B) it is easy to see how even this highly unusual configuration of the icon manages to preserve the same essential lines of perception that were earlier identified in (B) from Japan. (C) also makes it possible to understand the highly simplified, even abstract representation of the asterism in (D), another six-star icon, this time from rather later in the Chinese tradition, the Sung dynasty *Shih-lin kuang-chi* 事林廣記 (“Unabridged Account of the Forest of [Civil] Affairs”), an encyclopaedia first

printed in 1325, written in the period 1100–1250.<sup>50</sup> Needham has a specimen of this source’s south polar projection of the heavens; the drawing here is from its parallel view of the north reproduced in the modern Japanese encyclopaedia *Koji ruien* 古事類苑 (“Classified Garden of the [Civil] Affairs of Antiquity”), 1:2, 86 (Tokyo, 1908; reprinted 1928). (E), the principal icon for the asterism reproduced in Schlegel (I, 351–56), is also not without interest despite the late date of its source, the *T'ien-yüan li-li ch'üan-shu* 天元曆理全書 (“Complete Treatise on the T'ien-yüan Calendar”) of 1682. This is a Ch'ing dynasty tract in favor of the so-called “Bamboo-books” chronology. But the icon (E) itself is surely far older than the text in which it is found. Even though the source already shows, in other connections, examples of 17th-century conflation of inherited Chinese astronomy with Western notions arriving *via* the Jesuits then already in Peking, its drawing of the Pleiades incorporates gratifyingly antique perceptions. Clearly visible is the saw-tooth configuration of the Zebu’s bristling back, here as clear as it ever is in the Chinese sources, and indeed clearer than in some of the earlier exemplars.<sup>51</sup> (F) and (G) in Fig. 8 round out the illustrative materials. (F) is the modern Subaru automobile logo, to which we shall return; (G) is offered in apology for the almost complete lack of any other data from the Korean domain of the greater Sinitic culture area.<sup>52</sup> It copies the configuration of a six-star asterism to be found as the logo on the sign of a bar on McCulley Street in Honolulu, Hawaii, near the site of the former Golden Duck Restaurant. On one side of this sign the bar identifies itself as “Subaru” in Japanese *hiragana*, on the other side with Chin. *mao* ‘the Pleiades’; it additionally carries the word “Subaru” in romanization on both sides. Earlier prototypes of this con-

<sup>50</sup> Needham, p. 323.

<sup>51</sup> The perception of the Pleiades as a ‘razor,’ which turns up in Buddhist texts and from there is introduced into China and Japan (Schafer, p. 84), probably also originates in this same saw-tooth configuration for the asterism; cf. ‘razor’ as in ‘razor-back hog.’

<sup>52</sup> Otherwise known to me is only the apparent and still insufficiently studied reference to the Pleiades in the *Samguk Yusa* 三國遺事 1.10 (translated by Tae-Hung Ha and Grafton K. Mintz, *Legends and History of the Three Kingdoms of Ancient Korea* [Seoul, 1972], pp. 42–43), where “six eggs come down from heaven” and become both the founder of the royal line and of the chiefs of the five Kaya tribes; the fourth of the five is lexically linked with the astral myth by its name Söngsan 星山 Kaya.

figuration of six stars are unknown, and the stars are the modern, Western five-point variety. But whoever was responsible for the design of the logo surely had heard the “mane” explanation for the arrangement of the members of the asterism, and tried to depict it in the sign’s graphics.

Finally, Fig. 8 (1) and (2) display standard and earlier writings for words meaning ‘the Pleiades’ from the two extremes of the ancient Orient: (1) Sumer, (2) China (the oldest Chou-dynasty writing available is on the right, and the Han and later, i.e., the modern, writing on the left). Of course there is no suggestion of linking these two bodies of epigraphical evidence with one another. But at the same time one can hardly overlook the fact that both plainly embody the same essential perception of a triangularly arranged set of stars—a tricorn, as it were—for their writing of the words going with this asterism. Widely separated in time and space, these two different sets of graphs nevertheless still speak for a parallel if not a common and perhaps even somehow an historically related perception.<sup>53</sup>

In one sense we have already been to Japan in our peregrination of the perceptions of the Pleiades. But that was solely to inspect the Sinitic evidence preserved in the Takamatsuzuka tumulus star-map. Now we must undertake the necessary excursion into Japan properly speaking.

Astral observation along scientific lines, i.e., in terms of Chinese models, reached Japan late. “For pre-mathematical peoples,” Schafer has observed, “the stunning displays over arid lands are more conducive to star worship than to star study.”<sup>54</sup> *Mutatis mutandis* this holds true for Japan as well, even though it is hardly an arid land. But then, neither do its skies frequently offer “stunning displays” of astral phenomena. Even before modern pollution set in, bright, unobscured nights were for most parts of the year the exception rather than the rule. This was always particularly true during those agriculturally important seasons when, in early spring, the skies are virtually obliterated by clouds of yellowish-brown loess ferried in by the prevailing winds directly from China, and then again in early summer when the monsoon (*tsuyu*) totally conceals the skies day and night for weeks at a time.

<sup>53</sup> I. J. Gelb, *Old Akkadian Writing and Grammar (Materials for the Assyrian Dictionary, 2)* (Chicago, 1961), p. 68; B. Karlgren, *Grammata Serica*, loc. cit. (cf. note 23 *supra*).

<sup>54</sup> Schafer, pp. 8–9.

We have the testimony of the *Nihon shoki* of A.D. 720 that the first astronomical texts were brought to the islands in A.D. 602 by a Korean Buddhist missionary-priest from the Old Korean Paekche kingdom.<sup>55</sup> Only in A.D. 675 was the first free-standing architectural structure devoted to astronomical observations erected.<sup>56</sup> This building was soon put to practical use; and particularly interesting it is to learn that the first observations made from its top concerned the appearance of a tailless or aphelial comet that “shot up in the Zenith and proceeded along with the Pleiades until the end of the month,” in the eleventh lunar month of a year largely in correspondence with A.D. 684.<sup>57</sup>

The British scholar-diplomat William George Aston (1841–1911) who first translated this text was struck by what seemed to him a relative paucity of astral observation, and indeed of any notices of astronomical interest in the pages of this very long book: “The only stars [mentioned] are Venus, the Pleiades, and the Weaver or Star  $\alpha$  Lyrae.”<sup>58</sup> The Weaver-Girl Star, Vega,  $\alpha$  Lyrae, is one of the two principal participants in an elaborate Chinese astral cult that centers around an annual tryst between this asterism and the so-called Herd-Boy, Altair,  $\alpha$ ,  $\beta$ ,  $\gamma$  Aquilae. The myth and the cult alike are both apparently of Chinese origin, and reached Japan through Korean literary intermediaries.<sup>59</sup> Both capitalize upon the circumpolar situation of these two stars which, though formally outside the 28-member lunar mansion list, nevertheless belong to the oldest nucleus of that system even in China, where it is clear that they antedate even the oldest textual levels of the *Shu ching*.<sup>60</sup> They were also old enough to require replacement by other more clearly observable, because brighter, circumpolars as

<sup>55</sup> W. G. Aston, *Nihongi, Chronicles of Japan from the Earliest Times to A. D. 697* (London, 1896, 2 vols.; reprinted Tokyo, 1972), II, 126; text in *Nihon Bungaku Taikei* vol. 68 (1965), p. 179 (the name of the Paekche monk was Kwanlūk 觀勒).

<sup>56</sup> Aston, II, 326. On the possible configuration of this structure, Needham pp. 297, 298, and Schafer, p. 14; they discuss the sole surviving Korean example of such a building.

<sup>57</sup> Aston, II, 367; text, p. 466.

<sup>58</sup> Aston, I, 69, n. 5. Coincidentally, the same theme is repeated in the now-standard lexicon of Old Japanese, the Saneidō’s *Jidai-betsu kokugo daijiten, Jōdaihen* (Tokyo, 1967), p. 391a, s.v. *subaru*.

<sup>59</sup> Cf. Kojima Noriyuki, *Jōdai Nihon bungaku to Chūgoku bungaku* (Tokyo, 1962–65, 3 vols.), II, 1120–53.

<sup>60</sup> Needham, pp. 244–45.



the inexorable precession of the equinoxes inevitably shifted the original candidates for the leading roles in this drama away from their first places in the expanses of the night skies.<sup>61</sup>

Transfer of the myth and of the cult of stars figuring in it to Japan was fraught with difficulty. Traditionally celebrated in China on the seventh night of the seventh lunar month, it would, as a consequence, have to be observed in Japan dangerously close to the beginning of the rainy season, when it was almost always impossible to observe the astral carryings-on. And this situation became only more frustrating with the adoption of the Gregorian calendar by modern Japan in 1873, shifting this “Star Festival” (*tanabata* 七夕) to 7 July. Ever since, the Herd-Boy and the Weaver-Girl have consistently been obscured from Japanese view by the monsoon cloud cover, with little chance either of them meeting or of their meeting being observed.

But even though lists of formal observations of carryings-on among the asterisms are, as Aston pointed out, genuinely sparse in the chronicle of 720, Aston was unduly pessimistic. It is now possible to add substantially to the few early notices that he was able to garner in 1896.

On the one hand, this is because we now have at our disposal a few fragmentary texts unknown to Aston, notably portions of a “Liturgical Memorial” (*gebun* 解文)<sup>62</sup> submitted by the “Official(s) Who Set the Gods at Ease” in the Grand Shrines of Ise (*Kōtaijingu negi* 皇太神宮禰宜), cult headquarters for the worship of the Sungoddess Amaterasu-ō-mikami herself. These fragments, which may be dated in correspondence with A.D. 804, make specific lexical mention of two female deities in our asterism. One is called *Ama-nō-subarumē-nō-mikōtō* 天須婆留女命 ‘the august heavenly Pleiades maid’, with *subaru* ‘the Pleiades’ plus the suffix Old Japanese *-mē* for female, the other *Sumaru mēgami-nō-mikōtō* 須麻流女神命 ‘the august goddess Pleiades,’ with Old Japanese *sumaru* in the second title apparently an *-m-* allomorph<sup>63</sup> for standard *subaru* ‘the Pleiades.’ Unfortunately, we know nothing else of these two figures or

of their cults. But surely it will not go unnoticed by the Indo-Europeanist that here, at the outermost edge of Asia, we have unique evidence for a female identity in the case of at least two of the Pleiades stars. Who could help being reminded in this connection of the six, or seven, sisters of the Greek perception?

On the other hand, we now realize, as Aston did not, that even such long-available eighth-century texts as the *Kojiki* and the *Nihon shoki* preserve fragments of a major Japanese astral myth that centers upon the Pleiades. The myth, at least as we find it in the texts, is dismembered; it awaits a scholar who will do for it what Henri Maspero did for the mythic elements surviving in the Chinese *Shu ching*. But even while we await the integral reconstruction of the myth, it is a simple matter to read the texts themselves; and when we do that, we at once see that they document, often in intriguing detail of aesthetic sensibility, a genuinely astral myth—genuinely astral because, like the Greek stories of the Pleiades *vis-à-vis* Orion, it is based upon the actual perceived locations of the asterism in question.

Before glancing at the evidence of the texts, a moment must be spent considering the problem of why the existence of this astral myth centering about the Pleiades, even in its present fragmentary state of transmission, finds virtually no mention in the modern reference tools or handbooks now generally available, either in Japanese or in Western languages.<sup>64</sup> There is, as usual, a reason why these texts have consistently been obfuscated by Japanese scholars, and in their turn by the many Western writers who content themselves with Englishing what the Japanese say. Also, as again too frequently, this reason is unedifying in the extreme.

The surviving fragments of the Japanese Pleiades myth as we find it in the two major eighth-century sources are already deeply interwoven with elements borrowed from Chinese astronomy. Particularly evident are the Chinese perceptions and terminology dealing with the twenty-eight “lunar mansions,” parallels to the Indic *nakṣtra*. But the Japanese text-

<sup>61</sup> Needham, p. 251.

<sup>62</sup> Cited as the *Kōtaijingu gishikichō* 皇太神宮儀式帳 in the *Sanseidō* dictionary (note 58 *supra*), p. 877; cf. *loc. cit.*, p. 391a, s.v. *subaru*, and p. 702d, s.v. *mi-sumaru*, for citations.

<sup>63</sup> On the overall problem of an original *-b-~m-* variation within Japanese, cf. Ch. Haguenaer, *Origines de la civilisation japonaise: Introduction à l'étude de la préhistoire du japon* (Paris, 1956), p. 315.

<sup>64</sup> A welcome exception is the little volume by Nojiri Hōei 野尻抱影, *Nihon seimei jiten* 日本星名辞典 (Tokyo, 1973), where all the relevant materials are assembled, and treated as a unit, without fear or favor (p. 105 sqq.). The explanation behind this “exception that proves the rule” is to be found in the author’s lack of academic credentials in Japanese language and literature (he is the director of a planetarium in downtown Tokyo), and in the entirely “popular” nature of his publication.

fragments themselves, particularly in the contextuality of the two histories in which they have survived, ostensibly relate to the so-called “Age of the Gods,” i.e., to the period before the introduction of Chinese culture and civilization to Japan *via* Korea. The actors in these texts are ostensibly autochthonous Japanese deities, demigods, and other native mythic figures. Hence, in the terms of traditional Japanese scholarship on such matters, the texts themselves must also by definition have absolutely nothing to do with China, or any other “foreign land.”

Aston, translating many of these texts in 1896, already saw the predicament clearly enough. He noted of one of the most important fragments in particular, “it must have been written after the Japanese became familiar with Chinese astronomy.”<sup>65</sup> But this idea, simple matter-of-fact to all who could, or now can, read the texts, early became anathema to the Japanese government. In the fascist-militarist period of the 1930s and 1940s an absurd, non-historical chronology of all early texts was made a matter of deadly serious official orthodoxy. Academic careers, indeed academic lives, more often than not were made to depend upon at least seeming to take in dead earnest the unique and virtually instant creation of the Japanese archipelago in 660 B.C. Hence also the entire development of Japanese race, language, and civilization had necessarily to be accommodated within the all-too-brief span of time between that *annus mirabilis* and the coming of Chinese language, letters, and culture, along with Buddhism, in the first centuries of our era.<sup>66</sup> Everything, and everyone, had to give way before this absurd but absolutely rigid orthodox chronology. One can only be reminded of the heavy hand that an Irish bishop’s chronology for the Old Testament once laid upon the hypothesis of the evolutionary origin of species.

At any rate, what was clear to the English diplomat-translator Aston in 1896 necessarily had to become, and remain, obscure to Japanese scholars in the 1940s. They were kept busy writing commentaries on these fragments of the Pleiades myth, “explaining” why the texts did not actually have reference either to the Chinese astral terminology or to the Chinese astro-

nomical perceptions that they so obviously embodied—a feat roughly equivalent to “explaining” why marine fossils found on the top of mountains testify not to geological upheavals but rather to the historicity of Noah’s flood. Saddest of all, modern Western scholars who are still translating and retranslating these same texts (almost always for the worse) are also still repeating these same fascist-militarist mystifications of the 1930s and 1940s, decades after the fact.<sup>67</sup> It is all very discouraging.

So discouraging, in fact, that it is a distinct pleasure to be able to turn from this sorry spectacle of scholarship misfiring to learn, instead, what the texts actually say.

In what survives of the Japanese Pleiades myth, the asterism appears to have been perceived in terms that are unusual and aesthetically interesting in their own right, and probably also unattested elsewhere in Asia. In this myth, the Pleiades are a strand or cord of jewels or beads, specifically categorized as consisting of “five hundred items.”<sup>68</sup> In the contextuality of the passages involved, such large numbers are most often to be understood as just that, i.e., as impressively large numbers rather than as precise mathematical calculations. But it is surely worth noting that if we were to take the “five hundred” in the texts literally, we could claim that alone among the ancient materials, these Japanese sources approach the accuracy of perception of the modern observers of this “open cluster” with its hundreds, or thousands, of individual stars.

Be that as it may, archeological evidence, both from specific finds and from iconographic representations on figures among the Haniwa sculptures of the third and fourth centuries, makes clear the identity and configuration of the beads or jewels in question. They were surely *magatama* 曲玉, the roughly worked pieces of jadeite, obsidian and other semi-precious stones whose characteristic tailed-comet-shape confronts us with yet another facet of astral myth.<sup>69</sup> The

<sup>67</sup> E.g., D. L. Philippi, *Kojiki, Translated...* (Tokyo, 1968), p. 128 note 18.

<sup>68</sup> Thus Philippi, p. 74, § 4, translates freely, ‘myriad,’ where the text has 五百津, the final graph a rebus-phonogram for the OJ generalized numerical-counter *tu*, i.e., ‘item(s).’ In parallel passages the more elegantly Chinese text of the *Nihon shoki* has 箇.

<sup>69</sup> On the word *magatama*, see my suggestions for a Tungusic etymology in “Linguistic Evidence and Japanese Prehistory,” Chapter 5 in R. J. Pearson, ed., *Windows on the Japanese Past: Studies in Archeology & Prehistory* (Ann Arbor, 1986), pp. 112–13. One of the long-standing misrepresentations of Japanese archeology was the supposed

<sup>65</sup> Aston, I, 75; the poem in question is *Nihon shoki* no. 2.

<sup>66</sup> One cannot but be reminded, in this connection, of the high-level academic frauds perpetrated during the pre-war period (and now revived in the present day) concerning the Old Japanese *kōtōdama* 言霊 ‘the spirit of [the Japanese] language’ cult; see my book *Japan’s Modern Myth* (Tokyo, 1982), pp. 97–100, 127–40, and *passim*.

comet-shape of these well-known objects has given rise to many conjectures. But one searches the literature on this subject in vain for even a hint of what is probably the most important semantic-mythic correlative of their configuration, i.e., that the Pleiades were perceived as a cord or thread upon which a large number of such comet-shaped beads had been strung.

In one of the texts, the reference is to “the Pleiades (*sumaru*), the string of jewels / worn on the neck / of the Weaver-Girl / who dwells in Heaven.”<sup>70</sup> The poem that immediately follows this in the *Nihon shoki* continues the lunar-mansion symbolism with a reference to the asterism known in China as *pi* 畢 ‘the Net,’ more or less equivalent to the Hyades, that V-shaped asterism in the head of Taurus in close proximity to the Pleiades. Both these poems dwell upon the common theme of the Pleiades perceived as a string of beads or jewels of virtually infinite number; and both are said, in the prose passage that follows them in the text, to be “Airs dealing with border regions [or, with barbarians]” (OJ *Finaburi* 夷曲).<sup>71</sup>

This reference has long puzzled all the Japanese commentators, especially once they were ordered by their government to shut their eyes to evidence of foreign and particularly Chinese influence in these texts. But that these poems should be labelled “Airs dealing with border regions” is only to be expected. By the time the *Nihon shoki* was written in 720, the Pleiades in China had for centuries been associated with outlying, foreign regions and their barbarian inhabitants. Ssu-ma Ch’ien, after all, specifically identified these stars as “a foreign, barbarian asterism” (*hu hsing* 胡星)<sup>72</sup>; and ever after, as Schafer explains it, the “Common Monition” of this asterism in China was “Northern Frontier; Soldiers.”<sup>73</sup>

Many of the surviving fragments of the Japanese Pleiades myth revolve about the intriguing figure of a mischief-making demigod named Susanowo, he of

whom the *Nihon shoki* so blithely remarks—and Aston in 1896 so charmingly translated—that “his behavior was exceedingly rude.”<sup>74</sup> The Sungoddess uses the Pleiades, perceived as “an august string of five hundred Yasaka jewels,”<sup>75</sup> to entwine her hair and wrists in her attempt to disguise her gender and appear instead *in travesti*. Whereupon the mischief-making, exceedingly rude demigod Susanowo steals this “august string of beads” (i.e., the Pleiades) from her, “rinses it in the true-well of Heaven” (another lunar-mansion allusion, the “well” in question being the Chinese asterism *ching* 井, corresponding to  $\mu$ ,  $\nu$ ,  $\gamma$ ,  $\xi^2$ ,  $\epsilon$ ,  $\zeta$  and  $\lambda$  in Gemini<sup>76</sup>), “chews it with a crunching noise, and blows it away, so that from the true-mist of his breath” five new male deities (all named in the text) are generated.<sup>77</sup>

These five newly generated male deities the Sun-goddess immediately claims as her progeny, apparently willing to overlook the somewhat demeaning manner of their birth. After all, “Their seed was in the beginning the august necklace of five-hundred Yasaka jewels which belonged to me.”<sup>78</sup> Thus does the myth explain, as a good myth should, a particular perception of the Pleiades—specifically, the iconographic configuration of our asterism as we have already seen it set forth in the Takamatsuzuka tumulus star-map (Figs. 4, 5, 6; Fig. 8 [B]). There surely we have these same five male deities, whom the Sungoddess now proudly claims as her Pleiadic progeny, standing together in one group—a group with its tricornal peak strikingly reminiscent of the Pleiades icon from Seleucid-Babylonian Uruk—while the two additional female goddesses of the Ise liturgical fragment, as noted above, stand modestly aside at one safe remove from these lusty fellows.

E. F. Weidner, first writing about the Uruk tablet in 1919, went out of his way to stress how the perception

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absence of *magatama* from Korean sites (from which absence would of course follow their “indigenous Japanese origin”). Today we know that they were equally common in peninsular burials.

<sup>70</sup> Aston, I, 75; *Kojiki* poem 6 = *Nihon shoki* poem 2.

<sup>71</sup> Philippi, pp. 127, 568: “country, rustic air,” Aston, I, 75: “a rustic measure.”

<sup>72</sup> Meaning, both (a) ‘it is a foreign, barbarian (*hu*) star,’ in the sense that it was an asterism whose observation and perception was in China acknowledged to be shot through with non-Chinese elements, and (b) ‘it is the star that governs, or, informs us concerning, the foreigners.’

<sup>73</sup> Schafer, p. 77.

<sup>74</sup> Aston, I, 40. The Chinese original of the passage has: 素戔鳴尊之爲行也甚無狀 (ed. *Nihon koten bungaku taikei*, vol. 67 [1967], p. 111).

<sup>75</sup> Aston, I, 35. OJ *yasaka-ni* (variously written 八坂~尺瓊) as a qualifier for *magatama* presents major unsolved problems of interpretation. For the time being, and pending fuller study, there is no other course apart from following Aston and leaving the word untranslated.

<sup>76</sup> Schafer, Table 2, p. [77].

<sup>77</sup> Aston, I, 35–36. It would be interesting to attempt to trace parallels or even identities between this list of names and the list of five Pleiades-related Kaya tribes in the Korean sources (see note 52 *supra*).

<sup>78</sup> Aston, I, 36.

of the Pleiades as a set of seven stars, even though it eventually spread throughout the entire antique world, must always and properly be traced back to Babylon.<sup>79</sup> To this perception, and to this tracing, surely it is now possible to add the iconography of the asterism in the Takamatsuzuka tumulus, particularly as the study of the surviving mythic fragments now provides a basis for elevating the analysis of that icon to the level of textual sources.

For the most surprising, as well as for the rudest possible, details of the “exceedingly rude” behavior of the demigod Susanowo, we are fortunate to have two successive prose versions, one in the *Kojiki* of 712, the other in the *Nihon shoki* of 720. In the second the original myth is slightly bowdlerized, but at the same time also significantly “Japanized,” this last a task that was carried out in particular by excising some of its more important astral elements.

In the text of 712 the mischief-making demigod is not content with first defecating and then strewing his feces about in the hall where the Sungoddess is busy “tasting the first fruits,” i.e., celebrating the autumnal harvest festival. She herself is strangely calm during all this, recognizing from the feces who the culprit must have been (!), but elaborately refusing to become angry. But when Susanowo goes on to “open a hole in the roof of the sacred weaving hall and drop down into it the heavenly piebald colt that he had flayed with a backwards-flaying,” then another actress in the drama, this time the Heavenly-Maid, i.e., the Star Vega from the Chinese astral myth, “was alarmed and struck her pudenda against her shuttle and so died.”<sup>80</sup>

In the bowdlerized text of 720 the curious reference to the backwards-flaying of the heavenly piebald colt remains intact, but there are two important alterations in the other materials. When the mischief-making demigod flings the poor mistreated carcass into the hall he must first “break a hole in the roof-tiles,” a marvelously anachronistic note, since roof-tiles came

to Japan from Korea only with the building of Buddhist temples, well into our own era.<sup>81</sup> Also, in this text it is the Sungoddess herself, i.e., a Japanese mythic figure, and not the Star Vega, the foreign, Chinese astral personage, who thereupon takes offense to the extent of mutilating herself on her shuttle—though busy as they were in bowdlerizing the narrative, the editors of the 720 text forgot to explain what the Sungoddess was doing in the first place with a shuttle, the proper tool of the Heavenly Weaving-Maid.

Needless to say, this whole business of the “backwards-flaying of the heavenly piebald colt” has both puzzled and intrigued interpreters and translators of these texts East and West alike for centuries.<sup>82</sup> And without claiming to know any more than they about what all this really meant in the eighth century, when it was first written down, I do believe that we have already seen a picture of exactly how to perform this “backwards-flaying of the heavenly piebald colt” in the figure of Marduk, that original “Man in the Moon,” as we have seen him busy performing some brutal mistreatment of the animal who accompanies him in the moon, in the Berlin tablet VAT 7851 (Figs. 1, 2). Could Marduk as he is pictured there even perhaps be getting ready to fling the flayed remains down into the “heavenly weaving hall” through those “holes in the roof tiles,” i.e., the “holes in the sky” that figure so prominently in the perception of the Pleiades throughout the Altaic area, as long ago pointed out in the folkloristic literature first by Uno Harvo and later by J. Németh?<sup>83</sup>

<sup>79</sup> E. F. Widner, “Babylonische Hypsomatabilder,” *OIZ* Nr. 1/2 (1919), 11–12: “die in der ganzen alten Welt verbreitete Anschauung von den sieben Plejaden dürfte mithin wohl auf die Babylonier zurückzuführen sein.”

<sup>80</sup> Philippi, p. 79; p. 80. But his note 9 to p. 80 (“[t]he heavenly weaving maiden is evidently a subordinate princess belonging to the entourage of [the Sungoddess]”) displays at their most risible the always futile if frantic attempts of pre-WW II Japanese scholarship to subsume these textual variants, with their clear evidence for successive waves of bowdlerization, under the canons of the then-prescribed orthodox doctrines concerning Japan’s “national origin.”

<sup>81</sup> Aston, I, 41. For the origins of ceramic roof-tiles in Japan, and a possible etymology for Old Japanese *iraka* ‘id.’, see my paper “Some Old Paekche Fragments,” *Journal of Korean Studies* 1 (1979), 64–65.

<sup>82</sup> Philippi, p. 80. The “heavenly piebald colt” is Old Japanese *amanōFutikoma*, written 天斑駒, with *Futi* ‘dapple, pied’; the ‘backwards flaying’ is *sakaFagi* 逆剝, with *saka* ‘inverse, opposite’ and the deverbal noun in *-i* from *Fag-* ‘to flay’ (cognate with Kor. ‘*pe-* ‘cut,’ S. E. Martin, *Lg.* 42 (1966), 229, no. 57?). The bowdlerized *Nihon shoki* version, opting for an easier reading, omits the “backwards.” Significantly, Aston long ago hinted at astral connotations for this unusual collocation (vol. 1, p. 40).

<sup>83</sup> Uno Harva, “Die religiösen Vorstellung der altaischen Völker,” *FF Comm.*, No. 125 (Helsinki, 1938), pp. 178–79 (“Sehr verbreitet ist die Auffassung, dass da, wo sich die Plejaden befinden, im Deckel oder an der Decke des Himmels ein Art Loch sei;” *ibid.*, he glossed Yak. *ürgel* as ‘Luftloch’); J. Németh, “Über alttürkische Sternnamen,” *Acta Ling.*

After these eighth-century notices the word *subaru*, var. *sumaru* is surprisingly rare in Japanese texts until the modern period. Naturally it finds its place in the great Chinese-Japanese bilingual lexicon that marks the linguistic watershed between Old Japanese proper and the “late Old Japanese” that served as the language-of-transition leading into the Heian period; the *Wamyō ru jushō* 倭 (~和)名類聚鈔 (~抄) (ca. 931–938) lists the asterism, and defines it in terms redolent of Indic, specifically Buddhist, sources; but it adds nothing new to our survey of how these stars were perceived in the Far East.<sup>84</sup> So also for the only other significant employment of the term in earlier Japanese texts, pericope § 254 in the miscellany today generally known as the *Makura-no-sōshi*,<sup>85</sup> some portions of which are datable in correspondence with A.D. 994, others of which were surely written well after A.D. 1000. Our *subaru* figures here only in one of the many lists of terms deemed suitable for employment as

poetic diction that this text, at least in its received recensions, preserves at some length; hence unfortunately it once more tells us nothing we did not already know about the word or the ideas lying behind it.<sup>86</sup> Somewhat more interesting are a few occurrences of the term *subaru* in the compound *subarumandoki* (written variously 昂真時 and 昂滿時) in popular texts of the 17th and 18th centuries, with contextual reference to the same as the most suitable time for sowing the buckwheat crop in order to ensure a bumper yield.<sup>87</sup> Though apparently of no great antiquity in Japan itself, these references are nevertheless not devoid of interest, since they clearly revert to the extremely ancient role of the Pleiades as the autumnal, resp. harvest asterism par excellence, and in particular correlate most interestingly with similar Indic expressions.

Finally, and again just as one might expect, *subaru* is found in its proper place in the curious list of Japanese terms for the twenty-eight lunar mansions compiled (or, in some respects probably invented) by Kaibara Ekiken (1630–1714) in the course of putting together his Japanese simulacrum of the *Erh-ya*, the *Wajiga* 和爾雅.<sup>88</sup> But otherwise, the word might never have

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*Hung.*, 18 (1968), 5 (‘Luftloch,’ ‘der Blasende, der Wehende’: *ürker*).

<sup>84</sup> Variorum edition of the important early MSS and printed editions by Mabuchi Kazuo, *Wamyō ruijushō koshahon shōtenbon, Honbun oyobi Sakuin* (Tokyo, 1973), p. 13 bis. p. 253 bis. The lexicon cites (under its short title *Hsiu yao ching* 宿曜經 [“Sutra of Lunar Mansions and Planets”]) the important astronomical treatise translated into Chinese by Amoghavajra in A.D. 759 (Needham, p. 720) as saying of the Pleiades, “[the asterism consists of] six stars; it is the god of fire.”

<sup>85</sup> Thus in the most usual numbering of this text in the system of Ikeda and Kishigami; but the same pericope is § 207 in the Kaneko system, § 229 in the Tanaka system (cf. note 85 *infra*), § 244 for Ivan Morris, and § 246 for Markova. Ivan Morris, *The Pillow Book of Sei Shōnagon* (New York, 1967, 2 vols.) rendered *subaru* correctly as ‘the Pleiades’ in I, 205, but then forgot and registered it incorrectly in II, 351b as “Subaru—Altair (the star),” leaving one to wonder at his short memory on the one hand, and at what possible other sense of “Altair” apart from the astral he may have had in mind on the other. The pericope is accurately rendered in V. Markova, *Sei-Sjōnagon, Zapiski u izgolov’ja* (Moscow, 1975), p. 270 (“šestizvezdie”). Some text-traditions for this pericope (but by no means all) add to the “approved poetic diction” listing a short, somewhat obscure passage concerning shooting stars; with this, all the translators, but especially Morris, wrestle unprofitably. See Tanaka Jūtarō, ed. et comm., *Makura-no-sōshi zenchūshaku* Vol. 4 (*Nihon koten hyōshaku, Zenchūshaku sōsho*) (Tokyo, 1983), pp. 237–40, 229, for a complete commentary on the passage, including notes on its involved text-history.

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<sup>86</sup> The title of this miscellany has nothing at all to do with “pillows” of any sort; nor is it possible to attribute the text as we have it today to any single figure named “Sei Shōnagon”; nor does it constitute a uniform collection of opinions or views of any individual person. Nevertheless, all these (and many other) misrepresentations of the text and its contents have consistently been perpetuated by Western scholarship, most recently (and most strikingly) by the Ivan Morris translation of 1967. See the brief introduction to the nature of this text and some of the problems of its study in my book *Nihongo: In Defence of Japanese* (London, 1986), pp. 202–16.

<sup>87</sup> Citations from several texts, difficult of access, in Ōno Susumu et al., *Iwanami kogo jiten* (Tokyo, 1974), p. 702a. Ōno understands the morpheme *-man-* in *subarumandoki* to mean ‘(when the Pleiades are) full,’ i.e., directly overhead.

<sup>88</sup> This list of Japanese terms for each of the twenty-eight lunar mansions (resp., for each of the asterisms that distinguish them) appears to have been virtually unstudied in Japan; it is extracted from the *Wajiga* and printed in the *Koji ruien* Vol. 1, 1:2, 星, p. 96. The usual lexical tools do not generally avail themselves of the information it preserves. Again, the little handbook on Japanese astronomical terms by Nojiri Hōei (note 64 *supra*) is a pleasant exception to the rule; see his pp. 243–49 for a brief account. We have no trace of a list of indigenous terms for these twenty-eight items from Korea, where the available sources know only the designations of the same by Chinese loanwords; this gives an

existed for all the role that it plays in the centuries of Japanese literature that follow upon the termination of the Old Japanese period, until its obviously and highly artificial revival as the title of an influential, so-called “neo-romantic” literary journal published from January 1909 until December 1913, and later again in

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added dimension of importance to Kaibara’s list. In it he apparently brought together many genuinely old lexical elements, such as *subaru*, together with a certain number of coinages or neologisms (perhaps even words of his own manufacture?) in order to complete the inventory. Particularly striking in this list, even before a properly exhaustive study may be undertaken, are the following: (1) Chin. *chiao* 角, α Virginis, is rendered as Jap. *suboshi* ‘the *su* star.’ This term may possibly, as Nojiri suggests, have some connection with Jap. *sumi* ‘corner,’ in turn one of the possible translations of Chin. *chiao*; but one also suspects that the Kaibara list has here almost miraculously preserved the extremely ancient Oriental terminology for this asterism that otherwise surfaces, e.g., as Spica and Στάχος, cf. P. Kunitzsch, *Arabische Sternnamen*, p. 146 with note 1; (2) while *k’ang* 亢, κ, ι, φ, λ Virginis is apparently to be understood as ‘Gullet’ in its Chinese version (Schafer, Table 2, pp. [76, 77]; Needham, p. [235], ‘Neck’), the Kaibara list has this as *amiboshi* ‘the net star,’ while *pi* 畢 ‘Net’ is his *amefurihoshi* ‘the stars that cause the rain.’ This is understandable in view of the connection of this *pi* ‘Net’ with the Hyades, and the further association of the Hyades with rain “both in classical antiquity and in China” (Schafer, p. 82); but it raises the question of the apparent interchange of one perceptual designation with another in a rather curious fashion, all the more interesting because originally the Hyades was actually not associated with rain at all, but with quite a different perception (Scherer, *Gestirnnamen*, p. 147: “so kann kaum ein Zweifel sein, da die Hyaden ursprünglich als Muttersaw mit ihren Ferkeln gedacht waren.”). And even while not represented in the Kaibara list, also worthy of investigation is the scattered evidence for the Japanese preservation of early Altaic, specifically Tungus and non-Chinese, astral designations such as that for Altair, Old Japanese *inuka-Fibosi*, literally ‘the dog-caretaker’s star,’ cf. Oroč. *inaki* ~ *inaxi* ‘name of a star (in the tail of Ursa Major)’ (*TMS* 1.661b). In this term, as in those of the Kaibara list, the final element in the compound is Old Japanese *Fosi*, New Japanese *hoshi* ‘star,’ related to the words for ‘star’ in the Tungus languages (Ev. *osikakta*, Oroč. *xosakta*, Udh. *waikta*, Ulč. *xosta*, Orok. *wasikta*, Nan. *xosakta*, Ma. *usiha*, *TMS* 2.27a–b, from Proto-Tg. *\*xōsi.kta*, with suffixal *\*.kta*; cf. R. A. Miller, “Proto-Altaic *\*x-*,” *CAJ* 31 [1987], 46–47). But compounds of the order *subaruboshi*, as in the Kaibara list,

the title of yet another literary organ published from 1970 on.<sup>89</sup> Apart from these few notices, all is silence—until we come to the automobile, of which more in a moment.

As rare as the word *subaru* itself in post-eighth century Japanese texts are attempts to provide an etymology for this term. I know of only one of any consequence, but it is one of great importance for our study of this term, if only because it is now universally copied (virtually always without acknowledgement of its source) by modern Japanese dictionaries and other lexical tools.

This etymology originates with the remarkable late Tokugawa philologist Kariya Ekisai 狩谷掇齋 (1775–1835),<sup>90</sup> who wrote about the word in the course of his *Senchū* 箋注 *Wamyō ruijushō*. This painstaking commentary upon the *Wamyō ruijushō* (see above) was first printed only in 1883, well after its author’s death. In his commentary, Kariya attempted to account for both *subaru* and the *-m-* variant *sumaru* from the mythic texts as being denominals from the verb *sub-* ‘to unite, rule, lord over.’ It is interesting to note that, writing when he did, Kariya did not feel under any compulsion to isolate these two forms, thus in effect

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appear to be late or neologistic. In genuinely early sources *subaru* ‘the Pleiades’ neither required nor took this pleonastic addition. In which connection it is convenient to conclude the present brief survey of Japanese attestations of *subaru* with the two notices of this form in the Japanese-Portuguese bilingual *Vocabulario* of 1603–4, our principal lexical source for (late) Middle Japanese; there we find two entries in succession: SUBARU. *Sete estrello*. SUBARUBOXI. *Idem*. (Oxford Bodl. Lib. Arch. B.d.13 [facsim. ed. Doi Tadao, Tokyo, 1960], p. 455b). This shows that by the beginning of the 17th-century both the simplex *subaru* and the pleonastic *subaruboshi* coexisted; it also indicates that Kaibara’s list, in the case of this asterism at least, was not entirely a work of neologistic supererogation.

<sup>89</sup> On these journals and their titles, see *Nihon kokugo daijiten*, vol. 11, p. 481b., s.v. *subaru*. Tanaka’s commentary on the relevant *Makura-no-sōshi* pericope also deals informally with this phenomenon of lexical revival (pp. 239–40).

<sup>90</sup> Otto Karow, “Die Wörterbücher der Heianzeit und ihre Bedeutung für die japanische Sprachgeschichte,” *Monumenta Nipponica* 1951, reprinted in H. A. Dettmer and G. Endreß, eds., *Otto Karow Opera Minora* (Wiesbaden, 1978), p. 222 sqq. (p. 171 of original) deals in useful detail with Kariya Ekisai and his commentary on the *Wamyō ruijushō*; the article also serves as a reliable introduction to many other early Japanese lexical tools.

acknowledging the presence of the Pleiades myth within the earliest levels of the eighth-century historical texts. As we have seen, had he written a hundred years later this would have been impossible.

Unfortunately, the Kariya etymology is morphologically untenable. The verb *sub-* to which he would refer these two nouns is attested for Old Japanese, but its paradigm would yield only such forms as *suburu*, *subu*, and *sube*, not our *subaru* and *sumaru*.<sup>91</sup> Despite Kariya's enormous reputation, and also despite the avidity with which his etymology has been copied and repeated by Japanese scholarship ever since, the explanation it offers for the forms at issue will not hold. These words cannot successfully be etymologized within Japanese; therefore we must look elsewhere, outside, to clarify their history. In other, even plainer terms, *subaru*, along with its mythic-text variant *sumaru*, must be a loan from some other language, an old loan to be sure, but a loan for all that. Whatever else it may be, our *subaru*, if not our Subaru, is linguistically speaking definitely a second-hand model.

It appears to me that, for the present, there are two distinct etymological possibilities. Both are certainly possible. I find it difficult to choose between the two, in the sense of attempting to establish which of them is the more probable. I shall begin by giving what will more likely than not prove to be the more controversial of the two proposed etymologies first.

Since at least A.D. 964, and the *Kitāb al-kawākib at-tābīta* of 'Abd ar-Rahmān aṣ-Ṣūfī, the two stars δ and θ Leonis, i.e., the 11th lunar station or mansion, have been called by the Arabs *az-zubra* 'the mane,' the mane, that is, of Leo, not of Taurus. aṣ-Ṣūfī glosses the term as "the place on the lion's back

between his two shoulders and his two shoulder blades." Qazwīnī explains the *zubra* of the lion as its hair that bristles up when he becomes angry. As the designation of a specific asterism, the word has in Europe yielded *subra*, *AlZubra*, and *MinAlZubra*.<sup>92</sup> I would tentatively suggest that Japanese *subaru*, which is, as we have seen, the name for another mane—the mane of Taurus—somehow continues an earlier form or forms that also lie behind the *zubra* 'mane' of the Arabic astronomers.

The chronology at least argues in favor of the etymology. aṣ-Ṣūfī's catalogue of fixed stars comes almost exactly thirty years after the late Old Japanese lexicon in which *subaru* is first indubitably attested and glossed in a specifically lexical compilation; it is also just about another thirty years after aṣ-Ṣūfī that we have the notice of the term in the *Makura-no-sōshi* approving *subaru* as suitable for employment in poetic diction. To be sure, Arabic *az-zubra* is the mane of Leo. We are concerned instead with the mane, or more precisely, with the bristles on the hump of Taurus. But if the mane of one astral animal may supposed to have been conflated with the hump-bristles of another, and if more of the history of this word, of which Hommel tells us only that it is Yemenei,<sup>93</sup> could be established for us by our Semiticist colleagues, I feel that we might well be on the way toward clarifying the ultimate source of the etymon that in Japan first appears both as *subaru* and *sumaru*, and then shortly thereafter only as *subaru*.

The second etymology for *subaru* that I would like to propose comes from Korean. Phonologically, Japanese *subaru* would be a perfect loan-word representation for a postulated Old Korean form underlying Late Middle Korean *·spūl*, which means 'horn', and regularly glosses Chin. *chiao* 角 'horn'.<sup>94</sup> The Korean

<sup>91</sup> The relevant passage from Kariya Ekisai's commentary (of which I have not had a copy available) is cited *in extenso* in the *Koji ruien*, s.v. *subaru* (loc. cit., text *supra*). In traditional Japanese grammatical description the verb *sub-* belongs to the morphological category denominated *shimo ni dan*; for the Old Japanese forms generated within this paradigm, see e.g. the Sanseidō *Jidaibetsu* dictionary, p. (36); for forms in the later stages of the language (in this instance, not significantly different), see any handbook of Japanese grammar. Some modern dictionaries, e.g. Shinmura Izuru, ed., *Kōjien* (1955), p. 1163a, attempt to register a verb *subar-* that would account for the presumed deverbal noun in question. But the form is a lexicographical ghost without earlier authority, partly representing teleologically generated forms and meanings, partly also semantic-formal contamination with an unrelated set of words meaning 'to shrivel up, shrink.'

<sup>92</sup> P. Kunitzsch, *Arabische Sternnamen in Europa*, Einzeldarstellung, nr. 183, 'Subra,' p. 207 with note 1.

<sup>93</sup> F. Hommel, *ZDMG* 45 (1891), 603. Cf. also the etymological suggestions in *CAD* 121.50b.

<sup>94</sup> In the transcription of Middle Korean, renders a tone (or pitch) notation in the texts. This typically accompanies forms of this variety where the initial consonant cluster is suspect of representing the falling-together by syncope of an original \*CVC sequence. The vowel *-ū-* is another indication of original bisyllabicity, since it is normally and typically found only in second-syllable position. Since Middle Korean (like the modern language) had only /p/ (and no contrasting /b/), the *-p-* of orthographic *sp-* may equally well be understood as representing [sb] or [zb].

form first appears in a Buddhist text of A.D. 1447, but after that it becomes frequent, with attestation in one Buddhist text of 1459 and another of 1462, in a Chinese-Korean bilingual lexicon of 1527, and in a Korean gloss to the Chinese *Shih ching* of 1588.<sup>95</sup> The phonological match of the two forms is excellent, from the putative Japanese representation of the initial cluster of the Korean original through insertion of an epenthetic vowel, so that *sp-* became *sub-*, *sum-*,<sup>96</sup> down to and including the representation of the automatic Korean voicing of all internal stops with the Japanese voiced *-b-*.

Semantically too there is much to be said for this etymology. Chin. *chiao* ‘horn’ was a term of great frequency and utility in Chinese astral nomenclature. The word figured in the designations for any number of asterisms and constellations, where it uniformly had reference to visibly triangular, or even more literally, ‘tricornal’ configurations. The skies are of course full of clusterings of prominently visible stars in sets of threes, i.e., in corners, or horns—nor ought we to forget that both “corner” and “horn” are etymologically identical, and hence each can serve equally well as a gloss for Chin. *chiao*—or Middle Korean *·spül*, for that matter.

At the inception of Chinese astronomy the *ta chiao* ‘great horn’ of the heavens was Arcturus,  $\alpha$  Boötis. But “with the advance of time, precession [brought] about changes in the right ascensions of [the] stars . . . Determinative stars of neighboring constellations with small differences in right ascension, but with large differences in declination, . . . change[d] places in the enumeration order. . . . Thus . . . *Ta chio* (Arcturus;  $\alpha$  Boötis), which may once have been one of the ‘prolongation’ stars of the Great Bear’s handle, was superseded by *Chio* (Spica;  $\alpha$  Virginis).”<sup>97</sup> What is important to note here is that, for all these changes in nomenclature in order to accommodate observational data, the terminology always remained constant: the ‘horn’

or ‘corner’ perceived was still uniformly Chin. *chiao* (Needham’s “*Chio*”) ‘id.’.

But in order to go the one necessary step further, and to suggest that a form underlying MKor. *·spül* ‘id.’ the canonical gloss for Chin. *chiao*, might also etymologically underlie Japanese *subaru* ‘the Pleiades,’ we must of course be able to document some perception, not only of  $\alpha$  Boötis or  $\alpha$  Virginis as having this essential tricornal configuration, but also of the Pleiades asterism as well. Fortunately, this is a fairly simple matter, not only from the iconography with which we are already now familiar, but also from the texts.

The single most striking feature by which the Takamatsuzuka tumulus icon of the Pleiades asterism differs from that found on the ceiling of the Turkestan tomb, as we have already pointed out, is less in that the former distinctly follows the Babylonian norm in showing seven rather than six individual stars, and more in that the Japanese exemplar arranges these seven into a configuration culminating in a horned, specifically a tricornal, peak, immediately reminiscent of the tricorn terminus of the asterism on the Uruk archival tablet, where we have seen Marduk doing his backwards flaying, the same tricorn peak that is conspicuously missing from the ambush-map of the Turkestan exemplar and from other, later Chinese representations as well—but for all that, hardly other than the tricorn of the Sumerian ideograms, both old and new (Fig. 8 [A]), and also the tricorn figured by the star-pictographs in the Chou-dynasty Chinese epigraphical evidence (Fig. 8 [B]). Surely from all this we learn, at the very least, that  $\alpha$  Boötis and  $\alpha$  Virginis were not by any means the only tricornal peaks in the skies over the Sinitic culture sphere: similarly perceived was also a key portion of the Pleiades asterism.

Fortunately for our course of argument, there are important texts that make all this even clearer, as all good texts ought to do.

In the second lunar month of the year mostly corresponding to A.D. 904, the astronomers of T’ang China recorded one of the many dismal omens that had begun to accumulate in ever accelerating bulk at this period in the history of the dynasty—as well they might, for we now know that only three years later the T’ang house was to come to its end, so that it was only to be expected that the skies should already be providing abundant evidence for the forthcoming earthly cataclysm.

For this particular event, the chapter on astronomical *omina* of the *Hsin T’ang shu* has preserved a description rich in precision and detail of observation:

<sup>95</sup> Citations in Nam Kwang-u 南廣祐, *Ko’ö sajōn* 古語辭典 (Seoul, 1973; revised reprint of original 1960 edition), p. 274b; Yu Ch’ang-ton 劉昌惇, *Yi-cho’ö sajōn* 李朝語辭典 (Seoul, 1984; 5th ed. of original 1964 edition), p. 407a.

<sup>96</sup> I.e., the cluster of consonants represented in the writing system was “real,” not merely an orthographic convention as has sometimes been alleged. See my paper “Syncope and the Middle Korean Initial Clusters,” read in the Inner Asian Section on 24 March 1987 at the 197th Meeting of the AOS in Los Angeles.

<sup>97</sup> Needham, pp. 250–51.



On the evening [of a date corresponding to 16 March 904], Venus was observed in the west of the Pleiades, red in hue and incandescent as fire.<sup>98</sup>

But on the following night, this same Chinese omen-text records an even more ominous finding. That evening the astronomers perceived the Pleiades, still with Venus to its west, in the following truly extraordinary and frightening fashion:

It had three horns (*san chiao* 三角, lit. 'a tricorn') that were as flowers shuddering tremulously. The omen was read as follows: there will be a rebellion; walled cities will conflagrate; foreign<sup>99</sup> men-at-arms will arise.<sup>100</sup>

One could hardly ask for a more precise textual description of the perception of the tricornal peak of the Pleiades, a perception precisely parallel to the iconographic representations that we have by now traced across the entire expanse of Asia, from Seleucid Uruk to the Takamatsuzuka tumulus star-map. Given the canonical employment of MKor. *·spül*, which would regularly have yielded Japanese *subaru* as a loan, to gloss Chin. *chiao*, this T'ang omen text more than fills in any still missing links that would point to the (unknown) Old Korean original behind the attested Middle Korean form as the ultimate etymological origin for the Japanese term for the Pleiades.

Both these etymologies fit the chronology satisfactorily, Arabic *zuba* somewhat better, for that matter, than MKor. *·spül*. Both fit the semantic and perceptual contexts of the problem equally well. The choice, for the present at least, must be yours.

And so finally, we come to the question of the modern Japanese automobile and its name: how, and why, Subaru?

We might at first suspect that the automobile name Subaru represents some fine-tuned reminiscence of the Mesopotamian term "Wagon Star" for Ursa Major, particularly when we recall the genial Tungus confusion of Ursa Major with the Pleiades that has already figured in our discussion. Perception of Ursa Major as some sort of wheeled vehicle is not only early attested from the land between the rivers, it is

also of wide distribution throughout Central Asia and known as well to the Hungarians.<sup>101</sup> Alas, and with regret, we soon learn that this is an *ignis fatuus*; the men who named the Subaru knew nothing of the Mesopotamian, Central Asian, or even the Hungarian perception of Ursa Major as a vehicle. Similarly, we might be tempted to suspect that the Japanese automobile manufacturers were somehow harking back to extremely remote Indo-European materials when they settled upon their choice of a name for the car; Skt. *kr̥tikā* 'the Pleiades' is also glossed as 'a vehicle, a cart.'<sup>102</sup> Unfortunately for any dreams of Indo-European survivals in the modern Japanese industrial complex, this too soon proves to be a false friend. Fortunately, the actual story of the naming of the Subaru is still well-remembered by many who are alive and well; and if it proves to be philologically perhaps less interesting it is for all that nevertheless quite instructive.<sup>103</sup>

In the years immediately following the Japanese military surrender of August 1945, the occupation forces stationed in Japan set about dismantling the corporate structure of Japan's military-industrial complex (*zaibatsu* 財閥), the vast interlocking conglomerates that had produced the arms, ships, aircraft and other *materiel* with which the nation had fought, and finally lost, its war in the Pacific. Between 1945 and 1950 the occupation supervised the dissolution of the Nakajima Aircraft Co., in its day the producer of the once celebrated, and much-feared, "Zero" fighter plane. Nakajima was split up into twelve independent companies, even the largest of which was so small that it was reduced to producing a line of motorized scooters, widely sold in fuel-scarce Japan of the 1950s under the trade-mark "Rabbit."

But only three years later, in 1953, six of these splintered fragments were again united by their Japanese owners under the new corporate umbrella of "Fuji Heavy Industries Ltd.," with the blessing of what little then remained of the occupation forces and their

<sup>101</sup> E. Reiner, *JAOS* 105 (1985), 194 with note 21.

<sup>102</sup> A. Scherer, *Gestirnnamen bei den indogermanischen Völkern*, p. 145.

<sup>103</sup> A special note of gratitude is due Akira Takeda of the Consulate General of Japan, Seattle, for generously taking time from his official duties, as a personal favor to the author, in order to put me in touch with officials of the Fuji Heavy Industries now resident in Tacoma, WA, who were able to verify the account in the text, and also in order to establish contact with the Fuji headquarters in Tokyo, resulting in the materials cited in the note immediately *infra*.

<sup>98</sup> *Hsin Tang shu*, ed. Chung-hua shu-chü (Shanghai, 1975), 33.864.

<sup>99</sup> I.e., *hu* 胡, cf. the long-standing *hu*-identification of this asterism among the Chinese, note 72 *supra*.

<sup>100</sup> Tr. Schafer pp. 71–2, *Mod. auct. ad normam Chang-haiensis ed. interpunct.* (vide notam 98 *supra*).

authority. This of course came about only because by then the political and military situation in the Far East had already taken new and dangerous turns as a result of American, Chinese, and potentially also Soviet embroilment on, and over, the Korean peninsula.

This new corporate entity immediately resumed manufacturing and repairing military aircraft for the war in Korea. Then in 1958 it put on the market its first light passenger car, the “Subaru 360,” selecting the name of the line, as well as its logo (Fig. 8 [F]), in order to serve as visible signs of the inward rehealing of the then-still recent occupation-ordered dismemberment of the original Nakajima aircraft complex.

In this, the company’s officers were implementing Kariya Ekisai’s late Tokugawa etymology, which they knew because they found it repeated in all their modern dictionaries, the etymology that held Japanese *subaru* ‘the Pleiades’ to be morphologically related to the verb *sub-* ‘to unite.’<sup>104</sup> As we have explained, the facts of the morphology of the language, Old Japanese and New Japanese alike, totally rule out that explanation. But, it *is* in the dictionaries; and the Japanese officers of the new Fuji corporation were hardly alone in the world in believing that what they found “in the dictionary” must be true. The star-map lines on their new logo united the six stars in their graphic asterism just as the new Fuji Heavy Industries Ltd. had re-assembled the six major severed fragments of the once mighty Nakajima Aircraft Corporation. The etymology at the heart of all this, Ekisai’s derivation of *subaru* from *sub-* ‘to unite,’ was false both historically and morphologically. One is reminded of the wrath of

W. D. Whitney, who thought he had detected just such etymologies (incorrectly, as it now turns out) in the Indic grammarians; for him they were not merely “sham and false,” they were “a mass of worthless rubbish.”<sup>105</sup>

But “sham and false” though it surely was (and is) this Ekisai etymology of *subaru* as deverbal ‘to unite’ served the requirements of the newly-organized Fuji corporate officers with consummate precision and utility. For them it was a subtle—and hence a safe!—linguistic taunt of U. S. occupation policy in post-war Japan; indeed, at the same time it was also an equally subtle commentary upon the lightning-like swiftness of the shift in U. S. foreign policy, from absolute dismemberment of the *zaibatsu* in 1945–50 to officially sanctioned and encouraged reunification and restoration in 1953.

And so, the trail of American Subaru, the automobile, and Japanese *subaru* ‘the Pleiades,’ does really take us all the way back to Sumer. Through its study we may establish many of the links in an immensely long history of the perception of the Pleiades, a history that reaches across the entirety of the land mass that we call “Asia,” only to surface at last in the Japanese archipelago—an interlocking chain of perception and conceptualization that points from Subaru back to Sumer, all the way to MUL.MUL and even to Marduk-in-the-Moon—not to mention the rude antics of the Japanese demigod Susanowo along the way. But all this was only to be expected; surely, as members of the American Oriental Society, we know better than most, that History Begins at Sumer.

<sup>104</sup> Letter 23 January 1987, T. Shioiri, Manager, 1st Sales Section, Subaru 1st Overseas Sales Dept., Head Office, Fuji Heavy Industries Ltd., Tokyo; *Diamond’s Japan Business Directory 1984*, p. 814.

<sup>105</sup> W. D. Whitney, “On Recent Studies in Hindu Grammar,” *American Journal of Philology* 14 (1983), 171 sqq., cited in J. F. Staal, ed., *A Reader on the Sanskrit Grammarians* (Cambridge & London, 1972), p. 174.