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Two Early Loan-words in Chinese

The chief purpose of the present paper is to suggest new etymologies for two words current in Chinese since the Former (Western) Han period: 苜蓿 *mu-su* (*mu-siu*) '*Medicago sativa*, medick grass, luzerne' and 珊瑚 *shan-hu* 'coral'. The etymologies so far proposed for the first of these words seem inadequate; the other word, as far as I know, has never been dealt with etymologically. Thus, the present paper is a direct sequel to my earlier study *The Problem of Early Loan-words in Chinese as Illustrated by the Word p'u-t'ao* published in "Rocznik Orientalistyczny" XXII, 2 (1958), pp. 7—45. This also accounts for the fact that I have included in the present paper a few addenda to the latter article — after the publication of which I was able to use some pertinent bibliographical material formerly inaccessible to me. I have to state that the complementary data now available on various problems touched upon in my previous paper are chiefly of a bibliographical character and do not invalidate my conclusions formerly presented; these data — together with some additional information omitted from the former article — are now given for the sake of completeness. They form the first section of the present paper, while the words *mu-su* and *shan-hu* are dealt with in sections II and III respectively.

I

Unless otherwise indicated, all page-references in this section are to my aforementioned article in this "Rocznik" XXII, 2; pp. 7—45.

P. 11 and 34. As already pointed out by P. Pelliot in "T'oung Pao" XX, 1921, p. 144—145, footnote 4, the word *p'u-t'ao* occurs in the poem *Shang-lin fu* 上林賦, written by the famous early Han poet Sī-ma Sīang-jū 司馬相如 who lived 179-117 B. C. The poem forms part of chapter VIII of the 6th century anthology *Wen-sūan* 文選 (for translation of the passage in question see E. v. Zach, *Die chinesische Anthologie* I, Cambridge Mass. 1958, p. 111) and is also quoted by Sī-ma Ts'ien in his *Shi-ki*, chapter 117 (biography of Sī-ma Sīang-jū; the passage containing the word *p'u-t'ao* on p. 0256₃ of the *Er-shi-wu shi* ed.). The poem itself is a description of Wu Ti's park and hunting grounds named

Shang-lin, and *p'u-t'ao* is mentioned among the many plants growing in this imperial park. This — and not the *Ta-yüan* chapter (123) of the *Shi-ki* I referred to in my article — seems to be the earliest record of the word. The evidence from Sî-ma Siang-ju to the effect that the term *p'u-t'ao* (and the thing itself) must have been known in China prior to 117 B. C. (i.e., the year of the poet's death) is the more important as the *Ta-yüan* chapter of the *Shi-ki* is considered by some as a later interpolation derived from the *Han-shu*, cf. P. Pelliot in "T'oung Pao" XXVI, 1929, p. 178, footnote 1; O. Franke, *Geschichte des chinesischen Reiches* III, 1937, p. 186; H. Franke, *Sinologie*, 1953, p. 119. Cf. also *infra*, p. 76 and 84.

P. 14—15, footnote 11. With regard to the word *p'u-t'i-tsī*, cf. B. Laufer in "T'oung Pao" XVII, 1916, p. 516, no. 248.

P. 19, footnote. As Mr. A. Waley kindly points out to me, the *Sī-pu ts'ung-k'an* edition of P'o K'ü-i's works which I used omits the poet's "own notes" (*tsī-chu* 自注). P'o K'ü-i's "own note" in this instance is that the character *p'u* 蒲 is to be read in *k'ü-sheng*. Thus, my remark concerning the compilers of the *K'ang-hi tsī-tien* is not to the point: they simply drew from P'o K'ü-i's notes. To my mind, the unusual tone-value of the character was invented by the poet to save the prosodic pattern of the line. It may be remarked that P'o K'ü-i's gloss itself shows the unsoundness of Ch'u K'ifeng's speculation.

P. 32. For the problem of intersyllabic assimilation (*sandhi*) in early Chinese, cf. Yü Min 俞敏, *Ku Han-yü li-mien-ti lien-in pien-tu (sandhi) hien-siang* 古漢語裏面的連音變讀 (*sandhi*) 現象, "Yenching Journal of Chinese Studies" no. 35, 1948, pp. 29—50. However, neither the case of Meng K'ang's gloss nor any other case of the type *-k-g- → -g-g-* is discussed in the paper.

P. 34. Prior to Laufer, the French scholar E. Huber suggested that the Chinese term for 'grapes' derived from some vernacular Indian form akin to Sanskrit *mr̥du-* (literally: 'tender, delicate'), attested in the sense of 'grape' in the *vinaya* of Sarvāstivādin: "C'est de ce mot sous sa forme prācrite probablement, et non pas du grec *bótrys*, que doit provenir le nom chinois du raisin (*p'ou-t'ao*) que la découverte au deuxième siècle avant notre ère du Ferghāna et de l'Inde par Tchang K'ien acclimata en Chine" (see "Bulletin de l'École Française d'Extrême-Orient" XIV, 1, 1914, p. 13, footnote 1). Pelliot endorsed Huber's suggestion ("T'oung Pao" XX, 1921, p. 145; it also deserves mentioning that Pelliot, who knew Laufer's etymology, preferred Huber's *mr̥du* to Laufer's **budāwa*), and it is to be added that the etymology linking Chinese *p'u-t'ao* with Sanskrit *mr̥du-* has recently become known in China through a Chinese translation of the corresponding passage of Pelliot's in Feng Ch'eng-kün 馮承鈞 (translator), *Si-yü nan-hai shī-ti k'ao-cheng i-ts'ung wu-p'ien* 西域南海史地考證譯叢

五編, Peking (Chung-hua shu-kü), 1956, pp. 82-83. It seems that Ōtsuki Fumihiko's suggestion connecting Sino-Japanese *budōka* with Sanskrit *mṛdvikā* (a derivative of *mṛdu-*, 'bunch of grapes', wrongly written *mṛdvika* by Ōtsuki) goes back to Huber or Pelliot.

P. 36. I would never have written that Laufer's reconstruction "is a pure speculation for which there may hardly be any evidence in Iranian linguistics" if I had known H. W. Bailey's article *Madu, A Contribution to the History of Wine* in the "Silver Jubilee Volume of the Zinbun-Kagaku-Kenkyusyo", Kyoto University, 1954, pp. 1—11 (for the discussion of the Chinese term, see the final paragraph, pp. 10—11), — and I greatly regret that this article came to my knowledge only after my own paper had been published. Prof. Bailey slightly differs from Laufer, but follows a similar line of reasoning and, in the main, seems to accept the latter's reconstruction — for which he also finds some indirect evidence in Iranian materials recently discovered. The Chinese word is considered as going back to Iranian **madu* (cf. Laufer's remark quoted in my article, p. 36, footnote 40), and the Chinese form itself — said to be intermediate between Karlgren's Archaic Chinese *b'wo-d'og* and Ancient Chinese *b'uo-d'au* — is reconstructed as **bodau* or **budau* (**βodau* or **βudau*). In this form, says Prof. Bailey, the first syllable gives an example of the stop *b* (or fricative *β*) replacing the nasal *m*, while the second syllable "is to be compared with the *-āu-* attested from *u*-stems in the Avestan *aranāum* 'fight', Old Pers. *dahyāuš* 'district', and in Sogd. ... *dyv'w* **dixāw*, that is, a form arising by ablaut in the inflexion". It is further stated that "from *u*-stems adjectival derivatives were made in *-āya-* and *-āya-*, as found in Khotanese ... and in various Sogdian suffixes" — which, I think, refers to Laufer's **budāwa* and is intended as a support for the latter form. On the other hand, nothing is said of the (Khotanese) Saka word *bātaa-* as a possible source of borrowing, although it is explicitly stated that Ferghana, where the Chinese must have learned the word, was a region of the Saka tribes. — The fact that Laufer's reconstruction was endorsed by such an authority in the field of Iranian linguistics as is Prof. Bailey certainly deserves emphasis and makes my statement in this respect invalid, but I cannot say that Prof. Bailey's learned article convinced me in this particular point. Limiting myself to what is strictly pertinent to the sinological aspect of the problem, I must state that if one accepts — as Prof. Bailey seems to do — Karlgren's Archaic Chinese reconstructions and especially Karlgren's system of voiced final stops, it is hardly possible for him at the same time to postulate for the early Han period **bodau* or the like (without a final stop in the second syllable) as an intermediate form between Karlgren's Arch. **b'wo-d'ôg* and Anc. **b'uo-d'âu*. Except for some specific phenomena concerning final *-g*, postulated for the *Shi-king* language in rime-class XVII (to which the *-ôg* words do not belong), Karlgren himself states that

"we can attest the full vigour of the final *-g* ... as late as middle Han time" (*Grammata Serica*, p. 31; cf. also *Compendium*, pp. 324—325 and 360), and I believe that there are now good reasons to extend the validity of this statement to the Later Han period as well. What is more, it has even been argued recently that Karlgren's Archaic Chinese is, in fact, the language of the Later Han period, see P. L.-M. Serruys, *The Chinese Dialects of Han time according to Fang Yen*, University of California Press, 1959, p. xii. At any rate, early Han forms accepted by both Laufer and Bailey are hardly tenable within the framework of Karlgren's system as it stands, and it must be borne in mind that accepting such forms implies rejecting a particular point of that system, if not rejecting the whole system of Archaic voiced final plosives. If we had strong positive evidence from an Iranian prototype that the early Han form must have been **bodau* or the like, it certainly would be an argument against Karlgren, which the opponents of his system would not fail to make use of. This, however, cannot be the case, since the evidence put forward in Prof. Bailey's article is only indirect, in the sense that only scattered morphological elements roughly corresponding with parts of the alleged Chinese forms are found in various early Iranian dialects — while the Iranian prototype of the Chinese form itself is not attested. All this, to my mind, is too weak a basis to support the alleged Chinese forms which by themselves are largely incompatible with Karlgren's reconstructions, the more so as, according to what I tried to show in my paper, there is a rather direct and comparative'y strong Iranian evidence for Chinese ***b'wo-d'ôg* as the early Han form.

P. 41, footnote 49. Concerning the rime pattern in ode no. 79, add: Lu Ch'i-wei, *Shi-yün p'u* 詩韻譜, Peking 1948, p. 28. The author agrees with most scholars in accepting the pattern *a : a : a : a* for the whole of the ode, but his reconstructions of the riming words differ, of course, from Karlgren's (except for the final *-g*).

P. 42. For another criticism of Karlgren's final voiced stops in Archaic Chinese see A. G. Haudricourt, *Comment reconstruire le chinois archaïque*, "Word" X, 2—3 (1954), pp. 351—364. In particular, with regard to the final *-g* Haudricourt believes to have found negative evidence in the early stratum of Vietnamese borrowings from the Chinese. On the same evidence he suggests to solve the problem of Chinese final stops by means of a hypothetical suffix *-s* resulting (in the case of *ju-sheng* words) in final groups *-ks* (e.g., *âk* 'evil' : *âks* 'to hate' — as against Karlgren's *âk : âg*), *-ts*, *-ps* > *-gs*, *-ds*, *-bs* > *-ys*, *-ws*, *-s* — the *-ks* finals having become vocalised already in the Archaic period (see *ibid.*, pp. 363—364). One will ask in how far Vietnamese data — which are both indirect and comparatively late — can be conclusive for Archaic Chinese of the *Shi-king* epoch; cf. also Serruys, *The Chinese dialects of Han time*, p. 254.

P. 43. Burmese “*ne* > **niy*” is, of course, a printer’s error for “*ne* < **niy*”. The formula is taken from Nishida Tatsuo 西田龍雄, *Myazedi hibun ni okeru chūko Biruma-go no kenkyū* (2), *Kodaigaku* 古代學 V, 1; Osaka 1956, p. 28.

II

As is well known, later Chinese tradition¹ credited Chang K’ien², the famous explorer of Central Asia in the Former Han period, with the introduction of various useful plants from the ‘Western countries’ into China. The final fixation of this tradition is due to Li Shī-chen, the great pharmacologist of the Ming era, whose *Pen-ts’ao kang-mu* contributed much not only to fix in China Chang K’ien’s fame as the great seed-importer but also to make it known in the West³. It is true that this tradition was already put to doubt by some Western scholars before the end of the past century, but it seems that it was the Japanese scholar Kuwabara Jitsuzō 桑原鷺藏 (1870—1931) who first rejected it wholly and categorically⁴. B. Laufer, on the other hand, was less radical in his criticism, since he stated that Chang K’ien “as a matter of fact, brought to China solely two plants, — alfalfa [i.e., *Medicago*] and the grape-vine”, no other plant being “attributed to him in the contemporaneous annals”⁵. Laufer further says that the famous general “obtained the seeds of alfalfa in Fergana, and presented them in 126 B.C. to his imperial master, who had wide tracts of land near his palaces covered with this novel plant” — the only source-reference to this statement being the *Shi-ki*, chapter 123⁶. Consequently, the Chinese word for *Medicago* — written 苜蓿 in the *Shi-ki* and 目宿 in the

¹ This tradition is represented by such unreliable and comparatively late works as the *Po-wu chi* 博物志 (attributed to Chang Hua 張華 who lived in the 3rd century A.D., but unauthentic), *Shu-i ki* 述異記 by Jen Fang 任昉 (beginning of the 6th century), *T’u-king pen-ts’ao* 圖經本草 by Su Sung 蘇頌 (late 11th cent.) and a lot of others.

² All Chinese names and terms which were given in characters in my former paper, RO XXII, 2, are given here in transcription only.

³ Chiefly through E. Bretschneider’s *Botanicon Sinicum*, based on the *Pen-ts’ao kang-mu*.

⁴ Cf. Fang Hao 方豪, *Chung-si kiao-t’ung shi* 中西交通史 I, Taipei, n.d. (about 1952), pp. 121—123, who accepts Kuwabara’s statements to the effect that none of the plants (including the grape-vine) attributed to the famous general was brought to China by himself. — I have not had access to Kuwabara’s paper quoted by Fang Hao.

⁵ *Sino-Iranica*, p. 190.

⁶ *Ibid.*, pp. 210—211 and p. 211, footnote 1.

Han-shu — is said to have been transmitted by Ch'ang K'ien from Ferghana to China, and Laufer's etymological attempt is based wholly on this assumption.

As is shown in my former paper, there are some reasons to connect the introduction of the grape-vine into China — and especially the introduction of its name — with Ch'ang K'ien's person, which, however, does not necessarily mean that the seeds were brought to China by the general himself⁷. On the other hand, Laufer's statements linking the introduction of *Medicago* (both the thing and its name) with Ch'ang K'ien and his etymology as well are largely inadequate and badly need reconsideration. Before proceeding to this, I think it useful to add a few words concerning, first, the traditional Chinese treatment of the term under discussion, second, the etymology of the term put forward in Western sinology prior to Laufer.

Graphical semanticisations of the word *mu-su* — the primary form of which is certainly 目宿, i. e., a purely phonetic rendering of a foreign word — appeared quite early, and it will be remarked that even the *Shi-ki* form (with 'grass') as against the *Han-shu* form (without 'grass') is an early attempt to semanticise the dissyllable in a specific way. This, however, is not the same as conscious etymologising, which in the present case is due to Li Shih-ch'en. The latter's «etymology» is based on a graphical variant of the term *mu-su*, 牧宿 (the characters 牧 and 目 being strictly homophonic), found in a gloss inserted by Kuo P'o 郭璞 (276—324) into his commentary on the *Er-ya* 爾雅⁸. This is interpreted as follows: 謂其宿根自生可飼牧牛馬也 'its perennial root (*su-ken* 宿根) shoots up by itself [after the plant had been cut, and the plant] can be used as fodder (*si-mu* 飼牧) for cows and horses'⁹. Thus, Li Shih-ch'en believes that the first syllable *mu-*, pretended to be 牧, means 'to tend (cattle), to feed', and the second, *-su* 宿, 'perennial (plant)'¹⁰ — the whole term being conceived as 'perennial forage

⁷ Cf. Pelliot's remark in "T'oung Pao" XX, 1921, p. 145, footnote.

⁸ In fact, in the *Si-pu ts'ung-k'an* ed. (reproducing a Sung edition) of the *Er-ya*, ch. 13, f. 4r, the word is written 牧宿.

⁹ See *Pen-ts'ao kang-mu*, Shanghai (Shang-wu in-shu kuan), 1954, vol. IV, chapter 27, p. 98.

¹⁰ In this, Li Shih-ch'en evidently follows K'ou Tsung-shih 寇宗奭, author of the *Pen-ts'ao yen-i* 本草衍義 (early 12th century), who recorded that *mu-su* 'has a perennial root (*su-ken*) which shoots up again after the plant had been mown'; the passage is quoted in *Pen-ts'ao kang-mu*, *ibid.* — *Su-ken* '(root of) a perennial plant' is a technical term of Chinese botany, commonly used at least since the Sung period. It can be traced back to pre-Han times, cf. *Li-ki*, chapter *T'an-kung*: 朋友之墓有宿草而不哭焉 (S. Couvreur, *Li Ki* I, p. 116: 'In amici sepultura quum est vetus

(-plant)¹¹. The «etymology», in spite of its fancifulness, had some influence among Chinese scholars even in quite recent times¹². After Li Shī-chen, as

(*integro anno*) herba, tunc non necesse est plorare'). The term *su-ts'ao* is explained in the commentaries (both Ch'eng Hūan and K'ung Ing-ta) as *ch'en-ken* 陳根, which is another expression for 'perennial root (or plant)'. The term was also adopted outside China, cf. Sino-Japanese *shukukonsō* 宿根草 'perennial plant'.

¹¹ Li Shī-chen, *ibid.*, does not fail to note another variant of the word, a very late one, *mu-su* 木粟 (in modern Chinese homophonic with the primary graphs, but slightly differing from them in ancient sounds), recorded by the Sung scholar Lo Yüan 羅願. Li says nothing of the first character, but with regard to the second, 粟 'rice or millet grain', he adds: 'its grain can be used to prepare food'. This evidently refers to the fact that *Medicago* was sometimes used in China as human food, cf. *Sino-Iranica*, p. 216. C. Pétillon, *Allusions littéraires* II, 2nd ed., Shanghai 1910, p. 408, tells the story of Sie Ling-chī 薛令之, a scholar at the court of the T'ang Emperor Hūan-tsung (713—755), who in a piece of verse inscribed on a wall complained of his food being chiefly composed of *mu-su* stalks 'as long as railing-bars'. The Emperor having seen the versified complaint replied in a poem of his own, beginning with the words: 啄木嘴距長, 鳳凰毛羽短 'woodpecker's beak and spurs are long, while phoenix' feathers are short' — meaning that he considered the scholar malicious-tongued and short of talent — and advising the arrogant scholar to resign his office. Pétillon draws upon the *T'ai-p'ing kuang-ki* 太平廣記 (compiled towards the end of the 10th century) which gives a detailed version of the story, and it should be added that Sie Ling-chī is also mentioned in the official *Sin T'ang-shu* 新唐書, chapter 196, where the fact of the scholar's complaint is alluded to, although the poems exchanged between Sie and the Emperor are not recorded. The passage runs (*Er-shi-wu shi* ed., p. 4086): 令之書壁, 望禮之薄, 帝見復題, 聽自安者, 令之即棄官, 徙步歸鄉里 '[Sie] Ling-chī wrote on the wall [saying that] the emolument he expected proved too meagre; on seeing it, the Emperor replied by inscribing [on the same wall]; having learned who [wrote the reply], Ling-chī immediately gave up his functions and marching afoot returned to his native place'. The variant 木粟 recorded by Lo Yüan probably is a pun on Sie Ling-chī's story, and the first character 木, left unexplained by Li Shī-chen, probably stands for *cho-mu* 啄木 'to peck wood, woodpecker' (*cho-mu-niao* 啄木鳥 is the common term for 'woodpecker' in present day Chinese also); if so, the whole term as recorded by Lo Yüan was intended to mean 'woodpecker's grain (-food)' — 'woodpecker' referring to the arrogant Sie Ling-chī. — All this, of course, has but little importance, and it may seem unnecessary to have discussed here Lo Yüan's variant in detail. However, the case is a striking example of both the peculiar method of semanticising true loan-words in Chinese and the not less peculiar word-formative procédé sometimes to be met with in purely Chinese vocabulary.

¹² Cf. Chu K'i-feng, *Ts'ī-p'ung*, II, p. 2259.

far as I know, the only Chinese scholar to offer an explanation of his own — and a much more reasonable one — is the contemporary lexicographer Fu Ting-i 符定一, who suggested that *mu-su* 苜蓿 is a *tie-yün* 疊韻, evidently having in mind that the word is a purely Chinese dissyllable of the *tie-yün* type¹³. Fu's explanation, taken as a whole, is a specific case of misuse of the *shuang-sheng* 雙聲 and *tie-yün* method, so common among Chinese scholars¹⁴, since the term certainly is not of Chinese origin and renders a foreign word,

¹³ See Fu Ting-i, *Lien-mien tsi-tien* 聯綿字典, Shanghai 1954; vol. VIII, s.v. *mu-su*.

¹⁴ The origin of the notions and terms *shuang-sheng* and *tie-yün* and their subsequent application in traditional Chinese linguistics is a problem in itself — and a problem which has not yet found any satisfactory treatment in Western sinological literature. A solution cannot be attempted in this place, but a few words must be added on the subject. Dissyllabic 'impressive' ('descriptive') words characterised by either the same initial or the same final (i.e., 'rhyme') in both component monosyllables, i.e., alliterative and rhymed formations — corresponding with the *shuang-sheng* and the *tie-yün* respectively and usually so termed in later times — were common in early Chinese and are amply attested at least since the *Shi-king* epoch. They constitute two specific types of dissyllabic word-formation in Chinese, but the procédé seems to have remained for centuries at a subconscious level, and there were no technical terms to designate these two types. The terms themselves appeared rather late, not before the second half of the Liu-ch'ao period. What is more, as far as we can judge from the recorded data, the appearance of the terms *shuang-sheng* and *tie-yün*, and especially their fixation as technical terms in philological matters, are quite independent of the early alliterative and rhymed dissyllabic formations just spoken of. At any rate, the original career of the two terms is not due to morphological (linguistic) analysis of dissyllabic formations, but is closely connected with the development of Chinese literary criticism in the Liu-ch'ao period on the one hand — and with a specific kind of word-playing on the other. Now, the first well-documented mention of the two terms, *shuang-sheng* and *tie-yün*, is in Liu Hsie's 劉勰 (c. 465—522) masterwork on literary theory and criticism, *Wen-sin tiao-lung*, chapter 33, see Wang Li-k'ü 王利器 (editor), *Wen-sin tiao-lung sin-shu* 文心雕龍新書, Peking 1951, p. 92. The passage is not very adequately rendered in V. Yu-chung Shih, *The Literary Mind and the Carving of Dragons* by Liu Hsieh, New York 1959, p. 183, and the importance of the very appearance of the two terms has escaped the translator. This is, of course, a *terminus ante quem*, and, in fact, it is reported in the *Nan-shi* 南史, biography of a certain Sie Chuang 謝莊 in chapter 20 (*Er-shi-wu shi* ed., p. 2598), that the latter, when asked by the general Wang Hsüan-mo 王玄謨 to explain the meaning of the terms *shuang-sheng* and *tie-yün*, exemplified their sense in a malicious word-play on Wang's personal name and the name of the place where he had suffered a defeat (cf. also Wang Li, *Han-yü in-yün-hüeh*, p. 44). Wang Hsüan-mo is said to have lived 386—467 A. D., and thus the terms seem to have been in existence some one hundred years before the *Wen-sin tiao-lung* (written about 500 A. D.). It should be recalled, however,

but I think that F u 'T i n g - i is right in so far as the Chinese form in question, although based on a foreign prototype, may none the less have been coined according to the *tie-yün* type, otherwise common among the Chinese 'impressive' ('descriptive') dissyllables¹⁵.

that the *Nan-shī* which contains the story referred to is a comparatively late source (compiled in the early T'ang period), and that in the biography of the same S i e C h u a n g which is given in the *Sung-shu* 宋書, chapter 85, there is no mention of this story. This is important in so far as the *Sung-shu* is not only much closer in time than the *Nan-shī*, but was compiled by S h e n Y a o, a scholar known for his interests in phonetic analysis (cf. my former paper, p. 19). Moreover, I could not trace any allusion to the story in W a n g H ü a n - m o's biographies in both *Sung-shu*, ch. 76, and *Nan-shī*, ch. 16. It follows from all this that the story referring to S i e C h u a n g cannot be considered as a well-established fact, and the earliest well-documented record of the terms in question, as already said, remains that of c. 500 A. D. in the *Wen-sin tiao-lung*. On the other hand, it is a well-established fact that word-playing on monosyllables agreeing in either initial sound or rhyme was common in the later Liu-ch'ao period, this kind of word-playing being termed *shuang-sheng*(-yü 語) and *tie-yün*(-yü). A striking example of this practice (although limited to the *shuang-sheng-yü*), showing that even maid-servants excelled in the play, was recorded by Y a n g H ü a n - c h i 楊街之 in his *Lo-yang k'ie-lan ki* written shortly after L i u H i e's work, in the middle of the 6th century, see C h o u T's u - m o (editor), *Lo-yang k'ie-lan ki kiao-shī* 洛陽伽藍言校釋, Peking 1958, p. 94. The conclusion, I think, can only be the following. The terms *shuang-sheng* and *tie-yün* are attested sometime about 500 A. D., although they may be slightly earlier. As they appear, they are used in connection with literary theory and popular word-playing — being attested almost simultaneously in reference to both. Originally, they had nothing to do with morphological analysis, but designated the phenomena of alliteration and rhyming exploited in both literary composition and word-playing. In particular, they did not specifically designate inseparable dissyllabic formations subsequently termed *shuang-sheng* and *tie-yün*, but referred to any alliterative or rhymed phrase (syntactic formation) or word composed of two or more monosyllabic units — chiefly to phrases created *ad hoc* for the purpose of literary effect or pun. The secondary application of the terms in linguistic morphology, which took place only later, and especially the narrowing of their extension to designate specific dissyllabic words showing alliteration or rhyme, was legitimate. On the other hand, it must be borne in mind that the introduction of the *shuang sheng* and *tie-yün* notions, never clearly defined, into traditional Chinese linguistics also led to all kinds of misuse of the method, e.g., unfounded identifications of dialectal monosyllables with 'classical' ones, wild speculations on alleged genetic relationships between isolated monosyllables, etc. The only critical paper on the subject I know of is W a n g L i's short article *Shuang-sheng tie-yün-ti ing-yung ki k'i liu-pi* 雙聲疊韻的應用及其流弊, reprinted in his *Han-yü shī lun-wen tsi* 漢語史論文集, Peking 1958, pp. 407—411.

¹⁵ Cf. *infra*, p. 81, footnote 37.

Not much is to be said on etymological attempts by Western scholars prior to Laufer. As early as 1879, T. W. Kingmill suggested that the Chinese word may have some connection with the Greek $M\eta\delta\iota\kappa\acute{\eta}$. The suggestion was a failure, but it was subsequently popularised as a well-established etymology by the *Chinese-English Dictionary* of H. A. Giles; Laufer rightly rejected it for both historical and phonetic reasons¹⁶. This unsound etymology deserves to be mentioned here, since owing to authorities like Liang K' i - ch' ao 梁起超 and the well-known Japanese editor of the *Shi-ki* Takigawa Kametarō 瀧川龜太郎¹⁷ who accepted it (probably through Giles), the long discredited equation $mu-su = M\eta\delta\iota\kappa\acute{\eta}$, together with the not less discredited formula $p'u-t'ao = \beta\acute{o}\tau\rho\upsilon\varsigma$, seem deeply rooted among some Far Eastern scholars to this day¹⁸.

What is most important, however, is that Laufer's own etymological attempt is equally inadequate¹⁹. As already said, his main assumption is that the Chinese word was transmitted by Chang K' ien from Ferghana to China; consequently, the word — the ancient form of which is given as **muk-suk* — is assumed to be of Ferghanian (Iranian) origin. Having discovered a Tibetan transcription of the Chinese word in the form *bug-sug*²⁰ — supposed "to come very near to the Iranian prototype to be restored" — Laufer

¹⁶ *Sino-Iranica*, p. 213.

¹⁷ See his *Shi-ki hui-chu k'ao-cheng* 史記會注考證, *Shang-wu in-shu kuan* repr., Peking 1955; vol. X, chapter 123, pp. 22–23.

¹⁸ The equations in question also serve as an alleged support to far-fetched theories on cultural contacts between early China and the Greeks, cf. Fang Hsiao, *Chung-si kiao-t'ung shi* I, p. 170.

¹⁹ For Laufer's etymology, see *Sino-Ir.*, p. 212.

²⁰ Cf. also his article *Loan-words in Tibetan*, "T'oung Pao" XVII, 1916; p. 500. In fact, in H. A. Jäschke's *Tibetan-English Dictionary*, p. 369, the form *bug-sug* is marked as a dialectal Ladākhian word designating '*Melilotus*' — and this does not seem to confirm Laufer's statement to the effect that we have to do with "an ancient Tibetan transcription of the Chinese word". Apart from the difference between *Medicago* and *Melilotus* (both are related species belonging to the genus *Papilionaceae* and may easily be mistaken for one another), one can hardly see how the Chinese word could penetrate in ancient times precisely to Ladākh, a region so close to Eastern Kashmir and so distant from China proper. I think that Laufer was wrong, and that the relation between Chinese *mu-su* and Ladākhian *bug-sug* is only indirect — in the sense that *bug-sug* does not render *mu-su*, but both independently render the same foreign word, cf. *infra*, p. 83. — As remarked by Laufer, *ibid.*, the *Polyglot Dictionary* of the K'ien-lung era (of which Laufer used the manuscript copy in the British Museum) does not confirm the equivalence of Chin. *mu-su* and Tib. *bug-sug*. This *Dictionary* gives, s.v. *mu-su*, two artificial Tibetan words, *rcva-bsuñ* 'fragrant grass' and *rgya-spos* 'Chinese (or Indian) scent', and it may be added that in the recently published *Wu-t'i Ts'ing-wen kien*

based himself on the latter form, and, in consequence, the Ferghanian prototype is restored as **buksuk*, **buxsux* or **buxsuk*. Laufer was also inclined to see some connection between these Ferghanian forms restored by himself and *būso*, a Gilakī word designating *Medicago*; in this, he follows W. Tomaschek who first compared the Gilakī word with Chinese *mu-su*, but he adds that the comparison "would be satisfactory if it could be demonstrated that this *būso* is evolved from **buxsox* or the like".

As far as I know, Laufer's etymological attempt, published four decades ago, has never been checked by anybody, and remains authoritative among the most critical scholars to this day²¹. To my mind, it is untenable for more than one reason.

First of all, Laufer, usually so careful in his treatment of the Chinese source-material, commits an error when he says that the "contemporaneous annals" attribute the introduction of *Medicago* to Chang K'ien himself; he is equally in error when he states — with an alleged reference to the *Ta-yüan* chapter of the *Shi-ki* — that Chang K'ien himself obtained the *Medicago* seeds in Ferghana and presented them to the Emperor in 126 B. C. Unlike the grape-vine — which, as already said, is rather clearly connected in the contemporaneous sources with the person of the famous general — *Medicago* is spoken of in both *Shi-ki* (ch. 123) and *Han-shu* (ch. 96 *shang*) in contexts not implying any direct connection between Chang K'ien himself and the introduction of the plant into China. In the *Shi-ki*, ch. 123, the word *mu-su* occurs only three times in one short passage which does not form part of what may be considered Chang K'ien's personal report to the Emperor; what is more, the passage in question comes after the mention of Chang K'ien's death. It is true that the passage concerns Ta-yüan, i.e., Ferghana,

五體清文鑑, 3 vols., Peking 1957, reproducing a manuscript of the *Polyglot Dictionary* preserved in the Ku-kung po-wu-yüan, *rcva-bsuñ* is wrongly written *rcva-ba-suñ*, and the whole seems to be conceived as one compound: *rcva-bsuñ-rgya-spos*, see vol. III, p. 4007. As Prof. J. W. de Jong kindly informs me, *rcva-bsuñ* is hardly attested in texts, while *rgya-spos* usually renders Sanskrit *vāyana* 'kind of perfume' or *tagara* '*Tabernaemontana coronaria* and a fragrant powder prepared from it'. It follows from this, I think, that the two Tibetan compound words (or perhaps only one: *rcva-bsuñ-rgya-spos*) which are given in the *Polyglot Dictionary* as equivalent of Chinese *mu-su* are not only artificial formations (words of this kind being common in the *Pol. Dict.*), but are also due to the confusion of *mu-su* '*Medicago*' with the '*mu-su* perfume' — the latter having probably nothing to do with *Medicago*, cf. Pelliot's remark inserted in P. Ch. Bagchi, *Deux lexiques Sانسکریت-չինոյս*, vol. I, Paris 1929; pp. 301—302, no. 989. At any rate, it remains a fact that the *Polyglot Dictionary* does not include Tibetan *bug-sug*, which seems to confirm the dialectal (Ladākhian) character of the word as indicated in Jäschke's dictionary.

²¹ Cf. Lo Ch'ang-p'ei, *Yü-yen yü wen-hua*, p. 25—26.

but in its essential part it states only this: 馬嗜苜蓿漢使取其實來於是天子始種苜蓿蒲陶肥饒地 ... 'the horses [in 'Ta-yüan] are fond of *mu-su*; Chinese envoys took its seeds and brought them home; then the Son of Heaven [i.e., Wu 'Ti] for the first time sowed the *mu-su* and the grape on fertile ground'²². In view of the fact that the 'Ta-yüan chapter of the *Shi-ki* is suspected of being secondary and derived from the *Han-shu*²³ it is important to note that in the passage on 'Ta-yüan in the latter work we find just the same statement about *mu-su* being brought to China by Chinese envoy(s) — without any reference to the general himself²⁴; there is also no mention of *mu-su* in Chang K'ien's biography in the *Han-shu*, chapter 61. On the other hand it is stated in the *Han-shu* that the Chinese had found *mu-su* also in *Ki-pin* 罽賓²⁵ i.e., Kashmir, the intercourse between China and the latter country having started during the reign of Wu 'Ti²⁵. In short, what we learn from the

²² *Er-shi-wu shi* ed., p. 0268₃; Takigawa, X, ch. 123, p. 31.

²³ Cf. *supra*, p. 66.

²⁴ *Han-shu*, ch. 96 *shang*, *Er-shi-wu shi* ed., p. 0607₃₋₄. The chief difference between the *Han-shu* and the *Shi-ki* in this respect is that in the *Han-shu* the phrase about the 'Ta-yüan horses being fond of *mu-su* is separated from the rest of the passage as it stands in the *Shi-ki* (cf. *supra*, p. 75—76), and forms part of another passage after which it is said: 'Chang K'ien was the first to tell Wu 'Ti about this'. Thus, one may argue that the *Han-shu* gives evidence to the effect that Chang K'ien himself brought the news about *mu-su* and transmitted the name. However, even this seems doubtful, since the phrase about Chang K'ien may well refer, as I think, to what immediately precedes it (i.e., the mention of 'blood-sweating' horses being the offspring of a 'heavenly' horse), not to the whole of the passage. The passage concerning the importation of *p'u-t'ao* and *mu-su* seeds only speaks of some Chinese envoy (or envoys, *Han shi* 漢使) returning home, and has no reference whatever to Chang K'ien. It is also worth noticing that the early T'ang commentator of the *Han-shu*, Yen Shih-ku, who must have known the legend making Chang K'ien the pioneer of plant-cultivation, was prudent enough not to seek any connection between the importation of *mu-su* into China and the famous general. In his gloss appended to the *Han-shu* passage just spoken of Yen Shih-ku only states that the dissemination of *mu-su* on the soil of Northern China goes back to Han time — without any reference to Chang K'ien, *Er-shi-wu shi*, p. 0607₄. As has already been said, the word is always written 目宿 in the *Han-shu* which is the original form as against 苜蓿 in the *Shi-ki*. Of course, this fact itself offers support to the assumption that the *Han-shu* text is primary while that of the *Shi-ki* is secondary.

²⁵ Cf. *Sino Ir.*, p. 216; *Han-shu*, ch. 96 *shang*, passage on *Ki-pin*, *Er-shi-wu shi*, p. 0606₁—0607₁. For the translation, cf. Н. Я. Бичурин, *Собрание сведений*, II, pp. 179—182. The identification *Ki-pin* = Kashmir is due to E. Chavannes and P. Pelliot. It is also stated in the *Han-shu*, *ibid.*, that *Ki-pin* had been conquered by the king of the *Sê* 塞, Arch. and Anc. Chin. **sak*, i.e., the Sakas, — the Iranian Saka tribes living in dispersion in various countries.

"contemporaneous annals" is only this: the Chinese became acquainted with *mu-su* through their expeditions to 'Western countries' in Wu Ti's time — which expeditions, as we know, were many; they saw the plant in Ferghana, but not only there: also in Kashmir, which is explicitly mentioned, and most probably in other countries too; the plant was introduced into China probably from Ferghana by some Chinese embassy returning home, sometime during Wu Ti's reign, but not in the early phase of the Chinese intercourse with the West, possibly after Chang K'ien's death — at any rate not by the general himself; the Chinese called the plant 呂宿 which certainly renders a foreign word. The positive evidence for the comparatively late introduction of *mu-su*, later than that of the grape-vine, — evidence which I believe to have found in both *Shi-ki* and *Han-shu*, — is confirmed by negative evidence from Sī-ma Sīang-jū's *Shang-lin fu* already quoted with regard to the *p'u-t'ao* problem²⁶. Unlike the grape-vine, *Medicago* is not mentioned among the many plants growing in Wu Ti's imperial park Shang-lin, and it is hardly conceivable that Sī-ma Sīang-jū may inadvertently have omitted from his poem that plant in which, as we know from the *Shi-ki* and the *Han-shu*, the Emperor himself took special interest on its introduction. To my mind, the fact that *mu-su* does not appear in the *Shang-lin fu*, so abundant in plant-names, can only mean that the plant had not yet been known in China by the time when the poem was written (sometime about 120 B.C.).

The earliest record I have been able to trace which attributes the introduction of *Medicago* to Chang K'ien himself is due to Lu Ki 陸機 (261—303); there is a reference to this effect in his *Yü ti Yün shu* 與弟雲書, handed down in the *Ts'i-min yao-shu* 齊民要術 compiled in the late 5th or early 6th century by Kia Sī-hie 賈思勰²⁷. In this connection Laufer himself — apart from the erroneous reference to the *Shi-ki* — verbally quotes only Jen Fāng's *Shu-i ki* (of the 6th century), saying that Chang K'ien was the first to obtain *mu-su* in the Western countries²⁸. But all this (including Lu Ki's statement, not mentioned by Laufer) is late uncritical speculation without any foundation in the "contemporaneous annals".

²⁶ Cf. *supra*, p. 65—66.

²⁷ Cited in Takigawa's commentary, *Shi-ki hui-chu k'ao-cheng*, X, ch. 123, p. 31. Cf. *Ts'i-min yao-shu*, Sī-pu ts'ung-k'an ed., III(29), f. 14v. For Lu Ki's *Yü ti Yün shu* and Kia Sī-hie's *Ts'i-min yao-shu*, mentioned by Laufer on another occasion, cf. *Sino-Ir.*, p. 278. However, Laufer's 陸機 is an error for 陸機 (Ki 機 was the name of another Lu Ki, also living in the 3rd century, known for his work on botanical and zoological nomenclature in the *Shi-king*; Laufer seems to have mistaken the one for the other, this confusion also occurring in some Chinese works), and his reading of Kia Sī-hie's personal name as "Se-niu" is equally erroneous.

²⁸ *Sino-Ir.*, p. 217.

As we know, Laufer's unfounded belief that it was Chang K'ien who learned the word in Ferghana and introduced the plant into China inevitably led him to assume that the Chinese word must be of Ferghanian (Iranian) origin, and, consequently, to a forced quasi-Iranian etymology based on a Tibetan transcription *bug-sug* of the Chinese form restored by him as **muk-suk* — or rather on what he considered as a Tibetan transcription of the Chinese word. The invalidity of Laufer's main tenet has already been demonstrated, and we must now turn to the Tibetan form with which his etymology either stands or falls. Setting aside the problem of whether Tib. *bug-sug* really renders the Chinese word — the problem already touched upon²⁹ and to which we shall revert later on — and following Laufer's line of reasoning as closely as possible, we observe, first of all, that *bug-sug* is not quite regular in so far as the first syllable is *bug-* (without prefixal'), not **'bug*. We now know perfectly well that in Sino-Tibetan transcriptions of the T'ang and Wu-tai period Chinese initial *m-*, if not combined with a nasal final, regularly corresponds with Tibetan *'b-*³⁰, which fact is explained by both the tendency in Northwestern Chinese dialects of the time to transform initial nasals into plosives and the tendency in Tibetan to nasalise the prefix³¹. Even supposing an irregularity in *bug-sug* as rendering the Chinese word — which is possible — we must state that this *bug-sug* cannot be earlier than the Sino-Tibetan transcriptions of the T'ang period, and we must ask whether the phonetic phenomenon attested for the T'ang and Wu-tai period has any bearing on the etymology of a word the Chinese borrowed from a foreign language nine or ten centuries before, in the Former Han period. There is certainly no direct connection between the late Tibetan form and the Chinese word as borrowed in the Western Han period, and I think that Laufer's quasi-Iranian etymology **baksuk* or the like — based on the Tibetan form — is untenable for this reason alone. Let it be added that the present state of Iranian studies, as far as I know, does not justify Laufer's speculation in the sense that the alleged Iranian prototype restored by him remains unconfirmed to this day.

According to Karlgren, the Archaic Chinese reading of 目宿 (苜蓿) is ***mîôk-sîôk*, which differs only slightly from the Ancient Chinese reading **mîuk-sîuk*. Theoretically, the second character may also be read ***sîôg > *sîzu* or — in view of the phonetic relations in the series — ***sîôk > *sîuk*³².

²⁹ Cf. *supra*, p. 74, footnote 20.

³⁰ See Lo Ch'ang-p'ei, *T'ang Wu-tai si-pei fang-in* 唐五代西北方音, Shanghai 1933; plate 6, line 38, where 目 is transcribed *'bug*; cf. also p. IX and 17.

³¹ Cf. P. Demiéville, *Le concile de Lhasa*, I, Paris 1952; p. 25, footnote 9, and p. 290, footnote 2.

³² Cf. *Grammata Serica Recensa*, series nos. 1036 and 1029.

The alternative modern reading *mu-siu*, occurring along with the more standard pronunciation *mu-su*, points to the first of these, ***sîôg > *sîzu > siu*, and seems to make the two early forms, ***mîôk-sîôk* and ***mîôk-sîôg*, equally possible. However, following Fu 'Ting-i's suggestion, I think that the whole form, although borrowed, was coined by the Chinese as a quasi-*tie-yün* dissyllable³³, and thus the variant ***sîôg* seems excluded. On the other hand, the *tie-yün* principle does not exclude the reading ***sîôk* — which, however, is not confirmed by the modern continuants of the word. I think that the early Chinese reading of the word which must be the starting point for any etymological attempt is ***mîôk-sîôk* (possibly ***mîôk-sîôk*).

It is certainly fully legitimate to suppose that the Chinese word under discussion may represent an Iranian original since the term is used in contemporaneous (or nearly contemporaneous) Chinese texts with reference to an Iranian country, Ferghana, and the plant was probably imported into China from Ferghana. We would expect the Chinese word to be based on Iranian *aspat* or the like — which is the common early Iranian term for *Medicago* — but this is certainly not the case. Strange as it may seem, there is nothing in the early Iranian vocabulary so far known which could be associated with the Chinese ***mîôk-sîôk*. Now, in dealing with the problem, one may adopt one of two procedures: either to assume, as Laufer did, that the word must, after all, be Iranian and forcibly to restore an alleged Iranian prototype otherwise not attested (even indirectly) — or to suppose that the Chinese word may be of non-Iranian origin and look for its original form outside the Iranian linguistic domain. I think that the latter possibility is also quite legitimate, and this not only because the former has so far failed. We must remember that in the Han annals *Medicago* is spoken of not only in connection with Ferghana but also in connection with Kashmir. Besides, it is to be borne in mind that the first news about the useful forage plant, the introduction of its name and the introduction of the plant itself — which latter, as we know, is comparatively late, later than the introduction of the grape-vine — need not necessarily coincide and may be due to different expeditions sent to the West at different times during Wu Ti's long reign, extending over more than 50 years (140—87 B.C.). I willingly concede that the simplest hypothesis is that the Chinese form is of Ferghanian (Iranian) origin, but I do not think that it

³³ Cf. *supra*, p. 72—73 and footnote 14. It is true that ***mîôk-sîôk* as a dissyllable which is both a loan-word and a *tie-yün* seems exceptional, since among the early loan-words in Chinese there is hardly another instance of this kind. This, however, must have been conditioned by the phonetic structure of the foreign prototypes, usually not allowing of the rendering by a *tie-yün* formation. On the other hand, I do not see any reason why the Chinese had better not use this type, otherwise common in their language, to render a foreign word which, owing to its own phonetism, permitted this kind of rendering.

is the only hypothesis possible, and since the supposition of Iranian origin does not yield any satisfactory explanation of the Chinese form I think it logical to turn to the other country mentioned in the *Han-shu* in connection with *Medicago*, i.e., Kashmir. I believe that the Chinese word came from there.

As is well known, there is no specific Sanskrit word for *Medicago*³⁴. On the other hand, it goes without saying that the plant which the Chinese encountered in Kashmir in the Former Han time must have had some local name, and that some Indian vernacular related to Sanskrit was spoken there at the time. Thus, in our search for the supposed early Kashmirian prototype of the Chinese form, we must turn, *faute de mieux*, to Sanskrit, although we must remember that the Indian form to be restored is not directly attested. The restoration must necessarily be based solely on phonetic resemblance paired with sufficient semantic associations; this, to my mind, yields two possible explanations.

The first of these was suggested to me by Laufer himself or rather by a curious error which he committed. In his chapter on *Medicago*, Laufer also mentions one of the Russian names of the plant, *медунка*, which he considers as derived from the Greek *Μηδυνή*³⁵. This is a serious error, since the word certainly is a purely Russian formation, a derivate of *měd* 'honey', and means something like 'honey-plant' (there are also parallels in other Slavonic and non-Slavonic languages, cf. Polish *miódunka* — although the Polish word designates another genus, the *Pulmonaria*; German *Honigklee* 'Melilotus', etc.). I learn from the botanists that *Medicago* is, in fact, a melliferous plant, and that bees are very fond of its flowers. I think that semantic associations similar to those attested in Russian *медунка*, etc., may have been responsible for the old Kashmirian name of the plant, and thus the early Chinese form ***mīōk-sīōk* inevitably makes us think of the Sanskrit *mākṣika* 'honey'³⁶. From the semantic point of view it is important to note that the

³⁴ Cf. *Sino-Ir.*, p. 214. — In the Sanskrit-Chinese glossary *Fan-yü tsa-ming* 梵語雜名, compiled by Li-yen 禮言 (= 利言) in the 2nd half of the 8th century, there appears the form *scista* (so written in both Sanskrit letters and Chinese characters) as the Sanskrit equivalent of Chinese *mu-su*, see P. Ch. Bagchi, *Deux lexiques Sanskrit-chinois*, I, p. 44b. As remarked by Pelliot (*ibid.*, p. 301, no. 989; cf. also vol. II, 1937, p. 353), this must be an error for *svista*, a Sanskritised form of Iranian *aspist*.

³⁵ *Sino-Ir.*, p. 219.

³⁶ Laufer says that *Medicago* is probably indigenous to Kashmir (*Sino-Ir.*, p. 216), but it is also probable that it was introduced there by the Iranian Saka invaders, spoken of in connection with Kashmir in the *Han-shu* (cf. *supra*, p. 76, footnote 25). Thus, it appears that the word for *Medicago* used in Kashmir may have been of Saka origin, and this again takes us back to Iranian. However, as already stated, there is nothing in Iranian vocabulary which could be compared with the Chinese form. Sanskrit *mākṣika* is attested in Khotanese Saka

meaning 'honey' is secondary. Morphologically, the word is a derivative of *mākṣikā* 'fly' or 'bee', and literally means '(something) relating or belonging to bees', which may mean 'bee-plant' as well as 'honey' — both meanings being due to parallel but independent semantic development. Thus, *mākṣika* appears to be a fairly adequate descriptive term for the designation of a melliferous plant. On the other hand, the phonetic resemblance of the two forms under discussion is striking, especially with regard to consonantism; in case of ***mīōk-sīōk*, a more theoretical one, the consonantal correspondence is perfect. The difference in vocalism, as it stands, may easily be explained by the fact that the Chinese certainly took the word not from Sanskrit, but from the local vernacular, as well as by the natural Chinese tendency to mutilate foreign loan-words and make them fit the rigid phonological system of the Chinese language; in the case of ***mīōk-sīōk* this tendency must have been further strengthened by the limitations peculiar to the *tie-yün* type³⁷. For both phonetic and semantic reasons which appear to be particularly strong and supported to some extent by historical reasons — at any rate not contradicted by historical reasons — I consider Sanskrit *mākṣika*, or rather some vernacular (Kashmirean) form of it, as the most probable prototype of the Chinese form discussed.

The other tentative explanation seems more sophisticated, but deserves, in its turn, to be briefly pointed out. I think that the second monosyllable of the Chinese form, *-sīōk*, may be conceived as rendering Indian *śāka* 'vegetable' or 'edible plant (in general)'. As is well known, in Sanskrit-Chinese glossaries and in translations Sanskrit *śāka* is usually rendered as *ts'ai* 菜 which is the general Chinese term for any edible plant. We know that *Medicago* was used as human food³⁸, and we have direct proofs that in China the plant was referred to as a *ts'ai*: in Li Shī-chen's *Pen-ts'ao kang-mu* the plant is put in the *ts'ai-pu* 菜部 (not *ts'ao-pu* 草部), and among the popular designations of *Medicago* current in China to this day we find the term *kin-hua-ts'ai* 金花菜³⁹. Thus, the Chinese parallels seem to justify the word *śāka* as referring to *Medicago*, and I think that a Sanskritist cannot raise objections against the possible use of the Indian word. If so, Chinese ***mīōk-sīōk* phone-

in the form *mākṣi*— (cf. S. Kono, *Primer*, p. 119: *mākṣia*-), but as Prof. H. W. Bailey has kindly informed me, the meaning (assured by the bilingual texts, where *mākṣi* corresponds to Tibetan *shrai-rci* 'honey') is only 'honey', and the form itself is a late loan-word from Buddhist Sanskrit. Thus, the form attested in Khotanese Saka cannot have any bearing on our problem.

³⁷ One will note that Sanskrit *mākṣika* represents a prototype allowing of being rendered by a *tie-yün* composed of *ju-sheng* monosyllables in *-k*. This also refers to the other Indian prototype, put forward *infra*, p. 82.

³⁸ Cf. *supra*, p. 71.

³⁹ The term *kin-hua-ts'ai* is given as a popular designation of *mu-su* in the small *Sin-hua tsī-tien* of 1953, p. 86.

tically renders an Indian compound word, °śāka-, the first member of which remains to be determined. This, in its turn, inevitably reminds us of the word *mṛga-* designating more specifically 'antelope', but in its wider extension also 'wild herbivorous animal' in general. The whole compound may be restored as **mṛgaśāka-* meaning something like 'animal fodder', and this seems to be a good descriptive name for the plant, which may have locally been coined and used in Kashmir. It is also worth noticing that the Indian term so restored is to some extent semantically paralleled by Iranian *aspast* 'horse-fodder'. It goes without saying that in the present case phonetic correspondence between the supposed Indian prototype and Chinese ***mīōk-sīōk* is less striking than between *mākṣika* and ***mīōk-sīōk*; the divergency, however, may be explained by reasons similar to those formerly referred to. By the way, it may be said that the Chinese must have had special difficulties in rendering *mṛga*, so unusual for their own phonological system, and I wonder whether *mīōk* was not perhaps the best way of transcribing the Indian word. The problem lies in the fact that the restored Sanskrit compound **mṛgaśāka-* (or rather its supposed vernacular form) is, as far as I know, not attested — and this is certainly a point deserving emphasis⁴⁰. However, I do not judge it possible entirely to exclude the etymological hypothesis just spoken of for this reason alone.

I am fully aware of the fact that two divergent etymologies proposed by one author for a single early Chinese loan-word is certainly too much, and only one of them, if any, can be true. As has already been said, the reasons for the first of them appear to be stronger than for the second, but I think that for the time being both should be taken into consideration, the final decision belonging to an indologue rather than a sinologue. I also believe that either of the proposed etymologies as they now stand is better founded than Laufer's quasi-Iranian **buksuk* based on a questionable Tibetan form — to which latter we must revert for a while. As already said (*supra*, p. 74, footnote 20), it is hardly conceivable for both chronological and geographical reasons that the Chinese word could penetrate in ancient times to Ladākh and become domesticated there in a form "coming very near" to its foreign prototype. On the other hand, the fact that Jäschke found the form *bug-sug*, so much resembling the Chinese word, precisely in Ladākh cannot be pure chance, since Ladākh is adjacent to Kashmir, that is to say the country to which the Chinese sources led us in our search for the prototype of the word borrowed by the Chinese in Former Han times. The most natural supposition is, of course, that the Tibetans of Ladākh became acquainted with *Medicago* through

⁴⁰ I am indebted to Prof. E. Słuszkiewicz for finding a *dvandva* compound *mudgaśāka-*, designating specifically '*Phaseolus Mungo*', but also 'vegetables, edible greens'. This is the only Sanskrit compound having -śāka and phonetically resembling the Chinese word to some extent which could be traced, but I do not think that it has any connection with our problem.

their closest neighbours, the Kashmireans, and took the word directly from them. If so, Tib. *bug-sug* and Chin. ***mīōk-sīōk* render the same Indian vernacular prototype, tentatively restored as *mākṣika* or **mṛgaśāka*, which fact accounts for the specific similarity of the two forms, Tibetan and Chinese, and for their difference as well, the Chinese word being much earlier and representing an early stage of dialectal development. Thus, the two forms appear to be connected in a specific way, but different from that supposed by Laufer. I do not know whether existing materials allow of further research on the origin of Tib. *bug-sug* as rendering a vernacular form corresponding to *mākṣika* or **mṛgaśāka* (words taken into Tibetan from the Indian vernacular are sometimes mutilated past recognition), but I think that the identification of the Tibetan form — if possible — may also yield the solution of the Chinese form.

III

In his *Sino-Iranica*, Laufer also devoted a short paragraph to coral, pp. 523-525. Basing himself on F. Hirth's⁴¹ interpretation of the pertinent passages of the *Wei-lüe* 魏略 and the *Hou-Han shu*, which are comparatively late sources⁴², Laufer says that "the Chinese learned of the genuine coral through their intercourse with the Hellenistic Orient". He adds, however, that we know from the *Han-shu*, chapter 96 *shang*, that the Chinese encountered coral also in Ki-pin (Kashmir); this *Han-shu* record Laufer considered as the earliest mention of the word *shan-hu* 珊瑚 'coral' in Chinese sources⁴³. With regard to the word itself, which he restores as **san-gu* (based on Sino-Japanese *san-go*), Laufer states that no ancient Iranian name for coral is known and that there is no word in any West-Asiatic or Iranian language with which the Chinese form could be correlated. Consequently, as he says, the Chinese word "possibly is of foreign origin, but possibly it is not". I may add that in no other work have I come across any etymological discussion of the Chinese word⁴⁴.

⁴¹ *China and the Roman Orient*, 1885, p. 41, 73, etc.

⁴² Yü Huan's 魚豢 *Wei-lüe*, partly preserved in P'ei Sung-chi's commentary on the *San-kuo ch'i*, is of the middle of the 3rd century, cf. E. Chavannes in "T'oung Pao" VI, 1905, pp. 519—520. The compiler of the *Hou-Han shu*, Fan Ye 范曄, lived in the 5th century.

⁴³ *Sino-Ir.*, p. 525, footnote 3. See *Han-shu*, *Er-shi-wu shi* ed., p. 0606, passage on Ki-pin.

⁴⁴ Even Li Shih-ch'en (*Pen-ts'ao*, III, ch. 8, p. 41, s.v. *shan-hu*) does not venture on any etymological explanation. He only gives a five-syllabic form as an alleged Sanskrit equivalent of Chinese *shan-hu*, which, however, must be erroneous (at least as it stands in the edition I have), since it yields no sensible identification (*prabāla?* *pāribhadra?*).

Now, as already remarked by Pelliot¹⁵, the earliest record of the Chinese form *shan-hu* is in Sī-ma Siang-ju's poem *Shang-lin fu*, already referred to in connection with grape-vine and *Medicago*. Laufer also overlooked the fact that the term occurs in the *Shi-ki*, ch. 117 (biography of Sī-ma Siang-ju), where the *Shang-lin fu* is quoted *in extenso*¹⁶. Thus, we have reliable source-evidence that both the thing and the word were known to the Chinese of the 2nd century B.C., sometime before the poet's death in 117. On the other hand, in view of the fact that the word does not occur in pre-Han literature and that its first appearance in Chinese sources coincides with the epoch when the Chinese became acquainted with the 'Western countries' where coral was known and highly appreciated, the simplest hypothesis is that both the thing and the name for it came to Han China from the West. Contrary to Laufer, I believe that Chinese *shan-hu* must be of foreign origin.

It is true that the earliest mention in Chinese sources connecting coral with a definite geographical region is the *Han-shu* record referring to Ki-pin, and this makes us think that the word may have come from Kashmir. However, unlike the former case, that of *Medicago*, the supposition yields no sensible result, since no Sanskrit word, as far as I know, allows of sufficient phonetic and semantic associations with the Chinese form. On the other hand, it is by no means necessary to assume an Indian origin in the present case since we know, through Sī-ma Siang-ju, that coral must have been introduced into China in the early phase of the Chinese intercourse with the West, probably contemporaneously with the grape-vine, and certainly earlier than *Medicago* (which latter, as we know, is not mentioned in the *Shang-lin fu*). The Chinese came into direct contacts with Iranian peoples in Central Asia certainly earlier than with Kashmir; on the other hand, there is a reliable tradition that the Iranians had known coral for ages and considered it as a valuable substance of peculiar properties¹⁷. If so, it is highly probable that the Chinese word is of Iranian origin.

Laufer states that no specific ancient Iranian name for coral is attested, and this, as far as I know, is true. It makes me think, however, that some non-specific term must have been used by the ancient Iranians, and I believe that it is Laufer's other remark, the one saying that coral "has always been conceived in the Orient as a precious stone", which gives us a clue to the problem.

¹⁵ Cf. "'T'oung Pao", XX, 1921, p. 145, footnote; also Ts' i Sī-ho 齊思和 in *Pei-king ta-hüe hüe-pao* 北京大學學報 I, 1955, p. 133 (otherwise supplementing Laufer's data).

¹⁶ See *Er-shi-wu shi*, p. 0256₂; for the translation, cf. E. v. ZACH, *Chin. Anth.*, I, p. 111.

¹⁷ *Sino-Ir.*, p. 525.

In fact, with the exception of some peoples having a direct, although imperfect, knowledge of the origin of the substance (*cf.* the common Sanskrit term for 'coral', *vidrūma-*, a derivate of *drūma-* 'tree'), the common notion among the Asians was that coral is a kind of stone⁴⁸. This, I think, must have also been the case with the ancient Iranians, especially those living in Central Asia, far away from the sea, and necessarily ignorant of the origin of the substance they appreciated. In short, I suggest that the ancient Iranians used their word for 'stone' as a designation of 'coral', the latter being conceived as 'stone *par excellence*', 'precious stone'; the full term for coral may also have been a compound or a phrase containing the word 'stone'.

Lauffer's **san-gu* needs only slight improvement. According to Karlgren, 珊 is to be read (Arch. and Anc.) ***sân* and 瑚 ***g'o* > **yuo*⁴⁹, which gives ***sân-g'o* as the early Han form and which does not much differ from Sino-Japanese *san-go* and Lauffer's **san-gu*.

In Modern Persian the common word for 'stone' is *sāng* سنگ; from the semantic point of view it deserves noticing that the word is also attested in derived meanings 'weight' and 'dignity'. This is an old Iranian word, traceable not only to Middle Persian *sang* or *sa(n)g* (سنگ), but also to Old Persian *aθa"gaina-* 'of stone (adj.)', from **aθa"ga-*, **āθa"ga-* or **θa"ga-* 'stone', Avestan *asāga-*⁵⁰, and having correlates in other Iranian dialects (*cf.* Sogdian *snk* or *snk'*, **sang'*⁵¹). Thus, we may safely assume the form **(ā)sanga* or the like, which in some Iranian dialect (or dialects) designated both 'stone' and 'stone *par excellence*', i.e., 'coral', and which accounts for the Chinese form ***sân-g'o*. Phonetic correspondence appears to be more than sufficient. The facultative initial *a-* in the Iranian form is no problem at all, the tendency of the Chinese to shorten polysyllabic foreign words and drop the initial *a* being known (many examples in loan-words borrowed from Sanskrit, *lan-jo* 蘭若

⁴⁸ For a parallel in China, *cf.* for instance Li Shī-chen, *Pen-ts'ao*, where coral is put among 'metals and stones', in the *kin-shī-pu* 金石部, ch. 8.

⁴⁹ For 珊, see *Analytic Dictionary*, p. 251, no. 852. As a matter of fact, Karlgren gives only the Ancient Chin. reading **sân* and omits the character from his *Grammata Serica*. The omission does not seem justified since the character appears in a pre-Han author, Sung Yü 宋玉, *Shen-nü fu* 神女賦 (*Wen-süan* XIX, 2), in the reduplicated formation 珊珊 explained in the commentary as onomatopoeia of sound produced by bird's wings in flight (v. Zach, *Chin. Anth.*, I, p. 264, has only 'feines Rauschen'); according to Karlgren's principles, the Archaic reading must be equally ***sân*. For 瑚, see *Grammata Serica Rec.*, no. 49 i'.

⁵⁰ *Cf.* P. Horn, *Grundriss der neupers. Etymologie*, no. 747; H. Hübschmann, *Persische Studien*, 1895, no. 747; Chr. Bartholomae, *Altiranisches Wörterbuch*, 1904, col. 64; R. G. Kent, *Old Persian*, p. 166.

⁵¹ *Cf.* R. Gauthiot, *Essai de Grammaire Sogdienne*, p. 59 *et al.*

for *aranya*, etc.); besides, the Iranian prototype may also have been **sanga*, which makes the phonetic correspondence nearly perfect.

Semantic reasons, already spoken of and shown to be sufficient, may be supplemented by mentioning an important fact which, to my mind, strongly corroborates the etymology proposed. Now, among the New Persian words designating coral there is a compound term — overlooked by *Lauf er* in his enumeration of Persian words, *Sino-Ir.*, p. 525 — namely *sāngi šājārī* سنگ شجری, literally meaning something like 'stone of a tree'. It is true that the formation is a hybrid one (the second member being a loan-word from the Arabic), and one attested comparatively late⁵². It cannot be directly connected with an early Iranian linguistic fact of the 2nd century B.C., but it is important in so far as it clearly shows the probability of associating the Iranian word for 'stone' with coral. To my mind, the etymology deriving the Chinese word *shan-hu* (***sân-g'o*) from an early Iranian **(ǎ)sanga* is highly probable, if not certain. At any rate, it deserves to be examined in view of the fact that no other etymology has so far been proposed for the Chinese form.

⁵² I. A. Vullers, *Lexicon persico-latinum etymologicum*, II, Bonnae ad Rhenum 1864, p. 333, s. v. *sāngi šājārī* 'corallium' cites the dictionary *Burhān Kāfi* which was compiled in the middle of the 17th century, — although it is based on earlier materials.