

To answer the second question, the contemporary (20th century) dictionary edited by A. N. Baskakov has been used. The comparison of this vocabulary with the contemporary dictionary shows that 104 examples out of 168 chosen from Merinski's dictionary have survived till now. Now one must think of the reason of such changes in a language.

Two following explanations can be suggested:

- 1) The natural evolution of each language eliminates archaisms giving instead neologisms or new synonyms.
- 2) The 20th century Turkish language trends to get rid of foreign influences (Arabic and Persian).

The comparison of the 17th century vocabulary with the 20th century one shows some differences. They refer to:

- 1) the forms of suffix -lik - in the 17th century there is only an illabial form;
- 2) the range of formations - there are some formations in the 17th century which do not exist now;
- 3) the range of meaning - there are some semantic groups in the 17th century which do not exist now.

The final conclusion follows: the formative model is the same in the 17th century and in the 20th century in regard to both morphology and semantics.

Elżbieta GÓRSKA

ARABIC DICTIONARIES IN ANAGRAMMATICAL ARRANGEMENT

Authors of the present-day dictionaries of Arabic language use two methods of word arrangement. Some of them accept the alphabetical arrangement, which takes into account a letter order in a word, irrespective of the grammatical category to which this word belongs. This system has found many advocates; its advantage is that persons with even a cursory knowledge of the Arabic alphabet and of simplest grammatical rules are able to use such a dictionary. Thus, it is useful mostly for foreigners who study Arabic for practical purposes; hence, it is frequently applied in Arabic-foreign language dictionaries but never in purely Arabic dictionaries of the lexicon type. Some examples of application of this method are: Handwörterbuch der Neu Arabischen und Deutschen Sprache by A. Wahrmund, edited by Giesen in 1879, or the Arabic-Azerbaijane Dictionary worked out in the Institute of Oriental Studies at the Academy of Sciences of the Azerbaijan Soviet Socialist Republic in 1962.

From a philological point of view a greater role has been played by dictionaries that arrange words according to the alphabetical order of their radicals, i. e. that group words with a common root. Principles of word classification may vary in particular dictionaries, yet, while scrutinizing more closely Arabic-European dictionaries a certain general scheme applied by their authors can be observed. It differentiates them decidedly from old, purely Arabic dictionaries, drawn up also by the root method,

but in the so-called "rhyme" arrangement ($R^3 R^1 R^2$), with a rather free and inconsistent order of particular word forms¹.

The scheme of presentation runs as follows²:

- verb in all its classes, apart from the basic form its maṣḍars are enumerated (in Lane's dictionary all forms of maṣḍars are given and explained for successive verb classes);

- nominal forms of various kinds created through alternation, i. e. substantiva, participia activi and maṣḍars of 1st class, certain nomina professionis, diminutiva and adjectiva;

- nominal forms created through affixation, participia activi and maṣḍars of consecutive classes, participia passivi of all classes, nomina loci, temporis and instrumenti, some types of nomina professionis (quite exceptionally in Wehr's dictionary participium activi of 1st class, besides participium passivi, belongs to this group).

A somewhat different arrangement occurs in H. K. Baranov's dictionary³, where the author after the group of verbs quotes and expounds maṣḍars of all successive verb classes and only further on accepts the above-mentioned order.

Of course, within the afore-said groups word arrangement is not identical. A more detailed treatment of this problem, going beyond the scope of the present article, could become the subject of further, very interesting studies and discussions.

At present the root method is applied in majority of dictionaries. This type of dictionary is, doubtlessly, more congruent with the structure of Arabic. It is also closely related to the traditional Arabic lexicography, created by investigators and experts in language, for whom the method based on word root (regardless of the accepted alphabetical "clue") was the only correct way, since it called for a good and thorough knowledge and understanding of language, mostly in its grammatical aspect.

The anagrammatical dictionary arrangement, outlined in the present article, required also detailed studies of Arabic, but mainly in its phonological layer. The term "anagrammatical" suggests such an order in which no morphological analysis of words is

applied; hence, this can be any order which accepts an arrangement of entries in a dictionary different from alphabetical arrangement of radicals, as - for example - a system applied in specialistic dictionaries compiled according to subject-matter, and - above all - the mathematical-anagrammatic system related to a number of letters in particular words.

The creator of the anagrammatical dictionary arrangement was Ḥalīl 'ibn 'Aḥmad 'al-Farāhīdī (718/719-786/791⁴). Having rejected the then existing alphabetical systems (one based on old Semitic alphabets and accepting the أ ب ج order and the other, modified, used till to-day), he adopted his own system of classification of Arabic phonemes according to the place of their articulation, starting with those whose articulation is the deepest, i. e. laryngeal. If this system were accepted nowadays, the following sequence of phonemes could be applied:

ء, ه
 ح, ع
 ق
 ب, غ, ك
 ج, س
 ت, د, ز, س, ه, ذ, ث, ظ, ل, ن, ر
 ف, ذ
 ف
 ب, م
 و, ي.

In Kitāb al-'ain by Ḥalīl 'ibn 'Aḥmad the order appears as below:

ء, ه, ح, ه, غ
 ك, ق
 ج, س, ذ
 ه, س, ز
 ت, د, ث
 ظ, ذ, ف
 ل, ر, ن
 ب, م
 و, ي, 'alif⁵.

What calls attention in this phonetic alphabet of Ḥallīl 'ibn 'Aḥmad are the following observations:

1) Hamza is placed at the end of the alphabet. This becomes clear when we consider the presently used alphabetical order, in which hamza has no definite place of its own, being treated as an additional sign. 'Alif, most often connected with hamza, is a semi-vowel and as such was very consistently placed by Ḥallīl 'ibn 'Aḥmad, together with wāw and jā, at the end of the alphabet. The author himself comments on it in a similar way, while explaining the name applied to this group of phonemes: 'al-hawā'ijja. Hamza is "hanging in the air" and does not belong to any of 8 groups mentioned previously⁶.

2) Laryngeal h follows pharyngeal ʕ and ḥ. The author did not differentiate places of articulation of these phonemes, numbering them with ḥ and ḡ among a common group of guttural sounds (Arabic ḥalqijja)⁷.

3) Postvelar q is inserted between velar k and ḡ. The author did not differentiate the places of articulation of k and q, but numbered both of them among velar phonemes.

4) Intradental ḍ and ṭ are placed between dentals. This whole group was subdivided by Ḥallīl 'ibn 'Aḥmad in a completely different way than at present. He classified the phoneme ḍ with palatoalveolar ḡ and ṣ and grouped together the following phonemes:

ṣ, s, z ('al-'asaliijja)

ṭ, d, t ('al-qat'ijja)

z, ḍ, ṭ ('al-laṭawijja)

The phonemes l, r, n were not explained by the author⁸.

5) Labio-dental f is not differentiated from labial m and b. The author classified them all together in one group - 'al-ṣafa-wijja. Even this cursory analysis of subdivision into phonemic groups carried out by Ḥallīl 'ibn 'Aḥmad reveals considerable differences in relation to the presently accepted classification. Yet, the attention should be drawn to the factual order of pho-

nemes, which - though created 12 centuries ago - is astonishingly convergent with the order accepted nowadays.

Although there exists an opinion claiming that Ḥallīl 'ibn 'Aḥmad's system is not original, but taken over from Sanscrit⁹, J. A. Haywood comments on it as follows: "A comparison of his order with that of the Sanscrit alphabet shows sufficient broad similarity to suggest influence, yet enough divergence in detail to indicate an independent mind moulding borrowed ideas"¹⁰. Later on, he also points to some very essential differences between the arrangement originating from Sanscrit and that used in Arabic.

The phonetic alphabet adopted in Kitāb 'al-'ajn does not determine, of course, the anagrammaticalness of the dictionary. Actually, this alphabet, if only consistently applied in the already mentioned order (i. e. according to order of accepted consonants), could yield as a result a variation of the dictionary arrangement based on the morphological analysis of words (it would be immaterial in that case whether the order were R¹ R² R³ or R³ R¹ R², used since the 2nd half of the 9th century). Ḥallīl 'ibn 'Aḥmad, however, adopted a completely different method, though obsolete for a long time and devoid of practical importance, yet very original as a mental construct and applied by later Arabic lexicographers until the 11th c. Both its imitation and criticism, searching themselves for new, improved methods, were exceptionally important for shaping and development of the Arabic lexicography.

Ḥallīl 'ibn 'Aḥmad's anagrammatical system was grounded on the division of words according to number of letters. Each book, designated by a separate letter (except وى, which were grouped together in the last book¹¹), was subdivided into chapters (bāb), which contained successively:

- 2-radical words (bāb 'aṭ-tunā'ī 'al-muḍā'af)¹²,

- 3-radical words (bāb 'aṭ-tulāṭī 'aṣ-ṣaḥīḥ),

- 3-radical words with one weak radical (bāb 'aṭ-tulāṭī

'aṭ-mu'tallī).

- 3-radical words, doubly weak (bāb 'al-laffi),
- 4-radical words (bāb 'ar-rubā'i),
- 5-radical words (bāb 'al-humāsī).

Within particular chapters was adopted the principle of consonant transposition (taqlīb 'al-hurūf)¹³, i. e. quoting successive-ly all possible variants of a given set of radicals. As a consequence, the following number of permutations occurred¹⁴: 2 for 2-radical, 6 for 3-radical, 24 for 4-radical and 120 for 5-radical words. The permutation number can undergo modification if a word contains weak radicals. The set of such permutations is defined as "part" (fasl)¹⁵. And so the principle of transposition caused Ḥallī 'ibn 'Aḥmad' method to become not only anagram-matical but also anagrammic.

The Book of the Letter 'Ain, which opens the whole work, is the most extensive, as it comprises all possible word combinations containing the letter 'ain. In conformity with the principle adopted by the author, the subsequent books do not deal with words which appeared previously. And thus The Book of the Letter Ha contains all words with this letter, excepting those which have been enumerated in The Book of the Letter 'Ain¹⁶.

Ḥallī 'ibn 'Aḥmad's work had a great impact on development of the Arabic lexicography and was followed by numerous critical studies. The thorough discussion of unusual importance and vastness of this work, as well as of the excellent lexical material contained in it, is not within the scope of the present article. Investigating the system alone, the attention should also be paid to its shortcomings, which can shed light on activities of later followers of Ḥallī 'ibn 'Aḥmad, who tried to improve his system. These are the most serious objections:

- 1) Recognition of articulation places of certain phonemes is wrong, from the present viewpoint.
- 2) The system of word arrangement seems very complicated and unpractical for users, which - among others - is due to:
 - a) lack of homogeneous word arrangement within particular parts called fasl,

b) omission of various parts of speech related to a given combination of radicals,

c) separate treatment of words with weak radicals.

3) No clearly defined criteria of word selection exist. This explains inconsistency in quoting the radical combinations which, practically, are not used. In some cases they are comprised in the set, in some others they are not.

All those drawbacks in Ḥallī 'ibn 'Aḥmad's system were noticed by posterior Arabic lexicographers. Their attempt to avoid those errors led to creation of several variations of the anagram-matical method. These are their main principles:

1) Some assumptions of the anagrammatical arrangement are changed¹⁷. Main parts of the dictionary are compiled according to number of radicals in a word. Thus, the successive chapters contain permutations of:

- a) 2-radical words (i. e. verbs of the type *mediae geminatum*),
- b) 4-radical reduplications (words with hamza are treated separately),
- c) 2-radical words with weak radicals,
- d) 3-radical words with "sound" radicals,
- e) 3-radical words whose 2-radicals (no matter which ones) are identical (in fact this is, for the most part, repetition of chapter a),
- f) 3-radical words with a weak radical in the middle and 1st and 3rd radicals identical,
- g) 3-radical words with a weak radical in an optional position (this chapter repeats partly the material from previous chapters),
- h) words with hamza, seldom used,
- i) 4-radical words,
- j) 5-radical words.

A separate chapter is devoted to loan-words, poetical metaphors, rarely used words, etc.¹⁸.

Within main chapters, delimited by the number of letters in a word, the modern alphabetical order is binding, though in final chapters it becomes less rigorously observed.

2) Ḥalīl 'ibn 'Aḥmad's phonetic alphabet is adopted in a modified form¹⁹. The alphabetical order is as follows:

h, ḥ, ʿ, ḫ, ǧ, q, k, ḡ, ʃ, l, r, n, t, d, ṭ, ẓ, z, s, ẓ, ḡ, j,
f, b, m, w, 'alif, j.

As a part of the manuscript is missing, it remains uncertain where hamza was placed; perhaps it occurred at the very beginning of the alphabet or in a special chapter appended at the end of the dictionary²⁰. This would be a further proof for the proper correction of places of phoneme articulation, erroneously identified by Ḥalīl 'ibn 'Aḥmad; also, other modifications carried out especially within the group of laryngeal or pharyngeal phonemes make this order resemble more and more the arrangement adopted nowadays. The anagrammatical order, whose main principle of word division according to number of radicals remains unchanged, seems the most simplified in comparison with the hitherto mentioned dictionaries. In 5 main chapters words are subdivided into:

- a) 2-radical,
- b) 3-radical, "sound",
- c) 3-radical with weak radicals,
- d) 'awšāb - various expressions such as interjections or onomatopoeias,
- e) 4- and 5-radical²¹.

Inside the chapters the phonetic alphabet is observed.

3) The anagrammatical arrangement²² resembles Ḥalīl 'ibn 'Aḥmad's phonetic alphabet; however, hamza is separated from wāw and jā²³ and 'alif is not treated separately, on the assumption that without hamza it is no more than a long vowel (according to the present point of view²⁴).

In addition, there exist 3 known dictionaries of the anagrammatical type which, from the methodological aspect, are a repe-

tition of Kitāb 'al-'ajin and contribute nothing new to the Arabic lexicography. They are works of the following authors: 'Al-ḥaḡīb fī 'l-luḡa by 'al-'Azhārī (895-981), Muḥtaṣar 'al-'ajin by 'Az-Zubajdī (died 989), and 'Al-muḥīṭ fī 'l-luḡa by Ṣaḥīb 'ibn 'Ab-bād (938-995). . These works, together with the previously mentioned ones, are of immense value, owing to the lexical material contained in them, since their authors' aim was to order and enrich the contents, rather than alter the arrangement of Kitāb 'al-'ajin. Thus, e.g., 'Ibn Manzūr, the author of Liṣān 'al-'arab states in the introduction to his dictionary that, in his opinion, no lexicon can surpass Ṭaḡīb fī 'l-luḡa by 'al-'Azhārī and none is more comprehensive than 'Al-muḥkam by 'Ibn Sīdā²⁵. It is worth mentioning that his opinion was not isolated among Arabic lexicographers and linguists of later times.

Some aspects of the anagrammatical method found also application in non-Arabic dictionaries. This is related to a great impact of the Arabic lexicography on other lexicographies (mainly Persian and Turkish), this being only one element of the whole complex of influences exerted by Arabic language and literature on neighbouring countries, especially intensive from the 8th to the 16th century. This phenomenon can be observed in Dīwān luḡat 'at-Turk written in 1032. Its author, Maḥmūd Kaṣṣārī, in the introduction to this work refers himself to Kitāb 'al-'ajin²⁶. Though the main clue of word arrangement in his dictionary is the root order R¹ R² R³²⁷, the subchapters group words according to number of their radicals. The combination of these methods yields an unusually complicated pattern, interesting solely from the philological point of view.

Some elements of the anagrammatical method occur also in Persian dictionaries of the so-called "old" period (11th - beginning of the 19th century). The most common principle observed in them is the same ordering as used by Maḥmūd Kaṣṣārī. The authors, however, append separately, outside this system, the subject-oriented chapters, which contain, for example²⁸:

- metaphors and poetical expressions,
- compounds,
- words comprising typically Arabic letters,
- words related to Avesta,
- foreign words, mainly proper names²⁹

It should be borne in mind that the anagrammatical arrangement cannot be related solely to the anagrammic system of Ḥaṣṣan ibn 'Aḥmad and his followers. As has already been mentioned at the beginning of the article, such an arrangement can be any order not based on the method of root analysis³⁰, so closely connected with the grammatical system of Arabic. Under such a formulation, old specialistic lexicons, which contain words related to a chosen domain, are also anagrammatical, since the only clue of their arrangement is the subject-matter, even if within particular chapters some definite order is preserved, related, e.g., to the semantic range of words. This issue, however, would call for separate studies and the detailed treatment of monographs of this kind goes well beyond limits of the present article, due not only to a wide range of subjects and richness of lexical material, but also to an uneven level and different value of particular works. I will limit myself to quoting only the most famous ones: Kitāb 'al-Faras, Kitāb 'al-'Arā'iz, and Kitāb 'al-Majair by 'al-'Aṣma'ī (740-828), Ḥarīb 'al-musannaf by 'Abū 'Ubayd (770-837), Kitāb 'al-ḥajj by 'Abū 'Ubaydā (728-825), Kitāb 'al-majar by 'Abū Zajd (died 830), Kitāb 'al-badī' by 'Ibn 'al-Mu'tazz (861-908), Tahḍīb 'al-'afāz by 'Ibn 'as-Sikkīt (died 857), Mabādi'u 'l-luḡa by Muḥammad 'ibn 'Abd 'Allāh 'al-'Iṣkāfī (died 1030), Fikḥ 'al-luḡa by 'Aṭ-Ṭa'ālabbī (died 1038), Kitāb 'al-muḥaṣṣaṣ fī 'l-luḡa by 'Ibn Sida (died 1066).

In consideration of the adopted method two more monographs should be added to this list: 'Iṣlāḥ 'al-manṭiq by 'Ibn 'as-Sikkīt, and 'Adab 'al-kātib by 'Abd 'Allāh 'ibn Qutajba (died 889). They differ from the remaining anagrammatical dictionaries

in one respect: irrespective of the subject-matter arrangement, particular groups of words have identical forms. The discussed chapters contain, for example, words of the fa'i and fī'i types and semantic differences between them; 3-radical words with the radicals wāw and jā used interchangeably; words with adjectival meaning of the type fa'īl, fa'ūl, mi'īl, mi'āi³¹, etc. The second work is based on a similar method, its main chapters being devoted to words of the same type, with an alternative vocalization³².

The anagrammatical method has not been rejected up till now. Its elements can be still discovered in arrangement of some modern specialistic dictionaries. Of course, the alphabetical arrangement, usually Europeanized, is also binding, but only within the frames of main chapters, which subdivide the dictionary into parts devoted to various subjects. As an example can serve Qāmūs 'al-mūsīqā 'l-'arabiyya by Ḥusajn 'Alī Maḥfūz, issued in Baghdad in 1975. Somewhat differently appears this system in four-language (Arabic-French-English-German) technical dictionaries. The anagrammatical method has also been mixed here with the alphabetical arrangement, but realized differently. Their introductions specify subject sections which cover the vocabulary of a given lexicon. Entries appear alphabetically, but apart from semantic explanation, they indicate to which section a given word can be referred. Two examples of dictionaries of this type are quoted below: Mu'ḡam muṣṭalahāt 'at-tiknūlūḡiyya 'l-kimjā' iyya (Technical Dictionary of Chemical Technology) by 'Anwār 'Abd 'al-Wāḥid, Yaḥyā 'al-'Aḡamāwī and Ḥasan 'Ismā'īl, Cairo-Leipzig 1974, and Mu'ḡam muṣṭalahāt 'al-ḥadīd wa's-sulb (Technical Dictionary of Iron and Steel Industry) by 'Anwār 'Abd 'al-Wāḥid and 'Abd 'al-'Azīz Ḥaṭṭāb, Cairo-Leipzig 1974.

In conclusion we should stress the importance of the widely understood anagrammatical method of dictionary arrangement and its spatial and temporary range. A limited usefulness of this method nowadays cannot alter the fact that its knowledge and in-

vestigation allow us to consider the Arabic lexicography from a new perspective and greatly develop its understanding. It also provides us with information that, among others, the early mediaeval Arabic philologist in their lexicographic studies attached more importance to semantics than to morphology. And only gradually have developed such grammatical systems which have arranged the lexical material of dictionaries more clearly and consistently. All this, however, should not belittle the real value of the anagrammatical method, especially in the form in which it is still being applied.

NOTES

¹ E. g., Qāmūs 'al-muhīf by 'al-Fīrūzābādī (1326-1414) or Tāz 'al-'arūs by Murtad 'az-Zabīdī (1732/33-1791).

² On the basis of: E. W. Lane, An Arabic-English Lexicon, London-Edinburgh 1863; A. de Biberstein-Kazimirski, Dictionnaire arabe-français, Cairo 1875; H. Wehr, Dictionary of Modern Written Arabic, London 1876; Elias A. Elias, Elias' Modern Dictionary, Arabic-English, Cairo 1976.

³ H. K. Baranov, Arabsko-russkij slovar, Moskva 1970.

⁴ J. A. Haywood, Arabic Lexicography, Leiden 1965, p. 20.

⁵ Ibidem, p. 36.

⁶ Ibidem, p. 35.

⁷ Ibidem, p. 35.

⁸ Ibidem, p. 35, footnote 15.

⁹ V. M. Bietkin, Arabskaja leksikotogija, Moskva 1975, p. 170.

¹⁰ Haywood, op. cit., p. 37.

¹¹ Ibidem, p. 37.

¹² Titles of chapters after Haywood, op. cit., p. 38.

¹³ V. M. Bietkin, op. cit., p. 170.

¹⁴ According to estimation of Ḥalīl 'ibn 'Aḥmad, quoted by Haywood, op. cit., p. 36.

¹⁵ V. M. Bietkin, op. cit., p. 170.

¹⁶ Ibidem, p. 170.

¹⁷ Kitāb 'al-ḡamhara fī'l-luḡa by 'Ibn Durajid (837-934).

¹⁸ Arrangement of chapters after Haywood, op. cit., pp. 48-50.

¹⁹ 'Al-kitāb 'al-bāri' fī'l-luḡa by 'Al-Qālī (901-967).

²⁰ A. S. Fulton, quoted by Haywood, op. cit., p. 60.

²¹ Arrangement of chapters after Haywood, op. cit., p. 60.

²² 'Al-muḥkam wa'l-muḥīf 'al-'a'zam by 'Ibn Sīda (died 1066).

²³ Haywood, op. cit., p. 66.

²⁴ J. Cantineau, Cours de phonétique arabe, Paris 1960, p. 18.

²⁵ Bietkin, op. cit., p. 172.

²⁶ V. A. Zviaginцев, Istorija arabskovo jazykoznanija, Moskva 1958.

²⁷ Haywood, op. cit., p. 119.

²⁸ Ḥusajn Inḡ, Farhang-e Ğehangiri, beginning of the 17 c.

²⁹ L. S. Piejsikov, Leksikotogija sovremennogo persidskovo jazyka, Moskva 1975.

³⁰ I take no account here of the Europeanized alphabetical order mentioned at the beginning of the article (p. 1). Its point of departure, in my opinion, is the "radical arrangement" which underwent some simplifications and became adapted to practical purposes, being simultaneously related to the system of European dictionaries.

³¹ Haywood, op. cit., p. 112.

³² Ibidem, p. 113.