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CONTRASTIVE ANALYSIS OF THE PHONOLOGY OF AMERICAN ENGLISH AND
MODERN LITERARY ARABIC.

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THE RESEARCH OUTLINED HERE IS CONCERNED WITH A
CONTRASTIVE ANALYSIS OF THE PHONOLOGIES OF AMERICAN ENGLISH
AND MODERN LITERARY ARABIC FROM A PEDAGOGICAL VIEWPOINT. THE
MAJOR GOALS OF THIS STUDY ARE--(1) TO DETERMINE THE SPECIFIC
AREAS OF DIFFICULTY ENCOUNTERED BY AMERICAN STUDENTS IN
PRONOUNCING AND READING ARABIC, AND (2) TO STUDY THE
STRUCTURE OF THE ARABIC WRITING SYSTEM, BOTH AS A DISCRETE
SYSTEM, AND AS IT RELATES TO THE PHONOLOGICAL STRUCTURE. ALSO
TO BE DERIVED FROM THIS STUDY IS A SET OF PENMANSHIP
EXERCISES IN ARABIC. AMERICAN STUDENTS HAVE BEEN TESTED FOR
ERRORS IN PRONUNCIATION AND READING, AND AREAS OF DIFFICULTY
HAVE BEEN CLASSIFIED. THE ARABIC WRITING SYSTEM HAS BEEN
ANALYZED INTO BASIC COMPONENT UNITS. VOCABULARIES OF 11
ELEMENTARY TEXTBOOKS IN USE IN THIS COUNTRY HAVE BEEN
COMPILED AND COMPARED TO DETERMINE VOCABULARY ITEMS OF MOST
WIDESPREAD USE. FINALLY THREE SETS OF INSTRUCTIONAL MATERIALS
(INCLUDING PRONUNCIATION, READING, AND WRITING EXERCISES
ACCOMPANIED BY TESTS) HAVE BEEN PREPARED AND TRIED OUT IN THE
UNIVERSITY OF MICHIGAN FIRST-YEAR COURSE IN ARABIC. THIS
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Contrastive Analysis of the Phonology of
American English and Modern Literary Arabic

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This study is concerned with a contrastive analysis of the phonologies of American English (AE) and Modern Literary Arabic (MLA) from a pedagogical viewpoint. The major aspects of this research are: (1) to determine the specific areas of difficulty encountered by American students in pronouncing and reading Arabic, which will provide the foundation for the preparation of teaching materials, leading to fluency and correctness in the phonology of MLA, and (2) to study the structure of the Arabic writing system, both as a discrete system per se, and as it relates to the phonological structure. Also to be derived from this study is a set of penmanship exercises to develop an acceptable hand in Arabic. American students have been tested for errors in pronunciation and reading, and areas of difficulty have been classified. The Arabic writing system has been analyzed into basic component units. Vocabularies of 11 elementary textbooks in use in this country have been compiled and compared to determine vocabulary items of most widespread use. Finally, three sets of instructional materials (including pronunciation, reading and writing exercises accompanied by tests) have been prepared and tried out in the University of Michigan first-year course in Arabic.

The teaching of Modern Literary Arabic (MLA) has been undergoing radical changes in recent years, specifically the increased use of an oral approach. It is our view that applying the audio-lingual approach to the teaching of MLA is pedagogically sound, and more effective generally than the traditional translation method. It is desirable for the following reason as well: most serious students of Arabic learn not only the literary language but also some colloquial dialect, where, of course, proper pronunciation is important. By mastering MLA phonology, which is the common denominator of all dialectal phonologies, the student has already anticipated this later problem.

The MLA writing system, while simple in principle, usually proves to be a real burden for the beginning student. Experience shows, however, that the advantages of a phonemic transcription are outweighed by its disadvantages: in general, most students do not seem really to master the phonemic transcription, and those who master it too well do not seem to be as self-assured later in Arabic script itself. Therefore, we have decided to bypass altogether a phonemic transcription. Our objective is to prepare a set of instructional materials with a coordinated attack on MLA phonology and writing system to be used by the beginning student. In order to make the materials as widely usable

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as possible, the materials are based on the vocabularies of 11 elementary Arabic textbooks in use in this country.

Method

The underlying methodological principle of this study is that of contrastive analysis. In brief, structures differing in the native and the target languages are contrasted and drilled. These contrastive differences were arrived at in view of the results of tests of American students of Arabic, the experience of the investigators as teachers, and contrastive linguistic analysis.

The 12 Ss tested had varying degrees of knowledge of Arabic, ranging from none (one student) to advanced (six).

The tests were of two types: perception (12 students participating) and reading (eight Ss). In the perception test, the S heard a word and was then asked to make the proper choice of two alternatives written on a sheet of paper. In the reading test, the S was asked to record (on tape) a short simple prose passage followed by a list of words.

Each test was scored, and the errors were analyzed. Some errors revealed difficulties with the phonology, and others showed areas of difficulty in the writing system. This error analysis was utilized in the preparation of the materials.

The structural analyses were carried out as follows:

- a. A contrastive analysis of the phonologies of AE and MLA was made, and the results were compared to those of the tests. Materials were prepared for difficulties predicted by either approach.
- b. The MLA writing system was analyzed, both impressionistically and by using an instrumental script analyzer; certain recurring shapes were taken as basic units of letters to facilitate preparation of writing exercises.
- c. The vocabularies of 11 MLA textbooks in current use (about 600 to 1200 each) were compared, and listed according to those items occurring in all 11 books, those in 10, etc. As far as possible, illustrative words were chosen from these lists.

Results and Discussion

The results of the above analyses revealed characteristic errors made by American Ss. These errors were classified into two categories: pronunciation and reading. Following is a summary of the Ss' major problems.

Pronunciation problems

1. Short vs. long vowels: katab-kaatab;
2. Short vs. long consonants: katab-kattab,
(the trilled rr was a special pronunciation problem);
3. Four emphatic vs. non-emphatic consonants: s - ṣ, d - ḍ, t - ṭ, ḏ - ḏ̣;
4. All contrasts involving velar and pharyngeal fricatives: x, ḫ, c, ħ, h,
as well as the stops ʔ and ʕ.

Reading problems

1. Confusion of letters which are distinguished only by a dot: ب - ظ,
ع - غ, ز - ذ; two special problems of this type are the distinction between
alif magsura "ا" and final yaa "ي"; and final haaʔ "ه" and taa marbuta "ة";
2. Confusion of letters of similar shape: د "د" and ر "ر";
3. Failure to assimilate the ل "ل" of the definite article preceding
"sun-letters".

Writing problems

Actual use of the materials in the classroom has indicated the following types of writing problems:

1. Tendency to connect non-connectors with following letters;
2. Unfamiliarity with certain combinatory forms as medial m as in "م" or
the contrast between s and b as in "س" ; "ب"
3. Some problems are tied to knowledge of structure, such as "ا" vs. "ي"
or recognizing the definite article "ال" when followed by "sun-letters".

Sets of instructional materials

On the basis of the studies completed in this research, the following sets of instructional materials have been prepared and tested in the first-year course at the University of Michigan.

Pronunciation exercises, including contrastive (English-Arabic) descriptions of difficult phonemes have been prepared. These drills provide students with practice in listening to Arabic sounds first and then producing them. The drills can be practiced both in the classroom under the control of the teacher and in the language laboratory with the help of a tape-recording. See Fig. 1 for illustration of a pronunciation drill oriented to the writing system.

Insert Fig. 1 about here

Reading exercises have been prepared, including (1) alphabet practice which requires students to recognize the individual Arabic letters, to call them by their sounds, and to remember their shapes; (2) letter-combinations and words, where students are required to recognize these letter-combinations and words, to pronounce them and to remember their shapes; (3) carefully-graded phrases and sentences, connected with the pronunciation drills and the oral materials of the lessons which take students beyond reading words to reading phrases and sentences; (4) short passages based on vocabulary known to the students, followed by true and false statements. The students read the passage silently, then indicate by a check mark whether the statements given are true or false. Finally, the passage is read orally, first by the teacher and then by students. This helps students to read with comprehension several sentences connected together; and (5) longer passages based on the oral materials covered in classroom, followed by questions. Students first read the passage silently and write down the answers. Then, they read the passage orally. Examples of these types are given in Fig. 2.

Insert Fig. 2 about here

Writing exercises to accompany the reading and pronunciation exercises have been prepared. They teach students (1) the mechanical movements used in forming letter shapes and combinations of letters. Students are required to identify letters and letter-combinations orally before they write them, in order to enforce correct pronunciation and recognition; and (2) the patterns necessary to read with understanding, words, phrases and sentences in print. The materials teach the student to copy the pattern following guidelines at first, then without these prompts later (see Fig. 3).

Insert Fig. 3 about here

In addition, tests consisting of three parts (pronunciation, reading and writing) are given as assignments which the students work through in the language laboratory. The tests reinforce the learning that has taken place in the classroom (see Fig. 4).

Insert Fig. 4 about here

A distinctive feature of the materials described briefly above is that they follow the principles of programmed learning, and are destined (after adequate use and revision) to become a fully programmed course, one which can be used independently by the individual student. As such, they will be the first to teach Arabic phonology and the writing system combined in a programmed course. There is a need for this type of course in view of the growing trend in this country and abroad to use modern audio-lingual techniques in the teaching of MLA.

Figure Captions

Fig. 1. An example of a pronunciation drill oriented to the writing system.

Fig. 2. An example of a reading drill containing the same sounds indicated in Fig. 1.

Fig. 3. An illustration of a writing drill, including the same sounds as in Figs. 1 and 2, following the pronunciation and reading drills in those figures.

Fig. 4. An illustration of a daily test, based on the drills indicated above, which the students do in the language laboratory.

ع غ

ا ب ت ث د ذ ر ز س ش ص ض غ
 ط ظ ع غ ف و ه ل م ن ه و ي

ع : باع قاع شاع

غ : باغ فرغ ساغ

بائع	فارع	فروع	فروع	نبوع
قراع	شارع	مضارع	دفاع	مرفوع
شعوع	بلوع	سماع	ربوع	صباغ

Fig. 2

ع ا ع و ع ي

ماع	شاع			
راع	راع			
عوي	عوا			
غوي	غوا			
عور	عاب	راعِي	باعِي	
غور	غاب	راعِي	باعِي	
ماعِي	ناعور	بالوع	عوري	
طاعون	بلاغِي	عاطل	سراعِي	
بلاغ	ماعَة	رغذَة	رعد	

Fig. 2 (con't)

ع غ	ع غ
-----	-----

ع ع ع ع ع ع ع ع ع ع

ع ع ع

غ

باع برِفاع مرفوع فارغ فراغ بلوغ

باع برِفاع مرفوع فارغ فراغ بلوغ

Fig. 3

عِي عِي عِي عِي عِي عِي عِي عِي

عِي عِي عِي عِي عِي عِي عِي عِي

عَاب غَار عَرَب عَدَد عَوْد رَاعِي

عَاب غَار عَرَب عَدَد عَوْد رَاعِي

Fig. 3 (con't)



ع	ع	ع	ع	ع	ع	ع	ع	ع	ع	ع	ع
ع											

ع	ع	ع	ع	ع	ع	ع	ع	ع	ع	ع	ع
ع											

ع	ع	ع	ع	ع	ع	ع	ع	ع	ع	ع	ع
ع											

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ع											

ع	ع	ع	ع	ع	ع	ع	ع	ع	ع	ع	ع
ع											

Part I Pronunciation

Fifteen words will be read, each one twice. Each word will contain a or ξ sound. Place a check in the appropriate column. ξ

ξ	ξ	
		1
		2
		3
		4
		5
		6
		7
		8
		9
		10
		11
		12
		13
		14
		15
		16

Fig. 4

Part II Reading

Ten words will be read, each one twice. For each word two choices are given below. Circle the letter of the correct choice:

- | | |
|--------------|--------------|
| عَدَد (٢٠٦) | بَاع (٢٠١) |
| دَعْد (٢) | بَاع (٢) |
| عَرَض (٢٠٧) | فَارِع (٢٠٣) |
| عَرَض (٢) | فَارِع (٢) |
| رَاغِب (٢٠٨) | شَارِع (٢٠٢) |
| غَارِب (٢) | شَاعِر (٢) |
| بَارِع (٢٠٩) | زَاع (٢٠٤) |
| عَابِر (٢) | عَذَر (٢) |
| عَرَب (٢٠١٠) | غَارِي (٢٠٥) |
| عَرَب (٢) | رَاغِي (٢) |

Part III Writing

Ten words will be dictated, each one will be read twice. Please listen carefully to each word and then write it in the space below:

Fig. 4 (con't)