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THE PHONOLOGICAL ANALYSIS OF ARABIC LOAN-WORDS
BORROWED INTO THE CASTILIAN LANGUAGE

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Presented for the
Master of Arts
Degree
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Edward Thomas Snyder

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ABSTRACT

The major premise of this work is that the principal changes which occurred in Spanish loan-words of Arabic origin can be categorized and studied according to linguistic criteria and that these alterations belong to recognizable patterns explained through phonology and morphology. Due to the nature of this research, which deals with cross-linguistic borrowing, a great deal of information is gained concerning the similarities and differences in the structure of both Arabic and Spanish. Most linguistic modifications followed predictable phonological developments, but the numerous exceptions reveal other linguistic influences.

This work deals with the phonological patterns of change that occurred in the more than 4,000 Arabic loan-words borrowed into the Castillian language. Most investigations in the past have dealt with the Arabic influence upon Spain from a cultural viewpoint, and when linguistics is the area of research, lexical borrowing is the primary topic. I have endeavored to accomplish at least three things in this thesis. First, I have strived to use a systematized transliteration of the Arabic loan-words and secondly, I have attempted to formulate an ordered analysis of the observed changes from Arabic to Spanish, including both regular and irregular patterns of change. Finally, I

have tried to give linguistic explanations of the observed changes. In going beyond the lexical influence, I hope to broaden the understanding of the Arabic influence upon Castilian.

PREFACE

In order to effectively use the information contained in this work, one should make use of the Castilian and Arabic dictionaries which are interrelated through the Alphabetical Listing of Consonantal Substitutions in Section X. To look up any Spanish word and its English translation, there is the Spanish Dictionary in Appendix A. It contains a listing by numbers which indicate the location of the Castilian words in the Alphabetical Listing of Consonantal Substitutions. Beside each Spanish loan-word is the transliterated Arabic equivalent, and in addition, the Castilian phoneme involved in the consonantal substitutions.

This information is standard, but in order to remove inconsistencies found in the transliterations of various sources, each loan-word being studied was traced back to the original Arabic. Thus, in the Arabic Dictionary, Appendix B, the Arabic loan-words are listed in Arabic, in transliteration, and with their Castilian equivalents.

These adaptations should facilitate the study of the Arabic contributions to the Castilian language by removing ambiguities due to differing forms of transliteration.

TABLE OF CONTENTS

SECTION	PAGE
I. HISTORICAL BACKGROUND	1
II. ARABIC PHONOLOGY	6
III. TOPONOMY	9
IV. TONIC STRESS	13
V. DIPHTHONGIZATION	25
VI. ADDITION OF WORD-FINAL VOWELS	27
VII. CONSONANTAL ADDITION AND DELETION	35
VIII. CONSONANTAL ASSIMILATION AND METATHESIS	38
IX. INTRODUCTION TO CONSONANTAL SUBSTITUTION	45
X. ALPHABETICAL LISTING OF CONSONANTAL SUBSTITUTIONS	47
XI. CONCLUSIONS	66
BIBLIOGRAPHY	69
APPENDICES	73
A. SPANISH DICTIONARY	74
B. ARABIC DICTIONARY	82
C. ADDENDUM	99
VITA	102

LIST OF FIGURES

FIGURE	PAGE
1. The Arabic Alphabet	7
2. Gender-Related Toponomical Names	10
3. Arabic Toponomical Sources	12
4. Stress and Masculine Arabic Loan-Words	17
5. Stress and Feminine Arabic Loan-Words	17
6. Final Stressed Vowel <u>ī</u>	18
7. The CVCCVC Stress Pattern	19
8. The CVCCV Stress Pattern with Final <u>ī</u>	19
9. Monosyllabic Stress	20
10. VCC Stress Pattern	21
11. The Strong-Vowel Stress Pattern	21
12. The Penultimate Stress Pattern	22
13. Exceptions to the Classical Stress Patterns	22
14. Consonants Which Do Not Require Support	23
15. Consonants Which Require Support	24
16. The Arabic Dipthong <u>au</u>	25
17. The Arabic Dipthong <u>aī</u>	25
18. The Arabic Dipthong <u>aī</u> in Later Loan-Words	26
19. Spanish Final Vowels	28
20. Spanish Loan-Words Ending in <u>ī</u>	29
21. Spanish Final-Consonant Loan-Words	29
22. Exceptions to Final-Vowel Addition	30

FIGURE	PAGE
23. Addition of Word-Final Vowels	31
24. Examples of Consonantal Addition and Deletion .	36
25. Spanish Phonological Chart	43
26. Arabic Phonological Chart	44

I. HISTORICAL BACKGROUND

By 718 A.D., most of Spain was under the domination of the invading Muslims. Under the conditions of Arabic political and cultural domination, the Mozarabs, or Christians who maintained their own religion and language, became important cultural intermediaries because of their bilingualism, speaking both Castilian and Arabic.

The Arabic culture spread its ideas primarily through the written medium, such as the Koran and technical works. In the 11th century, with the advance of the Spanish Reconquest, the Moorish capital of Toledo became the principal center of cultural exchanges between East and West. Arabic scientific and cultural knowledge was imparted to the Spanish primarily through the efforts of the Mozarabs. Many scientific and literary works were translated from Arabic into Latin, and through the efforts of Alfonso X, the King of Spain in the 13th century, the diffusion of eastern culture to the West was continued. For the first time, direct translation of literary works into the vernacular was promoted. From the Reconquest period until 1492 at its finish, the Muslims were either forcibly converted or expelled under the reign of Queen Isabel of Castille and King Ferdinand of Aragon; according to *La Civilización española* (Marín 1961).

Next to Latin, Arabic has made the largest lexical contribution to Spanish, which has incorporated over 4,000 Arabic words. These words include terms useful in dealing with the society, administration, commerce and industry in Spain, according to Historia de la lengua española (Lapesa 1959). The new lexicon was used to express concepts and to name things foreign to the West. These developments primarily took place in Andalusia, where the Arabic influence was most strongly felt.

The Castilian language has borrowed heavily from the Arabic language, and the effects of this borrowing are most evident in the Spanish lexicon. Many Arabic phonemes are absent in the Spanish sound system, and the borrowed sounds of Arabic were altered in five ways: addition, deletion, substitution, assimilation and dissimilation. Addition occurred primarily with single phonemes. Final helping-vowels are very common, such as Arabic al-zyt becoming Spanish aceite. One Arabic phoneme which has no equivalent has been deleted in all Spanish loan-words of Arabic origin: the glottal stop hamza, transliterated as '. Deletion also occurred to excessively long or difficult Arabic words, for example, Arabic (al)-lazaward becomes Spanish azul. Substitution occurred when a closely related Spanish phoneme replaced an Arabic phoneme. This is the most frequent phonological change among the Arabic loan-words, and is

further dealt with in Sections IX and X. An example of consonantal substitution is Arabic (al)-ferth becoming Spanish frez. This research shows how Spanish loan-words of Arabic origin adapted to the Spanish phonological system with the primary effect of enhancing the technical vocabulary of the Castilian language.

Due to the lack of words in Castilian for the new technology and the new ideas and idiomatic expressions introduced by the Arabs, there occurred a borrowing of Arabic words to match the newly introduced concepts and technology of the conquerors. This was a form of cultural borrowing that took place from approximately 700 A.D. to 1500 A.D., or during almost 800 years of foreign rule in Spain. Arabic loan-words were absorbed into the Castilian linguistic system with unfamiliar sounds being replaced by similar sounds in Castilian.

With the ascendancy of Castilian over the other Spanish dialects and languages, such as Catalan, Galician, Basque, Leonese and Andalusian, some of the Arabic lexicon was lost and was replaced by French and Latin terminology. The Arabic-based vocabulary continued to decline, and largely belongs to the less-popularly used part of the Castilian lexicon. However, Spanish loan-words of Arabic origin are especially prominent in older Spanish literature. The Arabic linguistic influence in Spain and even more so in

Europe is termed a superstratum, which according to the Glossary of Linguistic Terminology (Pei 1966) is:

the language of a culturally, economically or politically superior nation or conquering group introduced into a foreign national or geographic territory, and affecting the language of the latter, while itself eventually disappearing.

Depending upon the amount of linguistic contact that occurred between Arabic and Castilian, as measured by the amount of bilingualism present among the speakers of the borrowing language, which was primarily Castilian, one can see differences in the amount of contact-induced change. It should be noted that loan-words were very infrequently borrowed from Castilian to Arabic, since very few of the Arabs knew Spanish. The bilingual Mozarabs responsible for the assimilation of Spanish loan-words of Arabic origin into Castilian maintained a close correspondence between the phonological representations of the Castilian loan-words and their Arabic equivalents.

Transfer of language material occurred primarily through the efforts of the Mozarabic bilinguals, but also depended on social and cultural conditions. The way in which loan-words were affected by Castilian reflects the phonetic realization of specific Arabic phonemes. The comparison of the original Arabic and the borrowed Castilian forms of the loan-words shows the difference in their phonological systems. Not only were the loan-words borrowed

directly from Arabic, but through the Mozarabic intermediaries, they were already adapted.

II. ARABIC PHONOLOGY

The first step in learning about the phonological changes in Spanish loan-words of Arabic origin is to become familiar with the Arabic alphabet (Figure 1). There are 28 written consonants in Arabic. Of these, three are semi-vowels: Alēf, Wāw, and Yā. They can be transliterated two ways, either as a long vowel, ā, ū, and ī, respectively, or as consonants w and y for Wāw and Yā'. In written Arabic, only these long vowels are normally written (an exception would be for beginning Arabic students). The three unwritten short vowels in Arabic are: fatha, kasra and damma, written as a, i, and u, respectively. In the Arabic dictionary of this thesis the long vowels Wāw and Yā are written as consonants, but in the Alphabetical Listing of Consonantal Substitutions, Section X, unless they are intervocalic and take on the qualities of consonants, Alēf, Wāw and Yā are written as long vowels.

The Spanish loan-words being studied here are most commonly encountered in the literature of Old Spanish (O.S.). There are several consonants which have changed radically from Old Spanish to Modern Spanish (M.S.) and therefore the spelling and/or phonology of the Spanish loan-words of Arabic origin have changed. In O.S., the phoneme /b/ could be orthographically represented by b, u,

Arabic Consonant	Transliteration in This Text	Sun or Moon Letter	I.P.A. Symbol
Alīf	a, ā	m	/ā/
Bā'	b	m	/b/
Tā'	t	s	/t/
<u>Thā</u>	<u>th</u>	s	/θ/
Jīm	j	m	/j/
Hā	h	m	/ħ/
<u>Khā</u>	<u>kh</u>	m	/x/
Dāl	d	s	/d/
<u>Dhāl</u>	<u>dh</u>	s	/ð/
Rā	r	s	/r/
Zā	z	s	/z/
Sīn	s	s	/s/
<u>Shīn</u>	<u>sh</u>	s	/ʃ/
<u>Sād</u>	<u>s</u>	s	/ɬ/
<u>Dād</u>	<u>d</u>	s	/ɗ/
<u>Tā</u>	<u>t</u>	s	/t̪/
<u>Zā</u>	<u>z</u>	s	/ɗ̪/
Ayn	ʿ	m	/ʕ/
<u>Ghayn</u>	<u>gh</u>	m	/ɣ/
Fā	f	m	/f/
Qāf	q	m	/q/
Kāf	k	m	/k/
Lām	l	m	/l/
Mīm	m	m	/m/
Nūn	n	s	/n/
Hā	h	m	/h/
Wāū	w, ū	m	/w/
Yā	y, ī	m	/y/

Figure 1. The Arabic Alphabet.

or v, without any phonological change. This affected the transliteration of Arabic bā. Arabic jīm and shīn were both transliterated in O.S. by /ʃ/, which became M.S. /x/. In the orthography, /ʃ/ is written as x in O.S. and /x/ is written as j or q in M.S., depending upon environment.

In the Arabic alphabet as shown in Figure 1, there are five pharyngeal consonants transliterated as h, s, d, t and z; these represent hā, ṣād, ḍād, ṭā and ẓā. Arabic khā, dhāl, shīn and ghayn are transliterated as kh, dh, sh, and gh, respectively. Finally, Arabic ayn is transliterated as ʿ.

All of the Arabic consonants can be divided into two groups termed sun letters and moon letters, which are discussed in Section VIII. For more information concerning the Arabic Alphabet, see Cowan (1968) or Haywood (1962).

III. TOPONOMY

One of the strongest influences Arabic had upon the Castilian language is that of toponomy, or place names. In the area of phonology, one can see the many substitutions, additions and deletions. From a morphological standpoint, there is the obvious change in gender. The toponyms were the most stable words, from both a lexical and phonological view. Notice the use of an additional transliteration, -a(t), which stands for ta marbuta, the Arabic feminine termination whose /t/ is not normally pronounced. Note that of all the place names either from Arabic or influenced by Arabic, only a small sample has been included here.

The list of toponomical names in Figure 2 was specifically selected, since it reveals changed or preserved Latin and/or Arabic gender forms which are reflected in the phonology by feminine and masculine endings in Castilian (Alvar 1960).

These words have been divided into four groups:

- I. Masculine -e or -i Latin town names which changed to Arabic feminine -a(t) and then to Spanish feminine -a.
- II. Consonant-final Latin town names which add a feminine ending in both Arabic and Castilian.

Class	Latin Name	Arabic Name	Spanish Name
I.	a. Astigi	Istija(t)	Ecija
	b. Barcinone	Bar <u>sh</u> alona(t)	Barcelona
	c. Illiberri	Al-bira(t)	Elvira
	d. Olisipone	Al- <u>ash</u> buna(t)	Lisboa
II.	e. Hispalis	I <u>sh</u> bilialia(t)	Sevilla
	f. Igabrum	Qabra(t)	Cabra
	g. Saetabis	<u>S</u> hatiba(t)	Jativa
III.	h. Caesaraugusta	Saraqusta(t)	Zaragoza
	i. Corduba	Qurtuba(t)	Cordoba
	j. Dertosa	Turtusa(t)	Tortosa
IV.	k. Gades	Qadis	Cadiz
	l. Tagus	Taju	Tajo
	m. Turgalium	Turjata(t)	Trujillo

Figure 2. Gender-Related Toponomical Names.

- III. Feminine -a endings in Latin town names which keep the feminine -a(t)/-a endings in both Arabic and Spanish.
- IV. Consonant-final Latin town names which do not contain the feminine -a ending in Castilian and may or may not be feminine in Arabic.

The following town names in Spain (Figure 3) come from either a partial or total Arabic source, and have been divided into three classes (Alvar 1960):

- I. Those with a feminine -a(t) ending in Arabic which is retained in Castilian as feminine -a.
- II. Those with an Arabic masculine consonant ending which was retained as a masculine final consonant ending in Spanish.
- III. A group of town names which are composed of a mixture of Arabic and Spanish.

Class	Arabic Name	Spanish Name	English Translation
I.	a. Al-ḥamrā'	Alhambra	'the red'
	b. Baṣṭa(t)	Baza	'extensive'
	c. Wadi al-ramla(t)	Guadarrama	'sandy river'
II.	e. Al-mudawar	Almodovar	'circular'
	f. Jabal Ṭariq	Gibraltar	'mountain of Tariq'
	g. Kabīr	-quivir	'big'
	h. Qasr	Caceres	'palace'
	i. Majrīt	Madrid	'small fortress'
	j. Qalʿat Ayub	Catalayud	'Castle of Job'
III.	k. Madina(t) + del campo	Medina del Campo	'city of the field'
	l. Wadi al- +leth	Guadalete	'river Lethe'

To clarify some of the literal English translations, note that Arabic wadi means 'valley,' al-ramla(t) is 'sandy,' jabal is a 'mountain,' Tariq is a proper name (reduced to -tar in Spanish), Qalʿat is a 'castle,' and Ayub is the biblical name Job. Medina means 'city,' and (al)-lete comes from the Greek word Lethe, English 'forgetfulness.'

Figure 3. Arabic Toponomical Sources.

IV. TONIC STRESS

The Spanish-Arabic dialect is related to a group of Arabic dialects termed Maghrebine, which exist in Modern Libya, Algeria, Tunisia, Morocco and Mauritania. It is probable that the Arabic dialects spoken in these countries have been affected by the native Berber language (Encyclopedia of Islam) but to what extent is unclear. Linguists have not yet determined precisely in what respects Berber and Maghribī (Maghrebine) Arabic have affected one another, and the linguistic relationships between the two are either as substrata or adstrata. There are certain Arabic borrowings in Berber dictionaries. The most important group in Moslem Spain besides the muwalladun (Spanish neo-Muslims who adopted Islam and became bilingual, speaking Spanish Arabic and Iberian Romance), is the Berber element, which came from the Maghrib regions of Morocco closest to al-Andalus. These Berbers became arabized to the point of losing the Berber dialect and adopting Arabic.

According to the Encyclopedia of Islam, Spanish-Arabic is the best known of all the postclassical Arabic dialects of the Middle Ages, with important sources such as: al-Zubaydī's philological treatise on speech errors, Ibn Kuzman's zadjals, al-Shushtarī's zadjals (popular Arabic poetry), the Vocabulista (Arabic-Latin, Latin Arabic), and

Pedro de Alcalá's Arte and Vocabulista. There are many other secondary sources. Spanish Arabic seems to have been relatively homogenous from the sources and probably disappeared as a spoken language between the 10th and 16th centuries.

In Classical Arabic, the rules for assigning tonic word stress contain three patterns: Penultimate CVCV(C), Strong Vowel V:, and Vowel-Consonant-Consonant CVCCV(C). These three patterns are listed in increasing order of precedence. The CVCCV(C) combination can consist of either a strong or weak vowel. The Strong Vowel V: consists of one of the three long vowels forming part of the written Arabic alphabet and termed semiconsonants. In Arabic, these long vowels are: alef, waw and ya, transliterated as ā, ū and ī. The unwritten weak vowels in Arabic are fatha, kasra and damma, transliterated as a, i and u, respectively. Both the Vowel-Consonant-Consonant and the Strong Vowel combinations comprise a strong cluster in Arabic, with the CVCCV(C) combination taking precedence over the V: combination. When there is no strong cluster present, then the stress automatically falls on the penultimate syllable. Monosyllabic words do not fit into any of the above categories and simply receive the stress.

In addition to the influence of Classical Arabic upon the stress patterns found in the Arabic dialect spoken in

Spain, one must take into account the Maghrebine dialect spoken in North Africa by the Arabs and Berbers. The rules for assigning stress in Classical Arabic are fixed according to set patterns, but in the Hispano-árabe dialect spoken in Spain the stress was variable. In the Maghrebine stress patterns there is a common tendency to stress the ultima or final syllable, something which never happens in Classical Arabic. In all of the other Maghrebine dialects (excepting Hispano-árabe) the pretonic, unstressed short vowel of the penultimate syllable is deleted and the stress falls on the ultima. In the Hispano-árabe dialect, however, this short vowel is not deleted, but the stress shift to the ultima occurs.

From the list of loan-words in the Spanish Dictionary in Appendix A, those Castilian words having a written accent were studied as a group, since the presence of a written accent usually indicates an exception to the rules of accent position. These are: (1) if a word ends in a vowel, n, or s, the accent falls on the penultimate syllable, (2) if a word ends in any other consonant, stress normally falls on the ultima. Penultimate stress, which occurs in over 75 percent of all Spanish words, is the most common pattern of stress.

I hypothesized that irregularities of stress in the Castilian loan-words were due to the stress patterns of the

corresponding Arabic loan-words. The total number of Arabic loan-words with final Maghrebine stress is 44/72 or 61 percent of all the words studied. This shows the strong influence of the Maghrebine dialect upon the Hispano-arabic dialect spoken in Spain.

There were four patterns for the observed combinations of penultimate + ultimate syllables which lead to final syllable stress in Castilian. These four patterns are:

- I. CVCVC--Penultimate unstressed open syllable + final closed stressed syllable.
- II. CV(C)CV--Penultimate unstressed open or closed syllable + final closed stressed syllable ending in ta marbuta.
- III. CVCV--Penultimate unstressed open syllable + final stressed open syllable.
- IV. CVCCVC--Penultimate unstressed closed syllable + final stressed closed syllable.

In the examples in Figure 4, which belong to the first pattern, all of the Maghrebine loan-words are masculine, with a majority of their Castilian equivalents, 9/14, or 64 percent, ending in a stressed vowel + nasal.

The Arabic words in Figure 5 consist of a penultimate or a final syllable containing the stressed semivowel ī (ya) and also the feminine ta marbuta, transliterated as -a(t). All of their corresponding Castilian loan-words end in -īa.

Arabic (Maghrebine)	Spanish
1. al-hisán	alazán
2. al-baráz	albará
3. al- <u>ḡ</u> ashāq	gaché
4. al-qatām	alcotán
5. al-qutn (vowel elision)	algodón
6. al-za <u>ḡ</u> farán	azafrán
7. al-tabūt	ataúd
8. al-fa <u>ḡ</u> īh	alfaquín
9. al-muhtasīb	almotacén
10. al-barakán	barragán
11. al-harām	harém
12. al-harún	harón
13. al-hayán	jayán
14. al-tarjumán	trujamán

Figure 4. Stress and Masculine Arabic Loan-Words.

Arabic	Spanish
1. al-hadīyya(t)	alfadía
2. al-mah <u>sh</u> īa(t)	almejía
3. al-muk <u>h</u> fīa(t)	almofía
4. al-qutunīa(t)	cotonía
5. al-sindīa(t)	sandía

Figure 5. Stress and Feminine Arabic Loan-Words.

The Maghrebine loan-words in Figure 6 consist primarily of a penultimate unstressed open syllable followed by an ultimate, stressed open syllable containing the final stressed í.

Arabic	Spanish
1. al-bānī	albañíl
2. al-hurī	alfolí
3. al-myqrī'	almocarí
4. al-baghdadī	baldaquín
5. al-sīnī	cení
6. al-sikkī	cequí
7. al-zayānī	cianí
8. al-ghadāmasī	guadamecí
9. al-marābitī	maravedí

Figure 6. Final Stressed Vowel í.

The loan-words listed in Figure 7 are made up of a closed, unstressed, penultimate syllable and a closed final syllable, and 4/7 or 57 percent of their Castilian equivalents end in a single vowel + n or a vowel cluster + n.

A closed, unstressed, penultimate syllable plus an open, stressed, ultimate syllable are present in the Arabic loan-words in Figure 8. Their Castilian equivalents end in final -í.

Arabic	Spanish
1. al- <u>ḡ</u> aqrāb	alacrán
2. al-bardān	albardán
3. al-mak <u>ḡ</u> zān	almacén
4. al-saqqā'	azacán
5. al-bag <u>ḡ</u> dāz	baldés
6. al-qatrān	alquitrán
7. al-rayḡān	arrayán

Figure 7. The CVCCVC Stress Pattern.

Arabic	Spanish
1. al- <u>ḡ</u> hayrī	alhelí
2. al-turkī	turkí
3. al- <u>ḡ</u> thaghrī	zegrí

Figure 8. The CVCCV Stress Pattern with Final ī.

A single closed syllable, which must receive the stress, occurs in the examples in Figure 9.

Arabic	Spanish
1. al- <u>ǧú</u> d	la <u>ú</u> d
2. rab al-d <u>án</u>	ra <u>b</u> ad <u>án</u>

Figure 9. Monosyllabic Stress.

From an analysis of these forty-one Spanish loan-words, the following are the commonly observed patterns for the final stressed syllables: (1) Stressed Vowel + Nasal is equal to 21/44 or 47 percent of the words; (2) Stressed Vowel (single or as a vowel cluster) is equivalent to 19/44 or 43 percent of the words (the vowels being i, e, a or ia); and (3) Stressed Vowel + Non-Nasal Consonant is equal to 4/44 or 9 percent (the combinations being il, es and ud). Thus, the combination of a Stressed Vowel + Consonant (groups 1 and 3) occurs more frequently (56 percent vs. 43 percent) than a Final Stressed Vowel [either single or combined with ta marbuta -a(t)].

The group of Spanish loan-words in Figures 10, 11, and 12 follow the Classical Arabic stress patterns, which are discussed on page 14. These patterns are, in order of decreasing precedence, Vowel-Consonant-Consonant CV(:)CC (Figure 10), Strong Vowel V: (Figure 11), and Penultimate CVCV(C) (Figure 12).

Arabic	Spanish
1. al-dārmak	adārgama
2. al-bāytār	albēitar
3. al-māghfar	almófar
4. al-kāndara(t)	alcándara
5. al-fústuq	alfóncigo
6. al-fúnduq	alhóndiga
7. al-jāwhara(t)	aljófar
8. al-mārtak	almártaga
9. al-mū'adhdnin	almuédano
10. al-súkkar	azúcar
11. al-híjra(t)	hégira
12. al-mustāḡrab	mozárabe
13. wa sha állāh	ojalá

Figure 10. VCC Stress Pattern.

Arabic	Spanish
1. al-zāmila(t)	acémila
2. al-fāras	alférez
3. al-hājib	alhágib
4. al-mughāwar	almogávar
5. al-munāda(t)	almonéda
6. al-qandūra(t)	alcandóra

Figure 11. The Strong-Vowel Stress Pattern.

Arabic	Spanish
1. al-qásar	alcázar
2. al- <u>sh</u> ábak	jábega
3. al- <u>sh</u> á <u>ẓ</u> ar	jácara
4. al-mudájan	mudéjar

Figure 12. The Penultimate Stress Pattern.

In comparing the stress of these Spanish loan-words and their Arabic counterparts, only 6 out of 71 studied or 8 percent have nonidentically stressed syllables (see Figure 13).

Arabic	Spanish
1. al-bátil	baladí
2. al-qalānis	calañés
3. al-kamkām	cáncano
4. wa <u>sh</u> a állāh	ojalá
5. al-asfanārīa(t)	zanahória
6. al-ráhn	rehén

Figure 13. Exceptions to the Classical Stress Patterns.

The loan-words in Figure 14 end in consonants which do not require support, but add a helping vowel which changes

the position of the stressed syllable from ultima to penultimate. Thus, the words are changed to conform to the Castilian pattern. This is the most usual stress pattern in Spanish, which has stress on the penultimate syllable (when the word ends in a vowel, n or s).

Arabic	Spanish
1. al-mikyāl	maquila
2. al-hashāshīn	asesino
3. al-bādanjān	berenjena
4. al-miskīn	mezquino
5. al-burūz	alborozo
6. al-samīd	acemita
7. al-qawwād	alcahuete

Figure 14. Consonants Which Do Not Require Support.

The loan-words in Figure 15 require support and add a helping vowel in Spanish where the corresponding Arabic loan-words are consonant final. This leads to a shift in the stressed syllables' position from ultimate in Arabic to penultimate in Castilian.

Arabic	Spanish
8. al- <u>kh</u> arrūb	algarroba
9. al-bābūj	babucha
10. al-sanāj	cenacho
11. al-sahrīj	zafareche
12. al-zarnīkh	azarnefe
13. al-barqūq	albaricoque
14. al-sifāq	cifaque
15. al-summāq	zumaque
16. al-ḥajām	alfajeme
17. al-ḥarām	alfareme
18. al-salhām	cerome
19. al-rasīf	arrecife
20. al- <u>gh</u> ulām	chulamo
21. al-salām	zalama
22. al- <u>sh</u> arāb	jarope
23. al- <u>kh</u> ayyāt	alfayate
24. al-kīrāt	alquilate
25. al-ribāt	arrebato

Figure 15. Consonants Which Require Support.

V. DIPHTHONGIZATION

The Arabic diphthong au is pronounced as the English diphthong /aw/ of how. It is changed to simplified o in the Spanish loan-words shown in Figure 16.

Arabic	Spanish
1. al-sawṭ	azote
2. al-hawz	alfoz
3. al-jawhara(t)	aljofar
4. al-zāwūq	azogue

Figure 16. The Arabic Dipthong au.

The Arabic diphthong ai is pronounced as the English diphthong /ay/ of sight. It is simplified to Spanish e in the Arabisms that date from before the 1100's (Figure 17).

Arabic	Spanish
1. al-buhayra	albuhera
2. al-buṭaykha(t)	budefa
3. al-dayḡa(t)	aldea
4. al-mayḡa(t)	almea
5. al-mays	almez
6. al-shaykh	jeque

Figure 17. The Arabic Dipthong ai.

The diphthong ai is conserved in those loan-words introduced later than the 1100's, as in Figure 18.

Arabic	Spanish
1. al-rayhan	arrayan
2. al- <u>kh</u> utayf	cotayfeso
3. al- <u>kh</u> ayat	alfayate
4. al-zag <u>h</u> aya(t)	azagaya
5. al-rag <u>h</u> ayfa(t)	regaifa
6. al-qayd	alcaide

Figure 18. The Arabic Diphthong ai in Later Loan-Words.

VI. ADDITION OF WORD-FINAL VOWELS

Word-final helping vowels are added to most of the masculine Arabic lend-words borrowed into Castilian, and these include any words which are consonant-final in Arabic. A majority of the Castilian loan-words which do not add a final vowel when their Arabic counterparts are consonant-final end in Spanish consonants which do not require support. These words have been listed alphabetically according to the consonant preceding the final helping vowel of the Castilian words. According to Spanish phonological rules, certain consonants which occur in word-final positions generally can stand alone. These are d, n, l, r, z, and s (Gaya-Gili 1966). According to results concluded from an analysis from A Reverse Dictionary of the Spanish Language (Stahl 1973), which is a computerized list of all Castilian words alphabetized according to the words' final letters, approximately 99.6 percent of all the consonant-final Spanish words end in consonants which do not require support. Thus, the number of exceptions to the rule is very small.

When the figures for all Castilian words ending in vowels (using A Reverse Dictionary, *ibid.*) is compared with the list of Spanish loan-words which involve vocalic addition, several differences are observed. From 117

Spanish loan-words, 80/117 or approximately 68 percent add a helping vowel. Of these, 29 percent end in -a, 59 percent end in -e and 12 percent end in -o. Seventy-three percent of all the Spanish words end in vowels, and of these, 46 percent end in -a, 14 percent end in -e, 0.7 percent end in -i, 39 percent end in -o and 0.2 percent end in -u. These results are tabulated in Figure 19.

Vowel-Final Spanish Words		Vowel-Final Loan-Words	
# ending in:	%	# ending in:	%
-a	46	-a	29
-e	14	-e	59
-i	0.7	-i	0
-o	39	-o	12
-u	0.2	-u	0

Figure 19. Spanish Final Vowels.

Note that no loan-words added -i or -u as a helping vowel. However, the loan words in Figure 20 do end in -i.

There were 37 Castilian loan-words studied which paralleled their corresponding sources in Arabic by being consonant-final. The majority of these final consonants belong to the class which do not require support. These thirty-seven examples are listed in Figure 21.

Arabic	Spanish	English
al-hurí	alfolí	granary
al-muqri'	almocarí	Kuran reader
al-batíl	baladí	mean
al-baghdadí	borceguí	buskin
al-şíní	cení	fine brass
al-sikī	cequí	gold coin
al-zayaní	cianí	gold coin
al-ghadamasí	guadamecí	from Gadames
al-marabití	maravedí	Sp. coin
al-mūaladyn	muladí	reneg. Christ.
al-turkí	turquí	deep blue
al-thaghrí	zegrí	settlement

Figure 20. Spanish Loan-Words Ending in í.

Final Consonant	Number of Examples	Loan-Words Ending in Consonants
-z	13	ajedrez, alcamiz, alefriz, alférez, alfoz, arcaduz, gandul, arroz, cahiz, chafariz, frez, hafiz, and rahez
-l	7	alfil, añafil, arrabal, arrial, chaval, gandul, and quintal
-n	6	alacrán, alcotán, alfaquín, almocaden, almotacén, and rehén
-r	4	amelgar, halagar, mudéjar, and rejalgar
-s	2	abiados, seis
-d	1	almud
-m	1	harém

Figure 21. Spanish Final-Consonant Loan-Words.

There were only three loan-words which did not add a vowel even though they belong to the class which requires support, as seen in Figure 22.

		Spanish	English
-ch	1	turbich	turbid
-j	1	almofrej	course woolen bag
-t	1	albot	crucible

Figure 22. Exceptions to Final-Vowel Addition.

From the observed data, it can be seen that the vast majority of the Spanish loan-words conform to the phonological rules of Spanish in either the addition or lack of final helping vowels, even though the vowel percentages do not conform to the totals for all Castilian words. Figure 23 lists all of the Spanish loan-words involved in final vowel addition.

Spanish Loan-Word	Arabic Loan-Word
/b/ algarroba	al- <u>kh</u> arrub
almujaba	al-mu <u>sh</u> abbak
retova	al-rutab
adobe	al-tūb
aljibe	al-jub
quelbe	al-kalb
/ch/ babucha	al-babuj
cenacho	al-sanaj
zafareche	al- <u>s</u> ahrīj
/d/ alarde	al- <u>ḡ</u> ard
alcaide	al-qa'īd
alfinde	al-hind
alhinde	al-hind
almorzada	al-mudd
arracada	al-qirāt
arrelde	al-raṭl
/f/ adufe	al-duff
ajarafe	al-sharaf
alarife	al- <u>ḡ</u> rīf
almojarife	al-mu <u>sh</u> rif
arrecife	al-rasīf
azarnefe	al-zarnī <u>kh</u>

Figure 23. Addition of Word-Final Vowels.

Spanish Loan-Word	Arabic Loan-Word
/g/ alberchigo	al-firsīk
albogue	al-buq
alhōndiga	al-fundūq
almārtaga	al-martak
arrogue	al-ruq
azogue	al-zawūz
/h/ cadahe	al-qadah
/j/ alfanje	al-khanjar
alforja	al-khurj
/k/ ajaraca	al-sharak
laca	al-lak
muca	al-mukh
zoco	al-sūq
/k/ ² albaricoque	al-barqwa
alfaque	al-fakak
almadraque	al-maṭrah
alquerque	al-qirq
ceteraque	al-shīṭaraj
cifaque	al-ṣifaq
faneque	al-fanīqa(t)
jaque	al-shah
jarique	al-sharīk
roque	al-rukh
zumaque	al-summāq

Figure 23 (continued).

Spanish Loan-Word	Arabic Loan-Word
/l/ maquila	al-mikyāl
/l/ argolla	al- <u>gh</u> ull
/m/ adārgama	al-darmak
adarme	al-dirham
adolme	al-zulm
alfajeme	al-ḥajjam
alfareme	al-ḥaram
añazme	al-nazm
cerome	al-salham
chulamo	al- <u>gh</u> ulām
zalama	al-ṣalam
/n/ almuedano	al-mu'adh ^h dhin
asesino	al-ḥashāshīn
berenjena	al-bādanjān
mezquino	al-miskīn
/p/ jaroque	al- <u>sh</u> arāb
/r/ acetre	al-saṭl
cercera	al- <u>sh</u> arjab
cifra	al-ṣifr
safaro	al-zafir
/r/ ataharre	al- <u>th</u> afar
/s/ alborozo	al-burūz
/t/ aceite	al-zayt
acemita	al-samīd

Figure 23 (continued).

Spanish Loan-Word	Arabic Loan-Word
/t/ alcahuete	al-qawwād
alfayate	al- <u>kh</u> ayyat
alquilate	al-qīrāt
arebato	al-ribāt
arriate	al-rīyād
azafata	al-safat
azote	al-saut
jaquemate	al- <u>sh</u> āh māt

Figure 23 (continued).

VII. CONSONANTAL ADDITION AND DELETION

Both addition and deletion affect the quantity of phonemes present within words, and both may occur in either initial, medial or final position in the word. Figure 24 contains a list of each type of change, and pertinent examples.

The Spanish consonants added to the Spanish loan-words are b, n, g, l, r and s. The Arabic consonants deleted in the Spanish loan-words are ra, ha, ba, ta, za, kha, qaf, kaf, and lam. A feature analysis of the first group of consonants shows that b, l, r, n and s are [+ anterior] and b, n, g, l and r are [+ voiced]. Note that b is added between m and r in all four cases; these constitute examples of the addition of an excrescent plosive (involving the sudden opening of the lips), as does the addition of g in alguacil. There is the addition of intrusive s in the change from Arabic (al)-ḥatta to Spanish hasta. In Arabic al-fustuq, becoming Spanish alfóncigo, there is first the change of [c] to [s] then the position change from intervocalic to initial syllabic, due to intrusive n. In the addition of n to Arabic al-saqqā' the final vowel changes position in Castilian azacán. With the addition of r and l in Spanish halagar and chaval, an additional syllable is added. Epenthesis is the type of addition which occurs most frequently.

Addition

Initial--Prothesis (the addition of initial phonemes)

a. (al)-wazir

alguacil

Medial--Epenthesis (the addition of medial phonemes)

b. al-khumra(t)

alfombra

c. al-hamra

alhambra

d. al-thumn

azumbre

e. al-shamra

chambra

f. (al)-hattā

hasta

Final--Paragoge (the addition of final phonemes)

g. al-halaq

halagar

h. al-saqqā'

azacán

i. (al)-shābb .

chaval

Deletion

Initial--Aphesis (the deletion of initial phonemes)

a. (al)-lazaward

azul

b. (al)-khalūq

aloque

Medial--Syncope (the deletion of medial phonemes)

c. al-buḥayra(t)

albufera

d. al-tabūt

ataúd

e. al-jihāz

jaez

f. al-khurshūfa(t)

alcachofa

g. (al)-salham

cerome

Final--Apocope (the deletion of final phonemes)

a. al-adrar

aladrea

b. al-baraz

albará

c. al-zawraq

zabra

d. al-mushab

almujaba

Figure 24. Examples of Consonantal Addition and Deletion.

In the area of deletion, not the combining of the l of the Arabic article al- with the initial z of the hypothetical form al-(la)zawar(d) to become azawar, which deleted the vowels to become azūr, which became azul. There is the loss of initial fricative kh in Arabic al-khaluq becoming Spanish aloque. There is vocalization of b to u in going from Arabic al-tabut to Spanish ataúd. Arabic jihāz became Old Spanish jahez, and Modern Castilian jaez. Loss of h occurs in Arabic (al)-salham to Spanish cerome. There is simplification in Arabic al-khorshufa(t) to Spanish alcachofa. Notice the Spanish feminine -a ending in all four cases of apocope.

The two processes of addition and deletion show the changes of Arabic words to conform to the Castilian phonological patterns in order to remove difficult consonant combinations, lengthy words, and unpronounceable consonant patterns in the Spanish loan-words.

VIII. CONSONANTAL ASSIMILATION AND METATHESIS

There are six types of sound changes which occur to the Spanish loan-words: assimilation, dissimilation, metathesis, addition, deletion and substitution. Assimilation occurs when two sounds that are contiguous become more like one another. The opposite effect is termed dissimilation. The assimilation of the consonant "l" of the Arabic article al-, meaning the in English, occurs when the article precedes fourteen of the twenty-eight Arabic consonants. These consonants are termed sun letters, since Arabic al-shams, English sun, begins with one of these letters. Thus, al-shams is pronounced ash-shams. The remaining fourteen letters which do not assimilate are called moon letters, from Arabic al-qamar, English 'moon.' These 'moon' letters are indicated in Figure 1 by an "s" for sun letters and an "m" for moon letters. Examples of Arabic loan-words containing a moon letter after the article al- are al-ud and al-hamar, with the article al- being pronounced. An example of a loan-word with a sun letter after the article al- is Arabic al-dar (pronounced ad-dār). Note the assimilation of l to d. In Castilian loan-words, the borrowing of the article al- frequently occurs. There is a high correspondence between Arabic and Castilian cases of assimilation or dissimilation of al-. Note one exception: with Arabic

al-dayʕa(t) assimilation occurs, but in Spanish aldea, it does not.

Metathesis occurs with the Arabic combination /st/, which was transliterated in Castilian as z or c, pronounced [ts] and afterwards was reduced to [s]: Arabic al-musta rab gave Spanish mozárabe; Arabic al-fustac became Spanish alfozigo; and Arabic al-ustuwāna gave Spanish zaguán. In order to refer to the many different phonemes present in both the Arabic and Spanish languages, Table I consisting of a Castilian phonological table and Figures 25 and 26, Spanish phonological chart and Arabic phonological chart, respectively, have been provided.

TABLE I

CASTILIAN PHONOLOGICAL TABLE (HADLICH 1968)

Allophone	Description	Orthography	Position	Examples
1. /p/	Voiceless Bilabial Stop	p	everywhere	
2. /t/	Voiceless Dental Stop	t	everywhere	
3. /k/	Voiceless Velar Stop	C ^{a,o,u} Qu ^{e,i}	everywhere	
4. /b/	Voiced Bilabial Stop	b, v (=u)	after pause, /m/	vamos un vaso un beso
5. /β/	Voiced Bilabial Fricative	b, v (=u)	everywhere else	tu beso ese vaso no vamos
6. /d/	Voiced Dental Stop	d	after pause, /n/, /l/	un día caldo ¡Dámelo!
7. /ð/	Voiced Dental Fricative	d	everywhere else	ese día la dueña ¡No se lo des!
8. /y/	Voiced Palatal Affricate	y, ll, hi ^{e,a}	after pause, /n/, /l/	yo un yate el yugo
9. /ʎ/	Voiced Palatal Fricative	y, ll, hi ^{e,a}	everywhere else	la hiedra mi yate calle
10. /g/	Voiced Velar Stop	g ^{a,o,u} gu ^{i,e}	after pause, /n/	un gato ¡Gómez!
11. /ɣ/	Voiced Velar Fricative	g ^{a,o,u} gu ^{i,e}	everywhere else	haga ese gato

TABLE I (continued)

Allophone	Description	Orthography	Position	Examples
12. /f/	Voiceless Labiodental Fricative	f	everywhere	
13. /z/	Voiced Alveolar Fricative	s,z	before voiced consonant	mismo las manos juzgar
14. /s/	Voiceless Alveolar Fricative	s,z,c ^{i,e}	everywhere else	las casas cien, oso zapato
15. /x/	Voiceless Velar Fricative	j,g ^{i,e}	everywhere	
16. /ç/	Voiceless Palatal Affricate	ch	everywhere	
17. /ɱ/	Voiced Labiodental Nasal	n,m	(f)n (f)m	enfatico un fuego
18. /m/	Voiced Bilabial Nasal	n,m	everywhere else	mamá! un beso
19. /ŋ/	Voiced Velar Nasal	n	(g)n, (k)n, (x)n	un ganso un caso
20. /ɲ/	Voiced Dental Nasal	n	(t)n, (d)n	un tomate antes
21. /n/	Voiced Alveolar Nasal	n	everywhere else	un oso pena
22. /ɲ̃/	Voiced Palatal Nasal	ñ	(written n before ç,ý)	

TABLE I (continued)

Allophone	Description	Orthography	Position	Examples
23. /l/	Voiced Alveolar Lateral	l	everywhere	
24. /r/	Voiced Alveolar Flap	r	everywhere except where /r/ is	caro otro carta
25. /r̄/	Voiced Alveolar Trill	r r	r_, rr, (n)r, (l)r, (s)r	

	B.	L.	I.	D.	A.	P.-a.	P.	V.
Stops	p, b			t, d				k, g
Fricatives	ɸ	f	θ	ð			y	x, ɣ
Affricates						ʧ	ʝ	
Nasals	m	ɱ	ɲ	ɳ	n	ɳ̌	ɲ̃	ŋ
Laterals			ɭ	ɭ̌	l	ɭ̌	ɭ̃	
Flaps					r			
Trills					rr			
Sibilants				ʃ, ʒ		s, z		

Note: The consonants on the left are voiceless; those on the right of each column are voiced. The key to this chart is as follows: B. = bilabial, L. = labiodental, I. = interdental, D. = dental, A. = alveolar, P.-a. = palato-alveolar, P. = palatal, V. = velar.

Figure 25. Spanish Phonological Chart.

	B.	L.	I.	D.-a.	Pr.-p.	P.-p.	V.	Ve.	G.
Stops	b			t, d		k	q	t, d	ʕ
Fricatives		f	<u>th</u> , <u>dh</u>	s, z	<u>sh</u>		<u>kh</u> , <u>gh</u>	ṣ, ẓ	h, ʕ̣
Affricates					j				
Nasals	m			n					
Liquids and Vibrants				l r					
Semivowels	w				y				

Note: The consonants on the left are voiceless; those on the right of each column are voiced. The key to the chart is as follows: B. = bilabial, L. = labiodental, I. = interdental, D.-a. = Dental-alveolars, Pr.-p. = Prepalatal, P.-p. = post-palatal, V. = velar, Ve. = Velarized, G. = glottal. For the consonants, ʕ = hamza, usually not represented in the Arabic alphabet, j = jīm, w = wāu, and y = yā.

Figure 26. Arabic Phonological Chart.

IX. INTRODUCTION TO CONSONANTAL SUBSTITUTION

This section was organized to investigate the patterns of consonantal substitution in Castilian loan-words borrowed from Arabic. For each arabic consonant (listed alphabetically from bā to hā) there is a corresponding group of Castilian loan-words which replaces the Arabic consonant with a Castilian one. Substitution is of three types: unconditioned, conditioned, and sporadic. In dealing with phonemes only, conditioned sound changes is ignored. The following Arabic phonemes have corresponding Castilian equivalents and involve only sporadic substitution in Spanish: /b/, /t/, /x/, /d/, /r/, /z/, /s/, /θ/, /f/, /k/, /l/, /m/, /ʃ/, /ʒ/, /n/. A close equivalent exists for Arabic /q/ which is Spanish /k/. The remaining Arabic phonemes for which there are no exact Spanish phonemic equivalents are: /j/, /k/, /ʒ/, /ɣ/, /d/, /t/, /ʃ/, /ɣ/. These Arabic phonemes are either substituted unconditionally or sporadically by a related Castilian phoneme or they are simply deleted.

Each group of Arabic loan-words possessing a particular consonant has been divided up according to the consonants' and the syllables' positions in the words as follows:

- I. The Onset of the Initial Syllable
- II. The Onset of the Medial Syllable

III. The Onset of the Medial or Final Syllable in an Intervocalic Position

IV. The Coda of the Medial Syllable

V. The Coda of the Final Syllable

In addition to the Arabic loan-words and their Castilian equivalents, the Spanish phonemes which substitute for each of the Arabic consonants is listed. When a particular Arabic phoneme is not substituted but is deleted, this is indicated by the symbol /Ø/. Likewise, the silent Castilian h is given the symbol /H/. The table does not include the semiconsonants aléf, yá or wāw, transliterated as ā, ī or y, and ū or w, respectively. The semiconsonants yá and wāw are replaced with Spanish consonants in the list of Arabic loan-words and their Castilian equivalents. The semiconsonant yá in the first example and the semiconsonant wāw in the third example exist in the number II position as the Onset of a Medial Syllable. In the second example, wāw is the Onset of the Medial Syllable in an Intervocalic Position, number III.

1. (al)-yāsmīn, jasmin; 2. (al)-jariwaya, chirivia;
3. al-qawwad, alcahuete; and 4. al-wasy, albacea.

The consonant hamza /ʕ/, a voiced pharyngeal stop, has also not been included in the listing, since it is deleted in all Castilian loan-words of Arabic origin.

X. ALPHABETICAL LISTING OF CONSONANTAL SUBSTITUTIONS

The following Arabic loan-words contain the phoneme /b/ as:

I. The Onset of the Initial Syllable: 1. (al)-barakan, barragān /b/; 2. (al)-barma(t), marmita /m/; 3. (al)-biṭāqa(t), pataca /p/; 4. (al)-biṭāna(t), badana /b/.

II. The Onset of the Medial Syllable: 5. al-bānī, albañíl /b/; 6. al-baraz, albarā /b/; 7. al-baras, albarazo /b/; 8. al-bardaḡa(t), albarda /b/; 9. al-bardan, albardān /b/; 10. al-burūz, alborozo /b/; 11. al-barqūq, albaricoque /b/; 12. al-būq, albugue /b/; 13. al-bishara(t), albricias /b/; 14. al-buḡayra(t), albufera /b/; 15. al-furbīyūn, alforfon /f/; 16. al-ḡanbar, amarelo /θ/; 17. al-rubāḡī, rupia /p/.

III. The Onset of the Medial or Final Syllable in an Intervocalic Position: 18. al-kabīr, quivir /b/.

IV. The Coda of the Medial Syllable: 19. (al)-shābb, chaval /b/; 20. (al)-rutab, retova /b/; 21. al-ḡaqrab, alacrán /n/; 22. al-muḡtasib, almotacén /n/; 23. (al)-rakūb, recua /θ/; 24. (al)-sharāb, jaroque /p/.

The following Arabic loan-words contain the phoneme /t/ as:

I. The Onset of the Initial Syllable: 25. (al)-
taḡlīqa(t), talega /t/; 26. (al)-tarjuman, trujamán /t/;
27. (al)-turkī, turquí /t/; 28. (al)-turḡa(t), darro /d/. ✓

II. The Onset of the Medial Syllable:
29. al-qantūra(t), alcándora /d/; 30. al-tābūt, ataúd /d/;
31. (al)-mustaḡrab, mozárabe /ø/.

III. The Onset of the Medial or Final Syllable in an Intervocalic Position: 32. al-zaytūna(t), aceituna /t/;
33. al-sitāra(t), acitara /t/.

V. The Coda of the Final Syllable: 34. al-zayt,
aceite /t/; 35. (al)-shāh māt, jaquemate /t/.

The following Arabic loan-words contain the phoneme /e/ as:

I. The Onset of the Initial Syllable: 36. (al)-
thaghr, tagara /t/; 37. (al)-thaghrī, zegrí /s/.

II. The Onset of the Medial Syllable: 38. al-thafar,
ataharre /t/; 39. al-thaqba(t), atabe /t/; 40. al-thamn,
azumbre /s/.

III. The Onset of the Medial or Final Syllable in an Intervocalic Position: 41. al-athal, aludel /d/; 42. al-
athafī, alnafe /n/; 43. (al)-mithqāl, metical /t/.

IV. The Coda of the Medial Syllable: 44. (al)-
tathqiba(t), tasquiva /s/.

V. The Coda of the Final Syllable: 45. (al)-farth,
frez /s/.

The following Arabic loan-words contain the phoneme /j/ as:

I. The Onset of the Initial Syllable: 46. (al)-jariwiya, chirivia /tʃ/; 47. (al)-jara(t), jarra /x/.

II. The Onset of the Medial Syllable: 48. al-jumma(t), aljuma /x/; 49. al-jāmiʿa(t), aljama /x/; 50. al-jawhar, aljōfar /x/; 51. al-jubba(t), aljuba /x/; 52. (al)-taranja(t), toronja /x/; 53. (al)-turjiman, trujamán /x/; 54. al-jarafa, aljarfa /x/; 55. al-jūb, aljibe /x/; 56. al-zinjār, azingar /g/; 57. (al)-bādanjān, berenjena /x/. ✓

III. The Onset of the Medial or Final Syllable in Intervocalic Position: 58. al-ḥajjām, alfajeme /x/; 59. al-ḥajja(t), alhaja /x/; 60. al-ḥājib, alhāgib /x/; 61. al-tijāra(t), atijara /x/; 62. al-zanbūja(t), acebuche /tʃ/.

V. The Coda of the Final Syllable: 63. al-shitranj, ajedrez /s/; 64. (al)-sahrīj, chafariz /s/; 65. (al)-bābūj, babucha /tʃ/; 66. rahj al-ghār, rejalgar /x/.

The following Arabic loan-words contain the phoneme /k/ as:

I. The Onset of the Initial Syllable: 67. (al)-ḥaṭṭa hasta /H/; 68. (al)-ḥashsh, faza /f/; 69. al-ḥauz, alfoz /f/; 70. ʿamal al-had, amelgar /g/; 71. (al)-ḥarūn, harón /H/; 72. (al)-ḥayyān, jayán /x/.

II. The Onset of the Medial Syllable: 73. (al)-bahṛī, bagarino /g/; 74. al-ḥinnā(t), alheña /H/; 75. al-malḥafa(t), almalafa /Ø/.

III. The Onset of the Medial or Final Syllable in Intervocalic Position: 76. ṣaḥib al-madīna(t), zalmedina /Ø/; 77. al-rayḥān, arrayān /Ø/.

IV. The Coda of the Medial Syllable: 78. al-maḥshia(t), almejía /Ø/; 79. al-muḥtasib, almotacén /Ø/; 80. al-miḥfar, almocafre /k/.

V. The Coda of the Final Syllable: 81. (al)-qadah, cadahe /H/; 82. al-maṭraḥ, almadraque /k/.

The following Arabic loan-words have the phoneme /k/ as:

I. The Onset of the Initial Syllable: 83. (al)-khamīs, hamez /H/; 84. (al)-kḥalaq, halagar /H/; 85. (al)-kḥutayf, cotayfeso /k/; 86. (al)-kḥuwarazmī, guarismo /g/.

II. The Onset of the Medial Syllable: 87. al-kḥasa(t), alface /f/; 88. al-kḥanjar, alfanje /f/; 89. al-kḥayyat, alfayat /f/; 90. al-kḥumra (t), alfombra /f/; 91. al-kḥurj, alforja /f/; 92. (al)-baṭṭīkḥa(t), budefa /f/; 93. al-kḥurshūfa(t), alcachofa /k/; 94. al-kḥarrub, algarroba /g/; 95. al-kḥaīrī, alhelí /H/; 96. al-salīkḥa(t), zalea /Ø/.

III. The Onset of the Medial or Final Syllable in an Intervocalic Position: 97. al-fakhkhāri, alfarero /Ø/;

98. al-mikhadda(t), almohada /H/; 99. (al)-rakḥīs, rahez /H/.

IV. The Coda of the Medial Syllable: 100. al-makhzan, almacén /ø/; 101. al-mukḥfiya(t), almoña /ø/; 102. al-sukhra(t), azofora /f/.

V. The Coda of the Final Syllable: 103. al-zarnīkh, azarnefe /f/; 104. al-rukḥkh, roque /k/.

The following Arabic loan-words have the phoneme /d/ as:

I. The Onset of the Initial Syllable: 105. (al)-daraqa(t), adarga /d/.

II. The Onset of the Medial Syllable: 106. al-dishīsha(t), alejija /ø/; 107. al-bardaḡa(t), albarda /d/; 108. al-bardān, albardān /d/; 109. al-kandara(t), alcándora /d/; 110. al-funduq, alhóndiga /d/; 111. (al)-bagḥdadī, baldaquín /k/.

III. The Onset of the Medial or Final Syllable in Intervocalic Position: 112. (al)-ḡadwl, adulero /d/; 113. al-munādā(t), almonéda /d/; 114. (al)-bādanjān, berenjena /r/; 115. al-qudamīa(t), alcotoma /t/.

IV. The Coda of the Medial Syllable: 116. al-madrasa(t), almadraza /d/.

V. The Coda of the Final Syllable: 117. al-qaīd, alcaide /d/; 118. al-hind, alhinde /d/; 119. al-mudd, almud /d/; 120. al-samīd, acemita /t/; 121. al-qawwad, alcahuete

/t/; 122. (al)-turbid, turbich /tʃ/; 123. ʕamal (al)-had, amelgar /r/; 124. al-mūdd, almorzada /s/.

The following Arabic loan-words have the phoneme /ð/ as:

III. The Onset of the Medial or Final Syllable in an Intervocalic Position: 125. al-mu'adh_hdnin, almuédano /d/.

The following Arabic loan-words have the phoneme /r/ as:

II. The Onset of the Medial Syllable: 126. (al)-lazaward, azul /ø/.

III. The Onset of the Medial or Final Syllable in an Intervocalic Position: 127. al-qarāt, arracada /r̃/; 128. al-hurī, alfolí /l/; 129. al-kīrāt, alquilate /l/; 130. al-kirā', alquiler /l/; 131. (al)-maṭmura(t), mazmorra /r/.

IV. The Coda of the Medial Syllable: 132. al-khurshūfa(t), alcachofa /ø/.

V. The Coda of the Final Syllable: 133. al-wazīr, alguacil /l/; 134. al-nafīr, añafil /l/; 135. (al)-ghandūr, gandul /l/; 136. (al)-qintār, quintal /l/; 137. al-khanjar, alfanje /ø/; 138. al-thafar, ataharre /r̃/.

The following Arabic loan-words have the phoneme /z/ as:

I. The Onset of the Initial Syllable: 139. (al)-zayānī, cianí /s/; 140. (al)-gharrafā(t), garrafa /g/; 141. (al)-zifir, safaro /s/.

II. The Onset of the Medial Syllable: 142. al-makhzan, almacén /s/; 143. al-zaʿfaran, azafrán /s/; 144. al-zawraq, zabra /s/; 145. al-zāmila(t), acémila /s/; 146. al-wazīr, alguacil /s/; (al)-jīza, giza /s/; 148. alkūza(t), alcuza /s/.

V. The Coda of the Final Syllable: 149. al-ḥawz, alfoz /s/; 150. al-ruzz, arroz /s/; 151. (al)-qafīz, cahiz /s/; 152. al-burūz, alborozo /s/.

The following Arabic loan-words have the phoneme /s/ as:

I. The Onset of the Initial Syllable: 153. (al)-saqa(t), zaga /s/; 154. al-ustuwān, zaguán /s/; 155. (al)-sūq, zoco /s/; 156. (al)-summāq, zumaque /s/; 157. (al)-sindīya(t), sandía /s/; 158. (al)-sahrīj, chafariz /s/.

II. The Onset of the Medial Syllable: 159. al-silqa(t), acelga /s/; 160. al-sānīa(t), aceña /s/; 161. al-sāqia(t), acequia /s/; 162. al-saṭl, acetre /s/; 163. al-sitāra(t), acitara /s/; 164. al-saqqā', azacán /s/; 165. al-timsāh, atimsach /s/; 166. al-safat, azafata /s/; 167. al-sūk, azogue /s/; 168. al-saut, azote /s/; 169. al-saṭh, azotea /s/; 170. al-sukkar, azúcar /s/; 171. al-sida(t), azuda /s/.

III. The Onset of the Medial or Final Syllable in Intervocalic Position: 172. (al)-madrassa(t), almadraza /s/; 173. al-kisā', alquicel /s/; 174. (al)-ghadamisī, guadamecí /s/.

IV. The Coda of the Medial Syllable: 175. al-kuskusū, alcuzcuz /s/; 176. (al)-miskīn, mezquino /s/; 177. (al)-mustaḡrab, mozārabe /s/.

V. The Coda of the Final Syllable: 178. al-qādūs, arcaduz /s/; 179. al-khamīs, alcamiz /s/; 180. al-fāris, alférez /s/; 181. al-ra'īs, arráez /s/; 182. al-riyās, arrial /l/.

The following Arabic loan-words have the phoneme /ʃ/ as:

I. The Onset of the Initial Syllable: (al)-shafra(t), chafarote /tʃ/; 184. (al)-shafaīra(t), chaira /tʃ/; 185. (al)-shamra(t), chambra /tʃ/; 186. (al)-shanāḡa, chanada /tʃ/; 187. (al)-shanīḡ, chanio /tʃ/; 188. (al)-sharjab, cercera /s/; 189. (al)-shatrak, ceteraque /s/; 190. (al)-shāh māt, jaquemate /x/; 191. (al)-shaqīqa(t), jaqueca /x/; 192. (al)-shāh, jaque /x/; 193. (al)-shaḡra(t), jara /x/; 194. (al)-shabaka(t), jābeca /x/; 195. wa shā' allāh, ojalá /x/.

II. The Onset of the Medial Syllable: 196. al-sharīk, ajaraca /x/; 197. al-shurka(t), ajorca /x/; 198. al-mahshīa(t), almejia /x/; 199. al-sharīk, jarique /x/; 200. al-shawār, ajuar /x/; 201. al-shiqā', en seco /x/; 202. al-shiṭranj, ajedrez /s/; 203. al-shawka(t), acicate /s/; 204. al-shakā(t), achaque /tʃ/.

III. The Onset of the Medial or Final Syllable in an Intervocalic Position: 205. (al)-kashimīr, cachemir /tʃ/; 206. (al)-ʔashshāq, gaché /tʃ/; 207. almushabbak, almujaḥaba /x/; 208. al-bishara(t), albricias /s/; 209. al-marāshsh, almarraja /x/; 210. al-ḥashashīn, asesino /s/.

IV. The Coda of the Medial Syllable: 211. al-mushrif, almojarife /x/.

V. The Coda of the Final Syllable: 212. al-mafrash, almofrej /x/.

The following Arabic loan-words have the phoneme /ʃ/ as:

I. The Onset of the Initial Syllable: 213. al-ṣanj, cenacho /s/; 214. (al)-ṣandal, cendal /s/; 215. (al)-ṣīnī, cení /s/; 216. ṣāḥib (al)-sūq, cevacogue /s/; 217. (al)-ṣifr, cifra /s/; 218. (al)-ṣarma, zarama /s/; 219. ṣāḥib al-madīna(t), zalmedina /s/; 220. (al)-ṣaghrī, chagren /tʃ/; 221. (al)-ṣahrīj, zafareche /s/; 222. (al)-ṣalam, zalama /s/; 223. (al)-ṣifāq, cifaque /s/.

II. The Onset of the Medial Syllable: 224. al-qurṣa(t), alcorza /z/; 225. (al)-qurṣa(t), caraza /z/.

III. The Onset of the Medial or Final Syllable in an Intervocalic Position: 226. al-raṣīf, arrecife /s/; 227. al-qasr, alcázar /s/.

IV. The Coda of the Medial Syllable: 228. al-waṣy, albacea /s/; 229. al-maṣṭakā, almastiga /s/; 230. (al)-rakhīṣ, rahez /s/.

The following Arabic loan-words have the phoneme /d/ as:

I. The Onset of the Initial Syllable: 231. (al)-dayfa(t), daifa /d/.

II. The Onset of the Medial Syllable: 232. al-dayḡa(t), aldea /d/; 233. al-dīna(t), atona /d/.

III. The Onset of the Medial or Final syllable in an Intervocalic Position: 234. al-qādī, alcalde /d/; 235. rabb al-dān, rabadān /d/; 236. (al)-radūma(t), redoma /d/.

V. The Coda of the Final Syllable: 237. al-ḡard, alarde; 238. (al)-abyaḡ, abiados; 239. al-rabaḡ, arrabal /l/; 240. al-firāḡ, alefriz /s/; 241. al-riyāḡ arriate /t/.

The following Arabic loan-words contain the phoneme /t/ as:

I. The Onset of the Initial Syllable: 242. (al)-ṭassa(t), taza /t/; 243. (al)-ṭāhūna(t), tahona /t/.

II. The Onset of the Medial Syllable: 244. al-bayṭār, albēitar /t/; 245. al-qanṭūra(t), alcándora /t/; 246. al-ṭabal, atabal /t/; 247. al-ṭalayḡa(t), atalaya /t/; 248. al-ṭaraqa(t), atarraga /t/; 249. (al)-qinṭār, quintal /t/; 250. al-ṭūb, adobe /d/; 251. al-riṭl, arrelde /d/.

III. The Onset of the Medial or Final Syllable in an Intervocalic Positin: 252. al-qutun, algodón /d/; 253. (al)-biṭāna(t), badana /d/; 254. (al)-baṭṭīkha(t),

budefa /d/; 255. (al)-marabiṭī, maravedí /d/; 256. (al)-bāṭil, balde /d/; 257. al-qaṭām, alcotán /t/; 258. (al)-khuṭayf, cotayfeso /t/; 259. (al)-qutunīya(t), cotonía /t/.

IV. The Coda of the Medial Syllable: 260. al-shitrānj, ajedrez /d/; 261. al-maṭrah, almadraque /d/; 262. al-saṭl, acetre /t/; 263. al-qitrān, alquitrán /t/; 264. (al)-maṭmūra(t), mazmorra /s/.

V. The Coda of the Final Syllable: 265. al-khayyāt, alfayat /t/; 266. al-qirāt, alquilate /t/; 267. al-sawṭ, azote /t/; 268. (al)-ribāt, arrebató /t/; 269. al-būṭ, albot /t/; 270. (al)-rubṭ, robda /d/.

The following Arabic loan-words have the phoneme /ð/ as:

I. The Onset of the Initial Syllable: 271. al-zulm, adolme /d/; 272. (al)-zay, dey /d/; 273. (al)-zafar, ataharre /t/; 274. (al)-zulla(t), toldo /t/.

II. The Onset of the Medial Syllable: 275. al-hanzal, alhandal /d/; 276. al-nazm, añazme /z/.

III. The Onset of the Medial or Final syllable in an Intervocalic Position: 277. al-nāzīr, anadel /d/; 278. (al)-nazīr, nadir /d/; 279. al-bazara(t), albatara /t/.

V. The Coda of the Final Syllable: 280. (al)-ḥāfiz, hafiz /s/.

The following Arabic loan-words have the phoneme /ʕ/ as:

I and II. The Onset of the Initial and Medial Syllables: 281. al-ḡashshāq, gaché /g/; 282. al-ḡarabīa(t), algarabía /g/; 283. al-ḡadada(t), alidada /ø/; 284. al-ḡajara(t), alagara /g/; 285. (al)-ḡaqrab, alacrán /ø/; 286. al-ḡlāqa(t), alahilca /H/; 287. al-ḡard, alarde /ø/; 288. al-ḡarīf, alarife /ø/; 289. al-bardaḡa(t), albarda /ø/; 290. al-maḡsara(t), almazara /ø/; 291. al-zaḡfaran, azafrán /ø/; 292. al-ḡūd, laúd /ø/; 293. (al)-mustḡrab, mozárabe /ø/; 294. (al)-shaḡra(t), jara /ø/; 295. al-ḡarrāda, algadara /g/.

III. The Onset of the Medial or Final Syllables in an Intervocalic Position: 296. al-ḡayḡa(t), aldea /ø/; 297. al-jāmiḡa(t), aljama /ø/; 288. (al)-nāḡūra(t), noria /ø/; 299. al-rubḡ, arroba /ø/; 300. (al)-taḡalīqa(t), talega /ø/; 301. al-zambūḡa(t), zamboa /ø/; 302. al-shiḡr, jácara /k/.

The following Arabic loan-words have the phoneme /ḡ/ as:

I. The Onset of the Initial Syllable: 303. (al)-ḡhanīma(t), galima /g/; 304. (al)-ḡhandūr, gandul /g/; 305. (al)-ḡhadamisī, guadamecí /g/; 306. (al)-ḡhulām, chulamo /tʃ/; 307. (al)-ḡhirbāl, herpil /H/; 308. (al)-ḡhazīa(t), ricia /r/.

II. The Onset of the Medial Syllable: 309. al-ḡhalala(t), algara /g/; 310. al-zagḡhrada(t), algazara /g/; 311. al-ḡhasūl, algazul /g/; 312. al-ḡhull, argolla /g/.

III. The Onset of the Medial or Final Syllable in an Intervocalic Position: 313. al-mughāwir, almogávar /g/; 314. al-zaghāya(t), azagaya /g/; 315. (al)-zaghal, zagal /g/.

IV. The Coda of the Medial Syllable: 316. al-maghra(t), almagre /g/; 317. al-maghfar, almófar /θ/; 318. (al)-baghdadī, baldés /l/; 319. (al)-baghdadī, borceguí /r/.

The following Arabic loan-words have the phoneme /f/ as:

I. The Onset of the Initial Syllable: 320. al-fanīqa, fanega /f/; 321. (al)-farsakh parasanga /p/.

II. The Onset of the Medial Syllable: 322. al-deflā, adelfa /f/.

III. The Onset of the Medial or Final Syllable in an Intervocalic Position: 323. al-nafīr, añafil /f/; 324. (al)-qafīz, cahiz /H/; 325. al-thafar, ataharre /H/.

IV. The Coda of the Medial Syllable: 326. al-jafn, algebna /b/.

V. The Coda of the Final Syllable: 327. al-duff, adufe /f/; 328. al-sharaf, ajrafe /f/; 329. al-mushrif, almojarife /f/; 330. al-raṣīf, arrecife /f/.

The following Arabic loan-words have the phoneme /q/ as:

I. The Onset of the Initial Syllable: 331. al-silqa(t), acelga /g/; 332. al-qutun, algodón /g/;

333. al-qaīd, alcaide /k/; 334. al-qarat, arracada /k/;
 335. al-qubba(t), alcoba /k/; 336. al-barqūq, albaricoque
 /k/; 337. al-qināḡ, algrinal /g/.

III. The Onset of the Medial of Final Syllable in an Intervocalic Position: 338. al-ḥabaq, albahaca /k/;
 339. al-faqqūs, alficoz /k/; 340. al-muqaddim, almocadén
 /k/; 341. al-saqqā', azacán /k/; 342. al-shiqā', en seco /k/;
 343. (al)-shaqīqa(t), jaqueca /k/; 344. al-daraqā(t), adarga
 /g/; 345. al-banīqa(t), albanega /g/; 346. (al)-fanīqa(t),
 fanega /g/; 347. al-taḡalīqa(t), talega /g/; 348. (al)-
 saqa(t), zaga /g/; 349. al-sāqīa(t), acequia /k/; 350. al-
 faqīh, alfaquín /k/; 351. al-zāwūq azogue /g/.

IV. The Coda of the Medial Syllable: 352. al-ḡaqrab,
 alacrán /k/.

V. The Coda of the Final Syllable: 353. al-būq,
 albogue /g/; 354. al-rawq, arrogue /g/; 355. al-qirq,
 alquerque /k/; 356. (al)-summaq, zumaque /k/; 357. (al)-sūq,
 zoco /k/; 358. al-funduq, alhóndiga /g/; 359. (al)-ḥalaq,
 halagar /g/; 360. al-zawraq, zabra /Ø/.

The following Arabic loan-words have the phoneme /k/
 as:

I. The Onset of the Initial Syllable: 361. (al)-
 karawān, caravana /k/; 362. (al)-kakatūa, cacatua /k/;
 363. (al)-kāś, caceta /k/; 364. (al)-kashimīr, cachemir /k/;
 365. (al)-kāfir, cafre /k/; 366. al-kisā', alquicel /k/;

367. (al)-kalb, quelbe /k/; 368. (al)-kibīr, quivir /k/;
 369. (al)-qirāt, quilate /k/.

II. The Onset of the Medial Syllable: 370. al-kandara(t), alcándora /k/; 371. al-karawiya, alcaravea /k/;
 372. al-kuhl, alcohol /k/; 373. al-kūza(t), alcuza /k/;
 374. al-kuskusū, alcuzcuz /k/; 375. al-kirā', alquiler /k/;
 376. al-kimiyā', alquīmīa /k/; 377. (al)-miskīn, mezquino /k/.

III. The Onset of the Medial or Final Syllable in an Intervocalic Position: 378. al-sukkar, azúcar /k/;
 379. (al)-sika(t), ceca /k/; 380. (al)-rakūb, recua /k/;
 381. al-daraka(t), adarga /g/; 382. (al)-barakān, barragan /g/;
 383. al-mastakī, almastiga /g/; 384. al-fakak, alfaque /k/;
 385. al-hakīm, alfaquín /k/; 386. (al)-mikyāl, maquila /k/.

V. The Coda of the Final Syllable: 387. (al)-fanak, faneque /k/; 388. al-martak, almártaga /g/; 389. al-barqūk, albaricoque /k/; 390. al-sharīk, jarique /k/; 391. al-darmak, adárgama /g/; 392. al-zāwūq, azogue /g/; 393. al-mushabbak, almujaaba /ø/.

The following Arabic loan-words have the phoneme /l/ as:

I. The Onset of the Initial Syllable: 394. (al)-lamt, danta /d/; 395. (al)-līma(t), lima /l/; 396. (al)-lakk, laca /l/.

II. The Onset of the Medial Syllable: 397. al-dafla(t), adelfa /l/; 398. al-qasari, escarzano /s/; 399. al-wazir, alguacil /l/.

III. The Onset of the Medial or Final Syllable in an Intervocalic Position: 400. al-hulla(t), alfolla /l/; 401. al-balu'a(t), albañal /ñ/; 402. al-qabila(t), cabila /l/; 403. al-muhalla(t), almohalla /l/; 404. al-khilal, alfiler /r/.

IV. The Coda of the Medial Syllable: 405. (al)-salham, cerome /r/; 406. al-qasr, alcázar /r/; 407. al-kuhl, alcohol /l/; 408. al-khilal, alfiler /r/.

V. The Coda of the Final Syllable: 409. al-fil, alfil /l/; 410. al-ritl, arrelde /l/; 411. al-ghull argolla /l/; 412. (al)-mikyāl, maquila /l/; 413. al-satl, acetre /r/; 414. (al)-sayl, seis /s/.

The following Arabic loan-words have the phoneme /m/ as:

I. The Onset of the Initial and Medial Syllables: 415. al-mudd, almud /m/; 416. (al)-mikyāl, maquila /m/; 417. al-marasa(t), barasa /b/; 418. (al)-mukhkh, nuca /n/.

II. The Onset of the Medial Syllable: 419. (al)-tarjuman, trujamán /m/.

III. The Onset of the Medial or Final Syllable in an Intervocalic Position: 420. al-khamis, alcamaz /m/; 421. al-zamila(t), acémila /m/; 422. al-ruduma(t), redoma /m/.

IV. The Coda of the Medial Syllable: 423. al-timsāh, atimsach /m/; 424. al-qamqām, cáncano /n/.

V. The Coda of the Final Syllable: 425. al-qatām, alcotán /n/; 426. al-hakīm, alfaquin /n/; 427. al-muqaddim, almocadén /n/; 428. al-ḥaram, harém /m/; 429. al-ḥajjām, alfajeme /m/; 430. al-ḥaram, alfareme /m/; 431. al-nazm, añazme /m/.

The following Arabic loan-words have the phoneme /n/ as:

I. The Onset of the Initial Syllable: 432. (al)-nazaha(t), añacea /ñ/; 433. (al)-nāḡūra(t), noria /n/; 434. al-nafīr, añafil /ñ/; 435. al-nīl, añil /ñ/; 436. al-nushādir, almocrate /m/.

III. The Onset of the Medial or Final Syllables in an Intervocalic Position: 437. al-ghanam, ganam /n/; 438. al-munādā(t), almonéda /n/; 439. (al)-fanīqa(t), fanega /n/; 440. al-ḥinnā', alhena /n/; 441. al-bānī, albañil /ñ/; 442. (al)-qalānīs, calañés /ñ/; 443. (al)-ghanīma(t), galima /l/; 444. al-sanīa(t), aceña /ñ/.

IV. The Coda of the Medial Syllable: 445. al-khanjar, alfanje /n/; 446. al-funduq, alhóndiga /n/; 447. al-shitranj, ajedrez /θ/.

V. The Coda of the Final Syllable: 448. (al)-rahn, rehén /n/; 449. al-miskīn, mezquino /n/; 450. al-mudajjan, mudéjar /r/.

The following Arabic loan-words have the phoneme /h/ as:

I. The Onset of the Initial Syllable: 451. (al)-hadūn, catum /k/; 452. (al)-hijra(t), hégira /H/.

II. The Onset of the Medial Syllable: 453. al-dirham, adarme /Ø/; 454. al-hadīa(t), alfadīa /f/; 455. al-hurī, alfolí /f/; 456. al-hind, alhinde /H/.

III. The Onset of the Medial or Final Syllable in an Intervocalic Position: 457. al-jawhar, aljófar /f/; 458. al-rahn, rehén /H/; 459. al-nazaha(t), añacea /Ø/; 460. al-jahaz, jaez /Ø/; 461. al-rahīsh, arijo /x/.

IV. The Coda of the Medial Syllable: 462. al-shāh māt, jaquemate /Ø/; 463. rahj al-ghār, rejalgar /Ø/; 464. (al)-sahrīj, zafareche /f/.

V. The Coda of the Final Syllable: 465. al-faqīh, alfaquín /n/; 466. al-shāh, jaque /k/.

An analysis of the results of the preceding section reveals that the majority of the observed changes were both regular and predictable. The types of Castilian phonemes which were substituted for the Arabic phonemes depended upon the following factors: the presence or absence of equivalent or near-equivalent Spanish phonemes to replace the Arabic phonemes; the position of the substituted phoneme in the word, and the effects of sporadic change (which cannot be predicted). When these factors are taken into consideration, they show that consonantal substitution in Arabic

loan-words depends heavily upon the Castilian phonological system; nevertheless, the Castilian loan-words do possess certain underlying patterns whose phonemic frequencies are due to their common Arabic origin. It is thus possible to predict whether or not a given word may be of Arabic origin.

XI. CONCLUSIONS

The Arabic influence upon the Castilian language can be most readily observed in the large number of loan-words, over 4,000, that were borrowed from Arabic into Castilian during the Arabic occupation which lasted for over 800 years in Spain. However, as was hypothesized, these loan-words went through both regular and sporadic phonological changes as they were assimilated from Arabic into Spanish.

The regularly occurring patterns of change have been divided into three basic groups:

1. those loan-words which preserve an underlying Arabic pattern which occurs more frequently among Arabic loan-words than among the Castilian language as a whole;
2. those loan-words which change phonologically in order to remove prohibited Arabic patterns from being transferred into Spanish through lexical borrowing; and
3. those loan-words which preserve Arabic phonological patterns which regularly occurred in Castilian and therefore remain indistinguishable from other Spanish lexicon.

Of these three groups, only the first group representing underlying Arabic patterns can be detected without reference to etymological origins. The other two groups of change transform the Arabic loan-words using already-existing high-frequency patterns. The area of morphological

study includes the presence or absence of the Arabic article al-, incorporated into Castilian words without functioning as an article. Also, the majority of the Arabic loan-words borrowed into Castilian are nouns.

Each group contains certain key areas of phonology that were studied in this work. Group I includes the phonology of toponomical names, Final Tonic Stress, Final Consonants (normally requiring support), incorporation of the article al- (either assimilated or nonassimilated), syntax, and the suffix -ī. Even though these patterns are studied separately, they are usually found in combination. Group II consists of Final Vowel Addition, Change from Final Tonic to Penultimate Tonic Stress, Substitution of Incongruous Consonants, and Consonantal Addition and Deletion. Group III consists of Substitution of Analogous Consonants, the Preservation of Tonic Stress, and Diphthongization.

These three groups of phonological changes are evidence for the three stages of chronological development which occurred as the Arabic loan-words were being incorporated into the Castilian language. First, the bilingual Mozarabs began to use Arabic terminology to describe cultural innovations and to imitate the superior Arabic society. Then, the new lexicon went through phonological changes which removed unacceptable Arabic patterns, before being incorporated fully into Castilian. Once adopted, these loan-words went

through any standard phonological developments which occurred in the Castilian language as a whole.

This research shows that the incorporation of Arabic loan-words from the Arabic language into Castilian language occurred according to the linguistic requirements of the indigenous Spanish language, yet it retained many of the underlying Arabic phonological patterns. Thus, the many Castilian loan-words from Arabic not only represent a cultural and lexical influence upon Spanish, but a phonological one as well. This study reveals many interesting linguistic features of both Arabic and Spanish as it treats the subject of Castilian loan-words of Arabic origin, and it should help foment future work in both Semitic, Romance, and Hispano-Árabe linguistics.

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APPENDICES

APPENDIX A

SPANISH DICTIONARY

Castilian Loan-Word	Location in Section X	English Translation
aben	text (t.)	son
abiados	238	white
acebuche	62	wild olive
aceite	34	olive oil
aceituna	32	olive fruit
acelga	159,333	beet
acémila	145,421	mule
acemita	120	bran bread
aceña	160,444	water mill
acequia	161,349	canal
acetre	162,262	water bucket
acicate	203	spur
acitara	33,163	partition wall
achaque	204	habitual infirmity
adarga	344,381	leather shield
adárgama	391	bran flour
adarme	453	.06 oz.
adelfa	322,397	oleander
adobe	250	adobe brick
adolme	271	wool fabric
adufe	327	tamborine
adulero	112	muleteer
ajaraca	196	trap
ajarafe	328	royal seat
ajedrez	63,202	chess
ajorca	197	bracelet
ajuar	206	furniture
alacrán	21,285,352	scorpion
alagara	284	incursion
alahilca	286	wall-hanging
alarde	237,287	military review
alarife	288	architect
alazán	t.	sorrel-colored
albacea	228	testamentary executor
albahaca	338	sweet basil
albanega	356	rabbit net
albañal	401	common sewer
albañíl	441	bricklayer
albará	6	public document
albarazo	7	leper

Castilian Loan-Word	Location in Section X	English Translation
albarda	8,107,289	pack saddle
albardán	9,108	buffoon
albaricoque	11,336,389	apricot
albatara	279	woman's disease
albéitar	244	veterinarian
albogue	12,353	pastoral flute
alborozo	10,152	merriment
albot	269	crucible
albricias	13,206	reward
albufera	14	salt lake
alcachofa	93,127	artichoke
alcahuete	121	procurer of women
alcaide	117,333	alcaide
alcalde	234	alcalde
alcamaz	420	dancer
alcamiz	179	military review
alcándora		falcon's perch
alcaravea	128,371	caraway seed
alcázar	227,406	alcazar
alcoba	335	alcove
alcohol	372	alcohol
alcorza	244	sweetmeat paste
alcotán	257,425	bird of prey
alcotoma	115	type of cloth
alcuza	148,373	oil bottle
alcuzcuz	175,374	honeyed flour-balls
aldea	232,296	small village
alefriz	240	mortise
alejija	106	barley porridge
alface	87	lettuce
alfadía	454	donation
alfajeme	58,429	barber
alfaneque	384	pavilion
alfanje	88,137,445	cutlass
alfaque	384	shoal
alfaquín	350,385,426	doctor of law
alfareme	430	hairstresser
alfarero	97	potter
alfayate	89,265	tailor
alferéz	180	ensign
alficoz	341	cucumber
alfil	409	chess's bishop
alfiler	404	broach
alfinde	118	strong steel
alfóncigo	t.	pistachio
alfolí	129,455	granary

Castilian Loan-Word	Location in Section X	English Translation
alfolla	400	purple brocade
alfombra	90	carpet
alforfon	15	euphorbia
alforja	91	saddle bag
alfoz	69,149	mountain passageway
algadara	295	catapult
algara	309	foraging calvary
algarabía	282	Arabic
algarroba	94	carob bean
algazara	310	huzza
algazul	311	seaweed
algebna	326	eyelid
algodón	252,332	cotton
algrinal	347	veil
alguacil	133,146,399	constable
alhāgib	60	prime minister
alhaja	59	jewel
alhamel	t.	beast of burden
alhandal	275	colocynth
alhelí	95	gilliflower
alheña	74,440	privet
alhinde	456	quicksilver
alhóndiga	110,358,446	public granary
alidada	283	geometric ruler
aljama	49,297	synagogue
aljarfa	54	tarred net
aljibe	55	cistern
aljófar	50,457	pearl
aljuba	51	mozarabic garment
aljuma	48	plant sucker
almacén	100,142	warehouse
almadraque	82,261	quilted cushion
almadraza	116,172	library
almagre	316	red ochre
almaizal	t.	gauze veil
almalafa	75	cotton sheet
almarraja	207	glass sprinkler
almártaga	388	litharge
almastiga	229,373	mastic tree
almazara	290	oil mill
almejía	78,198	cheap cloak
almocadén	340,427	commander
almocafre	80	hoe
almocarí	t.	Kuran reader
almocela	t.	head covering
almocrate	436	sal ammoniac

Castilian Loan-Word	Location in Section X	English Translation
almófar	317	helmet part
almofía	101	earthen jug
almofrej	212	course woolen bag
almogávar	313	expert forager
almohada	98	pillow
almohalla	403	army host
almojarife	211,329	customs agent
almonéda	113,438	auction
almorzada	124	double armful
almotacén	22,79	market clerk
almud	119	grain measure
almuédano	125	muezzin
almujaba	205,393	window with grating
alnafe	42	portable stove
aloque	t.	clear red (wine)
alquerque	355	oil mill part
alquicel	173,366	garment
alquilate	130,266	tax
alquiler	131,375	wages
alquimia	376	alchemy
alquitrán	263	tar
aludel	41	subliming pots
amerelo	16	amber-related
amelgar	70,123	to open furrows
amir	t.	emir
anadel	277	war chief
añacea	432	recreation
añafil	134,323,434	musical pipe
añazme	276,431	nose-earring
añil	435	indigo
arancel	t.	rental payment
arcaduz	189	water conduit
arebato	268	unexpected attack
argolla	312,411	metal arm-band
arijo	461	light soil
arrabal	239	suburb
arracada	127,334	earring
arracife	226	thistle
arráez	171	ship captain
arrayán	77	myrtle
arrecife	226,330	cardoon
arrelde	251,410	four-pound weight
arrial	182	hilt bar
arriate	241	trellis
arriero	t.	carrier with beasts
arroba	299	¼ part

Castilian Loan-Word	Location in Section X	English Translation
arrogue	354	grapnel for attack
arroz	150	rice
asesino	208	assassin
atabal	246	kettledrum
atabe	39	air-hole
ataharre	38,138,273	pack-saddle's leather band
atahona	173,366	horse-turned mill
ataúd	30	coffin
atalaya	247	watchtower
atarraga	248,261	hammer
atijara	61	trade
atimsach	165,423	crocodile
atona	233	lamb's nurse
azabra	360	coasting vessel
azacán	164,341	water-carrier
azafata	166	tray
azafrán	143,291	saffron
azagaya	314	javelin
azarnefe	103	oripimente
azingar	56	verdegris
azofora	102	contribution
azogue	167,351,392	mercury
azote	168,267	whip
azotea	169	platform
azúcar	170,378	sugar
azuda	171	water wheel
azul	126	azure
azumbre	40	liquid measure
babucha	65	slipper
badana	4,253	dressed sheep-skin
bagarino	73	sailor
baladí	t.	mean, vile
baldaquín	111	silk canopy
balde	253	something cheap
baldés	331,318	glove-skin
barasa	417	rope
barragán	1,382	companion
berenjena	57,114	eggplant
borceguí	319	buskin
budefa	92,254	watermelon
cabila	402	ship's dowell
cacatua	362	cockatoo
caceta	363	small pan
cachemir	203,364	cashmere
cadahe	81	wine pitcher
cafre	365	kafir

Castilian Loan-Word	Location in Section X	English Translation
cahiz	162,343	measure
calañés	442	native of Calanas
cáncano	434	louse
caravana	361	caravan
caraza	225	bread
catum	451	mantle
ceca	379	mosque's title
cenacho	213	fruit basket
cendal	214	silk cloth
cení	215	fine brass
cequí	t.	a type of coin
cercera	179	vault's air tube
cereza	t.	cherry
cerome	405	cap
ceteraque	180	spleen wort
cevacogue	216	market inspector
cianí	139	gold coin
cifac	223	peritoneum
cifra	217	cipher
cotayfeso	85,258	low-class soldier
cotonía	259	cotton factory
chafariz	64	basin
chafarote	183	short sword
chagren	220	horse-hide preparation
chaira	184	steel sharpener
chambra	185	woman's jacket
chanada	186	trick
chanio	187	crazy
chaval	19	youth
chirivia	47	parsnip
chulamo	307	youth
daifa	231	mistress
danta	394	tapir
darro	28	waste-water canal
dey	272	governor's title
enseco	201,342	courage
escarzano	398	type of arch
fanega	320,346,439	grain measure
faza	68	cultivated patch
frez	46	dung
gaché	204,281	beau
galima	303,443	petty theft
gandul	135,304	vagabond
ganan	437	day laborer
garrafa	140	carafe
guadamecí	174,305	from Gadames

Castilian Loan-Word	Location in Section X	English Translation
guarismo	86	algorithm
hafiz	280	guard
halagar	84,359	to invent a lie
hamez	t.	hawk distemper
harém	428	harem
harón	71	sluggish
hasta	67	until
hégira	452	hegira
herpil	307	mesh sack
jābega	194	wind instrument
jācara	302	romance
jaez	460	harness
jaque	192,477	check
jaqueca	191,343	pain
jaquemate	472,35,181	checkmate
jara	104,193,294	cistus
jarique	390	work partner
jarope	24	medical potion
jarra	47	jug
jasmin	t.	jasmine
jayán	72	robust person
jeque	t.	old man
laúd	292	lute
lima	394	lime
laca	396	lacquer
maquila	386,412,416	corn measure
maravedí	255	maravedi
marmita	2	kettle
mazmorra	132,264	dungeon
metical	42	coin
mezquino	176,377,449	poor, miserly person
mozárabe	177,31,293	mozarab
mudéjar	450	moslem subject
muladí	t.	mulatto
nadir	278	nadir
noria	298,433	irrigation wheel
nuca	418	nuca
ojalá	195	God grant!
parasanga	321	league
pataca	3	Jerusalem artichoke
quelbe	367	type of fish
quilate	379	carat
quintal	136,249	quintal
quivir	18,3	big
rabadán	245	chief sheperd
rahez	99,230	vile, cheap

Castilian Loan-Word	Location in Section X	English Translation
recua	23,380	drove of mules
redoma	236,422	flask
regaifa	t.	grinding stone
rehén	438,448	hostage
rejalgar	66,463	realgar
retova	20	bridge toll
ricia	308	ruin, havoc
ricino	t.	castor-oil plant
robda	270	vigilant guards
roque	104	rook
rupia	17	rupee
safaro	141	dirty
sandía	157	watermelon
saráfo	218	giraffe
seis	414	small river
sisa	147	Giza
tagara	36	type of vase
tahona	243	horse-turned mill
talega	300,25,347	sack
tasquiva	44	trench
taza	242	soup cup (tazza)
toldo	274	awning
toronja	52	grapefruit
trujamán	26,53,419	interpreter
trubich	122	turbit
turquí	27	deep blue
zabra	144	small vessel
zafareche	221,464	pond
zaga	153,348	carriage's back load
zagal	315	swain
zaguán	154	entrance, hall
zalea	96	undressed sheep-skin
zalama	222	flattery
zalmedina	76,219	ancient magistrate
zamboa	301	quince-tree
zanahória	t.	carrot
zegrí	37,357	settlement
zoco	155	plaza
zumaque	156,356	sumach tree

APPENDIX B

ARABIC DICTIONARY

Arabic
Loan-Word

Arabic
Script

Spanish
Loan-Word

Aléf

abyad

أبيض

abiados

athāfī

أثافي

alnafe

athal

أثل

aludel

amīr

أمير

amir

Bá

bābūj

بابوج

babucha

bahrī

بحري

bagarino

bādanjān

بادجان

berenjena

bardān

بردان

albardān

bardaḡa(t)

بردعة

albarda

baraz

برز

albarā

burūz

بروز

alborozo

baraṣ

برص

albarazo

barquq

برقوق

albaricoque

barkūk

بركوك

albaroque

barakān

بركان

barragān

barma(t)

برمة

marmita

bishāra(t)

بشارة

albricias

bataykha(t)

بطيخة

budefa

Arabic
Loan-WordArabic
ScriptSpanish
Loan-Word

Bā (cont.)

byṭār	بيطار	albéitar
biṭāqa(t)	بطاقة	pataca
bāṭil	باطل	a. balde b. baladí
biṭāna(t)	بطانة	badana
bazara(t)	بظرة	albatara
baghdādī	بغدادى	a. baldaquín b. baldés
bālūḡa(t)	بالوعة	albañal
banīqa(t)	بنيقة	albanega
bānī	باني	albañíl
būt	بوط	albot
buhayra(t)	بحيرة	albufera
būq	بوق	albogue

Tā

tābūt	تابوت	ataúd
tathqība(t)	تثقيب	tasquiva
tijāra(t)	تجارة	atijara
turbid	تربد	turbich
tarjumān	ترجمان	trujaman
turḡa(t)	ترعة	darro
turkī	تركي	turquí

Arabic
Loan-Word

Arabic
Script

Spanish
Loan-Word

Tá (cont.)

taranja(t)

ترنجة

toronja

taḥlīqa(t)

تعليقة

talega

timsāh

تمساح

atimsach

Thá

thaghr

ثغر

tagara

thaghr

ثغر

zegrí

thafar

تفر

ataharre

thaqba(t)

ثقبه

atabe

thamn

ثمن

azumbre

Jím

jub

جوب

aljibe

jubba

جبة

aljuba

jafn

جفن

algebna

jariwiya

جروية

chirivia

jara(t)

جرة

jarra

jarafa

جرافة

aljarfa

jāmiḥa(t)

aljama

jumma(t)

جمعة

aljuma

jihāz

جهاز

jaez

jīza

جيزة

Giza

jawhara(t)

جوهرة

aljófar

Arabic
Loan-WordArabic
ScriptSpanish
Loan-WordHā

ḥattā
ḥajja(t)
ḥājib
ḥajjām
ḥaram
ḥaram
ḥarūn
ḥashsh
ḥashshashīn
ḥāfiz
ḥalaq
ḥulla(t)
ḥanzal
ḥinnā
ḥawz
ḥayyān

حتى
حجة
حاجب
حجام
حرم
حرم
حرون
حش
حشاشين
حافظ
حلق
حلة
حنظل
حنا
حوز
حيان

hasta
alhaja
alhāgib
alfajeme
alfareme
harém
harón
faza
asesino
hafiz
halagar
alfolla
alhandal
alhena
alfoz
jayān

Khā

khutayf
kharrūb
khurj
khwārazmī
khurshūfa(t)
khass

خطيف
خروب
خرج
خوارزمي
خرشوفة
خس

cotayfeso
algarroba
alforja
guarismo
alcachofa
alface

Arabic
Loan-Word

Arabic
Script

Spanish
Loan-Word

Khā (cont.)

khalaq

خلق

a. halagar

khilāl

خلال

b. alogue

alfiler

khumra(t)

خمرة

alfombra

khamīs

خميس

alcamiz

khanjar

خنجر

alfanje

khayyāt

خياط

alfayate

khayr

خير

alhelí

Dāl

daraja

درجة

adaraja

darāqa(t)

درقة

adarga

daraka(t)

دركة

adarga

darmak

درمك

adārgama

dirham

درهم

adarme

dishīsha(t)

دشيشة

alejija

duff

دف

adufe

daflā

دفل

adelfa

disa(t)

ديسة

aldiza

Rā

rabb al-dān

رب الضان

rabadan

rubāgy

ربعي

rupia

rubḡ

ربع

arroba

Arabic
Loan-WordArabic
ScriptSpanish
Loan-Word

Rā (cont.)

rabaḍ	ربض	arrabal
ribāt	رباط	arrebato
rutab	رتب	retova
rahj al-ghār	رهج الغار	rejalgar
rukḥ	رخ	roque
rakhīṣ	رخيص	rahez
ruzz	رز	arroz
raṣīf	رصيف	arrecife
ruduma(t)	رضمة	redoma
rubt	ربط	robda
ratl	رطل	arrelde
raghayfa(t)	رغيفة	regaifa
rūq	روق	arrogue
rukūb	ركوب	recua
rahīsh	رهيش	arijo
rahan	رهن	rehén
rayḥan	ريحان	arrayán
raīs	رئيس	arráez
riyas	رياس	arrial
riyād	رياض	arriate
Zā		
zītūna(t)	زيتونة	zabra
zarnīkh	زرنيخ	azarnefe

Arabic
Loan-WordArabic
ScriptSpanish
Loan-Word

Zā (cont.)

zaghal
zaghrada (t)
zaghaya (t)
zafir
zaḡfarān
zambūḡa (t)
zāmila (t)
zanbūja (t)
zinjar
zāwūq
zayt
zayanī

زغل
زغردة
زغاية
زفر
زعفران
زنبوعة
زاملة
زنبوجة
زنجبر
زاووق
زيت
زياني

zagal
algazara
azagaya
safaro
azafrán
zamboa
acémila
acebuche
azingar
azogue
aceite
cianí

Sín

sitāra (t)
saṭḥ
sukhra (t)
sida (t)
saṭl
ustuwāna
safat
sūq
saqqā'

ستارة
سطح
سخرة
سد
سطل
اسطوانة
سفظ
سوق
سقاء

acitara
azotea
azofora
azuda
acetre
zaguan
azafata
zoco
azacán

Arabic
Loan-Word

Arabic
Script

Spanish
Loan-Word

Sín (cont.)

sāqiya	ساقية	acequia
sika(t)	سكة	ceca
sukkar	سكر	azúcar
sikkī	سكي	cequí
salīkha	سليخة	zalea
silqa(t)	سلقة	acelga
salham	سالم	cerome
samīd	سميد	acemita
summāq	سماق	zumaque
sindiya(t)	سندية	sandía
sanya(t)	سانية	aceña
sawt	سوط	azote
sayl	سيل	seis

Shín

<u>shābb</u>	شاب	chaval
<u>shabaka(t)</u>	شبكة	jábega
<u>shitaraj</u>	شترج	ceteraque
<u>sharāb</u>	شراب	jarope
<u>sharjib</u>	شرجب	cercera
<u>sharaf</u>	شرف	ajarafe
<u>sharak</u>	شرك	ajaraca
<u>shūrka(t)</u>	شركة	ajorca
<u>sharīk</u>	شريك	jarique

Arabic
Loan-Word

Arabic
Script

Spanish
Loan-Word

Shīn (cont.)

<u>shitr</u> anj	شطرنج	ajedrez
<u>shi</u> ḡr	شعر	jācara
<u>sha</u> ḡra(t)	شعرة	jara
<u>sha</u> fra(t)	شفرة	chafarote
<u>sha</u> fīra(t)	شفيرة	chaira
<u>sha</u> qa	شقا	enseco
<u>sha</u> qīqa(t)	شقيقة	jaqueca
<u>sha</u> kā(t)	شكاة	achaque
<u>sha</u> ḡa	شنعة	chanada
<u>sha</u> nīḡ	شنيع	chanio
<u>shā</u> h māt	شاه مات	jaquemate
<u>shā</u> h	شاه	jaque
<u>sha</u> wār	شوار	ajuar
<u>sha</u> wka(t)	شوكة	acicate
<u>shī</u> kh	شيخ	jeque

Sād

<u>sa</u> hib + sūq	صاحب السوق	cevacogue
<u>sa</u> hib + al-madīna(t)	صاحب المدينة	zalmedina
<u>sar</u> ma	سرفة	sarama
<u>sag</u> hrī	صغري	chagren
<u>sif</u> r	صفر	cifra
<u>sifā</u> q	صفاق	cifaque
<u>sa</u> lam	صلم	zalama

Arabic
Loan-WordArabic
ScriptSpanish
Loan-Word

Ṣād (cont.)

ṣanaḡ
ṣandal
ṣīnī
ṣahrīj

صنج
صندل
صيني
صحريج

cenacho
cendal
cení
a. zafareche
b. chafariz

Dād

dayfa(t)
dyḡa(t)
dīna(t)

دايفة
داغة
داينة

daifa
aldea
atona

Tā

tabal
taraqa(t)
tassa(t)
talayḡa(t)
tāhūna(t)
tūb

طبل
طرقه
طاسة
طليعة
طاحونة
طوب

atabal
atarraga
taza
atalaya
tahona
adobe

Zā

zafar
zulla(t)
zūlm
zay

ظفر
ظلة
ظلم
ظبي

ataharre
toldo
adolme
dey

Arabic Loan-Word	Arabic Script	Spanish Loan-Word
Ayn		
ʿanbar	عنبر	amarelo
ʿajara(t)	عجرة	alagara
ʿadada(t)	عددة	alidada
ʿadūl	عدول	adúl
ʿarabya(t) + must-	مستعرب	mozárabe
ʿarabya(t)	عربية	algarabía
ʿarradā(t)	عرادة	algadara
ʿard	عرض	alarde
ʿarīf	عريف	alarife
ʿashshāq	عشاق	gaché
ʿaṣar	عصر	alazán
ʿaqrab	عقرب	alacrán
ʿalāqa(t)	علاقة	alahilca
ʿamal + al-khadd	عمل الخد	amelgar
ʿūd	عود	laúd
Ghayn		
ghandūr	غندور	gandul
ghadamsī	غدامسي	guadamecí
ghirbāl	غربال	herpil
gharrafa(t)	غرافة	garrafa
ghazya(t)	غزية	ricia
ghasūl	غسول	algazul
ghalala(t)	غللة	algara

Arabic
Loan-Word

Arabic
Script

Spanish
Loan-Word

Ghayn (cont.)

ghulām

غلام

chulamo

ghanam

غنم

ganan

ghanīma (t)

غنيمة

galima

ghull

غل

argolla

Fā

fakhkhāri

فخاري

alfarero

forbīūn

فربيون

alforfon

farth

فرث

frez

farsakh

فرسخ

parasanga

fāris

فارس

alférez

firād

فراض

alefriz

fustuq

فستق

alfoncigo

faqīh

فقيه

alfaquín

faqqūs

فقوص

alficoz

fakak

فلك

alfaque

funduq

فندق

alhóndiga

fanīqa (t)

فنيقة

fanega

fanak

فناك

faneque

fīl

فيل

alfil

Qāf

qubba (t)

قبة

alcoba

qabīla (t)

قبيلة

cabila

qadah

قدح

cadahe

Arabic
Loan-Word

Arabic
Script

Spanish
Loan-Word

Qāf (cont.)

qādūs

قادوس

arcaduz

qudamīa (t)

قدمية

alcotoma

qirāt

قراط

arracada

qurṣa (t)

قرصة

a. alcorza

b. caraza

qirq

قرق

alquerque

qaṣary

قصري

escarzano

qaṣr

قصر

alcázar

qādī

قاضي

alcalde

qitrān

قطران

alquitrán

qatām

قطام

alcotán

qutn

قطن

algodón

qutuniya (t)

قطنية

cotonía

qafīz

قفيز

cahiz

qalanis

قلانيس

calañés

qināḡ

قناع

algrinal

qantūra (t)

قنتورة

alcándora

qintār

قنطار

quintal

qawwād

قواد

alcahuate

qā'id

قائد

alcaide

Kāf

kabīr

كبير

quivir

kuhl

كل

alcohol

Arabic
Loan-Word

Arabic
Script

Spanish
Loan-Word

Kāf (cont.)

kirāt

كراط

a. alquilate

b. quilate

kirā'

كراء

alquiler

karawan

كروان

caravana

karawīa

كرويا

alcaravea

kisā'

كساء

alquicel

kās

كاس

caceta

kuskusū

كسكسو

alcuzcuz

kashimīr

كشمير

cachemir

kāfir

كافر

cafre

kakatūa

كالكاتوا

cacatua

kalb

كلب

quelbe

kamkam

كامكم

cāncano

kandara(t)

كندرة

alcándora

kūza(t)

كوزة

alcuza

kīmiyā'

كيمياء

alquimia

Lām

lakk

لك

laca

lāzaward

لازورد

azul

lamt

لمط

danta

līma(t)

ليمة

lima

Arabic
Loan-WordArabic
ScriptSpanish
Loan-Word

Mīm

mithqāl

مِثْقَال

metical

muhtasib

مُحْتَسِب

almotacén

mahshya(t)

مَحْشِيَة

almejía

mihfar

مِحْفَر

almocafre

muḥalla(t)

مُحَلَة

almohalla

mikhadda(t)

مِخْدَة

almohada

makḥzan

مَخْزَن

almacén

mukḥfiya(t)

مُخْفِيَة

almofía

mudajan

مُدَجَن

mudéjar

madrasa(t)

مَدْرَسَة

almadraza

marabitī

مَرَابِطِي

maravedí

martak

مَرْتَك

almārtaga

marasa(t)

مَرَسَة

barasa

marāshsh

مَرَاش

almarraja

mīzar

مِيزَر

almaizal

mustaʿrab

مُسْتَعْرَب

mozarabe

miskīn

مَسْكِين

mezquino

mushabbak

مُشَبَّك

almujaba

mushrif

مُشْرِف

almojarife

maʿsara

مَعْرَة

almazara

maṣtak

مَصْطَك

almastiga

muṣalla

مُصَلَّى

almocela

maṭrah

مَطْرَح

almadraque

Arabic
Loan-Word

Arabic
Script

Spanish
Loan-Word

Mīm (cont.)

matmūra(t)

مطمورة

mazmorra

mughāwir

مغاوير

almogávar

maghf̣ar

مغفر

almófar

mafrash

مفرش

almofrej

muqaddim

مقدم

almocadén

muqri'

مقري

a. almocrebe

b. almocrí

mikyāl

مكيال

maquila

muwallad

مولد

muladí

malhafa(t)

ملحفة

almalafa

munādā(t)

مناداة

almonéda

mudd

مد

almorzada

mūdd

مد

almud

mu'adhhdhin

مؤذن

almuédano

mukhkh

مخ

nuca

Nún

nazaha(t)

نزهة

añacea

nushādir

نشادر

almocrate

nāzir

ناظر

anadel

nazir

نظير

nadir

nazm

نظم

añazme

nāḡūra(t)

ناعورة

noria

nafir

نفير

añafil

Arabic
Loan-Word

Arabic
Script

Spanish
Loan-Word

Nún (cont.)

naqal

نقل

a. añacal

b. anacalo

nīl

نيل

añil

Hā

habaqa(t)

هبة

alabajaca

hijra(t)

هجرة

hégira

hajam

هجم

alfajeme

hadūn

هدون

catum

hadiyya(t)

هدية

alfadia

hurī

هري

alfolí

hind

هند

alhinde

hakīm

حكيم

alfaquin

hamal

حمل

alhamel

Wāw

wazír

وزير

alguacil

waṣī

وصي

albacea

wa shā' allāh

وشاء الله

ojalá

Yā

yasmīn

ياسمين

jasmin

APPENDIX C

ADDENDUM

There are at least three linguistic topics which have not been previously discussed in this thesis but which I would like to mention for future study. These are: (1) the presence of various words in Arabic which were borrowed into Castilian but which are not originally of Arabic origin; (2) the scholarly debate which exists concerning the questionable etymological origins of the various loan-words; and (3) the semantic shifts which occurred in the Arabic loan-words as they were borrowed into the Spanish language.

The following words come from a non-Arabic source, but were transmitted to Spanish through Arabic, usually with some Arabization taking place: (1) Persian farsang became Arabic (al)-farsakh which became Spanish parasanga; (2) Persian shāh māt became Arabic (al)-shāh māt which became Spanish jaquemate; (3) Persian kārabān became Arabic (al)-kārawān which became Spanish caravana; (4) Persian papūsh became Arabic (al)-bābūj which became Spanish babucha; (5) Persian shitrank became Arabic al-shitranj which became Spanish ajedrez; (6) Persian zarnīkh became Arabic al-zarnīkh which became Spanish azarnefe; (7) Persian satl became Arabic al-satl which became Spanish acetre; (8) Persian ustuwāna became Arabic (al)-satwan which became

Spanish zaguan; and (9) Berber al-zaghaya(t) through Arabic became Spanish azagaya.

At times, there are at least two possible Arabic sources which may have yielded the Spanish loan-words. It is usually the choice between a singular or plural form, or between two different forms of the same Arabic root (which is a consonantal group, usually trilateral, from which many related words are derived): (1) Arabic singular (al)-muwallad and plural (al)-muwalladdīn have both been postulated for the source of Spanish muladí; and (2) singular sihrīj and plural al-ṣahārīj could have both yielded Spanish zafareche. The etymologies for the following loan-words are questionable: (1) Arabic (al)-zarrāfa(t) and (al)-gharrāfa(t) are both probable forms for Spanish garrafa; (2) both Spanish balde and baladí may have come from one or both Arabic sources, (al)-batil or (al)-baladi; and (3) Spanish zanahoria has been given the source (al)-asfanariya(t), which is non-Arabic originally and cannot be confirmed.

Concerning semantic shifts, Arabic (al)-turbid, which yielded Spanish turbich, 'turbit' in English, has the meaning in Modern Arabic of 'laxative', and Arabic (al)-khutayf which yields Spanish cotayfeso, English 'low-class soldier', means 'little rapist' in Modern Arabic.

Further research remains to be completed in order to fully investigate the true origin of these and other words

involved in language borrowing, but even the existence of doubtful origin does not lessen the phonological and lexical impact of any of the Arabic loan-words borrowed into the Castilian language.

Note that due to erroneous etymological information, two Arabic loan-words, ḥakīm and ḥamal, have been placed under the ha group of words and could easily be reinserted under ḥa.

VITA

Edward Thomas Snyder was born in Anaheim, California, on March 7, 1960. He attended Seabreeze Senior High School in Daytona Beach, Florida and graduated with honors in 1978. The following September he entered the University of Florida. In 1980 he transferred to Daytona Beach Community College. After completion of the two year program, he transferred to The University of Tennessee, Knoxville, in 1981, and graduated with honors the following year with a B.A. in Spanish. He was also commissioned a Second Lieutenant in the USAF. As of September, 1982, he was on delay and was a Graduate Teaching Assistant in the Romance Language Department of The University of Tennessee, and began working towards the completion of a M.A. in Spanish.

As of June, 1983, he began serving on active duty at Mather AFB, California, for Navigation Training. At the time of this writing, the author was the treasurer of Sigma Delta Phi (Spanish Honor Society), and a member of the Language Advisory Committee (as the graduate representative), the Tennessee Conference on Linguistics, and the American Association of Teachers of Spanish and Portuguese. He has published an article in Tennessee Linguistics and some poetry in The University of Tennessee's literary magazine, The Phoenix. He hopes to continue his studies and work towards a degree in linguistics and Arabic.