Acoustic Analysis of Threatening Intonation in Jordanian Arabic and American English

By
Anas Fawzat Ali Al-Salim

Supervisor
Prof. Faris Mitleb

Program: Linguistics

July, 2010
Acoustic Analysis of Threatening Intonation in Jordanian Arabic and American English

By

Anas Fawzat Ali Al-Salim

B.A. English Language and its Literature, Al Al-Bayt University, 2004.

A Thesis Submitted in Partial Fulfillment of the Requirements for the Degree of Master of Arts in English Linguistics in the Department of English Language and Literature, Yarmouk University, Irbid, Jordan.

Approved by:

Prof. Faris Mitleb ..............................................................Chairman Professor of Linguistics, Yarmouk University

Prof. Yousef Bader .............................................................Member Professor of Linguistics, Yarmouk University

Prof. Samir Steitiya.............................................................Member Professor of Linguistics, Yarmouk University

Dr. Mohammad Badareen .................................................Member Assistant Professor of Linguistics, Yarmouk University

July, 2010
Dedication

To my parents,

I dedicate this work
Acknowledgments

First of all, I would like to express my thanks to Prof. Faris Mitleb, my supervisor, for his advice and suggestions throughout the preparation of this manuscript. Thanks are also extended to my examining committee Prof. Samir Steitiya, Prof. Yousef Bader, and Dr. Mohammad Badareen for their invaluable comments and suggestions which have enhanced the quality of this thesis.

I would also like to thank my family, the English department chairman at Yarmouk University, Dr. Mahmmod Al-Rosan, my friends especially Mr. Oqab Al-Shawashreh and Mr. Mohammad Al-Kelani, the subjects who recorded the dialogues, and Speech and Hearing Center staff at Yarmouk University for their support and encouragement during my whole study.
# Table of Contents

Dedication............................................................................................................. ii
Acknowledgments................................................................................................. iii
Table of Contents.................................................................................................. iv
List of Tables.......................................................................................................... viii
List of Phonetico Symbols....................................................................................... ix
Abstract ................................................................................................................... xi

1. Chapter One

**Introduction and Theoretical Background** ......................................................... 1
  1.1. Introduction.................................................................................................... 1
  1.2. The Concept of Intonation .......................................................................... 1
  1.3. English Intonation ....................................................................................... 4
  1.4. Arabic Intonation ........................................................................................ 4
  1.5. The Properties and Functions of Intonation .............................................. 6
  1.6. The Structure of the Tone-Unit ................................................................... 10
  1.7. English Tone System 'Nuclear Tone'............................................................ 12
      1.7.1. The Rising Tone................................................................................. 13
      1.7.2. The Falling Tone.............................................................................. 13
      1.7.3. The Fall-Rise Tone .......................................................................... 14
      1.7.4. The Rise-Fall Tone ......................................................................... 15
      1.7.5. The Fall-Rise-Fall Tone ................................................................... 15
      1.7.6. The Rise-Fall-Rise Tone .................................................................. 17
  1.8. Definition of Threatening .......................................................................... 17
  1.9. Statement of the Problem .......................................................................... 19
  1.10. Purpose of the Study ............................................................................... 19
  1.11. Questions of the Study ............................................................................ 19
  1.12. Significance of the Study ........................................................................ 20
  1.13. Limitations of the Study ......................................................................... 20
  1.14. Assumptions ............................................................................................ 21
  1.15. Hypothesis ............................................................................................... 21

2. Chapter Two

**Review of the Related Literature** .................................................................... 22
  2.1. Introduction.................................................................................................. 22
  2.2. Intonation Studies in Arabic ....................................................................... 22
  2.3. Intonation Studies in Some Other Languages ........................................... 32
3. Chapter Three

Methodology

3.1. Introduction .................................................. 37
3.2. Population of the Study ...................................... 37
3.3. Sample of the Study .......................................... 37
3.4. Data Collection ................................................ 38
3.5. Data Analysis .................................................. 40

4. Chapter Four

Findings and Discussion

4.1. Introduction .................................................. 41
4.2. American English Structures ................................ 41
  4.2.1. If-Clause Type One Structure Analysis ............... 41
    4.2.1.1. Pitch Analysis ..................................... 42
    4.2.1.2. Duration Analysis .................................. 46
    4.2.1.3. Intensity Analysis ................................ 47
  4.2.2. Imperative 'Order' Structure Analysis ............... 47
    4.2.2.1. Pitch Analysis ..................................... 48
    4.2.2.2. Duration Analysis .................................. 50
    4.2.2.3. Intensity Analysis ................................ 51
  4.2.3. Imperative 'Command' Structure Analysis ............ 51
    4.2.3.1. Pitch Analysis ..................................... 52
    4.2.3.2. Duration Analysis .................................. 54
    4.2.3.3. Intensity Analysis ................................ 55
  4.2.4. Imperative 'Prohibition' Structure Analysis ......... 55
    4.2.4.1. Pitch Analysis ..................................... 56
    4.2.4.2. Duration Analysis .................................. 58
    4.2.4.3. Intensity Analysis ................................ 59
  4.2.5. Declarative 'Verb Clause' Structure Analysis ......... 59
    4.2.5.1. Pitch Analysis ..................................... 60
    4.2.5.2. Duration Analysis .................................. 62
    4.2.5.3. Intensity Analysis ................................ 63
  4.2.6. Interrogative 'Yes/No question' Structure Analysis .. 63
    4.2.6.1. Pitch Analysis ..................................... 64
    4.2.6.2. Duration Analysis .................................. 66
    4.2.6.3. Intensity Analysis ................................ 67
  4.2.7. If-Clause Type Two Structure Analysis ............... 67
    4.2.7.1. Pitch Analysis ..................................... 68
    4.2.7.2. Duration Analysis .................................. 70
    4.2.7.3. Intensity Analysis ................................ 70
5. Chapter Five

Summary, Conclusions and Recommendations

5.1. Introduction.................................................. 108
5.2. Summary.................................................. 108
5.3. Conclusions............................................... 109
5.4. Recommendations......................................... 110

References...................................................... 112
Appendix 1 American English Full Dialogues.................................117
Appendix 2 Jordanian Arabic Full Dialogues..................................122
Abstract in Arabic.................................................................130
List of Tables

Table (1): Pitch and Intensity Analysis for 'again' ............................................. 42
Table (2): Pitch and Intensity Analysis for 'meet' ............................................... 48
Table (3): Pitch and Intensity Analysis for 'do' .................................................... 52
Table (4): Pitch and Intensity Analysis for 'fail' .................................................... 56
Table (5): Pitch and Intensity Analysis for 'sign' ................................................... 60
Table (6): Pitch and Intensity Analysis for 'decide' ............................................... 64
Table (7): Pitch and Intensity Analysis for 'fired' ................................................... 68
Table (8): Pitch Contours that are used by Americans to

   Conduct Threatening ......................................................................................... 71
Table (9): Pitch and Intensity Analysis for /nzil/ ..................................................... 72
Table (10): Pitch and Intensity Analysis for /tindam/ ............................................. 76
Table (11): Pitch and Intensity Analysis for /aḥṣallak/ ............................................. 81
Table (12): Pitch and Intensity Analysis for /bagus/ ................................................. 85
Table (13): Pitch and Intensity Analysis for /beinaatnah/ ......................................... 89
Table (14): Pitch and Intensity Analysis for /yaʾni/ .................................................. 93
Table (15): Pitch and Intensity Analysis for /tshuf/ .................................................. 97
Table (16): Pitch Contours that are used by Jordanians to

   Conduct Threatening ......................................................................................... 101
Table (17): Pitch contours in Arabic and American English

   for all structures ................................................................................................. 102
List of Phonetic Symbols

The following phonetic symbols are used in this study.

Consonants:

<table>
<thead>
<tr>
<th>Arabic Consonants</th>
<th>Description</th>
<th>Symbol</th>
</tr>
</thead>
<tbody>
<tr>
<td>م</td>
<td>Voiceless glottal stop</td>
<td>'</td>
</tr>
<tr>
<td>ب</td>
<td>Voiced bilabial stop</td>
<td>b</td>
</tr>
<tr>
<td>د</td>
<td>Voiceless dental stop</td>
<td>t</td>
</tr>
<tr>
<td>ث</td>
<td>Voiceless interdental fricative</td>
<td>ظ</td>
</tr>
<tr>
<td>ج</td>
<td>Voiced palato-alveolar affricate</td>
<td>j</td>
</tr>
<tr>
<td>ح</td>
<td>Voiceless pharyngeal fricative</td>
<td>h</td>
</tr>
<tr>
<td>خ</td>
<td>Voiceless uvular fricative</td>
<td>x</td>
</tr>
<tr>
<td>د</td>
<td>Voiced dental stop</td>
<td>d</td>
</tr>
<tr>
<td>ذ</td>
<td>Voiced interdental fricative</td>
<td>د</td>
</tr>
<tr>
<td>ر</td>
<td>Voiced alveolar trill</td>
<td>r</td>
</tr>
<tr>
<td>ز</td>
<td>Voiced alveolar sibilant</td>
<td>z</td>
</tr>
<tr>
<td>ص</td>
<td>Voiceless alveolar sibilant</td>
<td>s</td>
</tr>
<tr>
<td>ش</td>
<td>Voiceless palato-alveolar fricative</td>
<td>ش</td>
</tr>
<tr>
<td>ص</td>
<td>Voiceless emphatic alveolar fricative</td>
<td>ص</td>
</tr>
<tr>
<td>ض</td>
<td>Voiced emphatic dental stop</td>
<td>ض</td>
</tr>
<tr>
<td>ط</td>
<td>Voiceless emphatic dental stop</td>
<td>ط</td>
</tr>
<tr>
<td>ظ</td>
<td>Voiced emphatic interdental fricative</td>
<td>ظ</td>
</tr>
<tr>
<td>ع</td>
<td>Voiced pharyngeal sonorant</td>
<td>ع</td>
</tr>
<tr>
<td>غ</td>
<td>Voiced uvular fricative</td>
<td>غ</td>
</tr>
<tr>
<td>ف</td>
<td>Voiceless labiodental fricative</td>
<td>ف</td>
</tr>
<tr>
<td>ق</td>
<td>Voiceless uvular stop</td>
<td>ق</td>
</tr>
<tr>
<td>ك</td>
<td>Voiceless velar stop</td>
<td>ك</td>
</tr>
<tr>
<td>ل</td>
<td>Voiced alveolar lateral</td>
<td>ل</td>
</tr>
<tr>
<td>م</td>
<td>Voiced bilabial nasal</td>
<td>م</td>
</tr>
<tr>
<td>ن</td>
<td>Voiced alveolar nasal</td>
<td>ن</td>
</tr>
<tr>
<td>ه</td>
<td>Voiceless glottal fricative</td>
<td>ه</td>
</tr>
<tr>
<td>و</td>
<td>Voiced labiovelar glide</td>
<td>و</td>
</tr>
<tr>
<td>ي</td>
<td>Voiced palatal glide</td>
<td>ي</td>
</tr>
</tbody>
</table>
Colloquial Consonant:

<table>
<thead>
<tr>
<th>Consonant</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>g</td>
<td>Voiced velar stop</td>
</tr>
<tr>
<td>ch</td>
<td>Voiceless palato-alveolar affricate</td>
</tr>
</tbody>
</table>

Vowels:

<table>
<thead>
<tr>
<th>Vowels</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>i</td>
<td>High, front, short, unrounded</td>
</tr>
<tr>
<td>e</td>
<td>Mid-high, front, short, unrounded</td>
</tr>
<tr>
<td>a</td>
<td>Low, front, short, unrounded</td>
</tr>
<tr>
<td>u</td>
<td>High, back, short, rounded</td>
</tr>
<tr>
<td>o</td>
<td>Mid-high, back, short, rounded</td>
</tr>
</tbody>
</table>

Long Vowels:

Long vowels are represented as double short ones (i.e., ii, aa, uu).

Diphthongs:

ai, au
Abstract


The current study is considered as a mixture of pragmatics and phonetics. The first part that investigates the structures of threatening in Jordanian Arabic and American English deems as pragmatics and the second one judges as phonetics because it deals with intonation and acoustic analysis. In addition, it makes a brief contrast between Jordanian Arabic and American English threatening pitch contours.

The present study sets itself the following goals. First, it discusses the structural forms of threatening in Jordanian Arabic and American English. Second, it sheds light on the pitch contours of the structural forms and classifies them as fall-tones, rise-tones, fall-rise tones, rise-fall tones, fall-rise-fall tones, and rise-fall-rise tones. Third, it shows acoustically how Jordanian Arabic and American English threatening structures differ according to pitch contours.

According to the results of this research, there are seven formulas that can conduct threatening in Jordanian Arabic and American English: if-clause type one, imperative 'order', imperative 'command', imperative