The intonational structure of Persian
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Persian words
Simplex words
ke’tab ‘book’ Xu’ne ‘house’
Suffixed words
ketab-'ha ‘books’ Xune-‘ha ‘houses’
Compound words
danaketabXu’ne ‘library’

Clitic Groups
ke’tab-i ‘one book’ Xu’ne-ji ‘one house’

Word-final accent; Clitics don’t count.
tɒ ‘tob’ vs ‘tɒb-e’
‘light’ ‘swing-3SG’

Persian intonation in previous literature
AP (Accentual Phrase):
1. Pitch accent on one accented syllable (H*, L*, L*+H or L+H*)
2. Final H- or L-

IP (Intonational Phrase):
1. Statements end in L%
2. Questions end in H%
3. Post-focal deaccenting
(e.g. Sadat Tehrani 2007)

Aims of the experiment
To establish:
1. that words are accented on the last syllable;
2. that Clitic Groups are accented on the pre-clitic syllable;
3. whether nonfinal APs end in H-;
4. whether declaratives end in L% and interrogatives in H%;
5. whether post-final words are deaccented.

Production experiment
• Two minimal pairs: noun vs noun+clitic;
• Two laryngeal onset types: voiceless vs voiced;
• Two modes: declarative and interrogative;
• Three focus conditions: neutral, post-final, focal;

Task
Reading task with six educated native speakers

Neutral
un ‘to/bef-e’ un ‘tob-e’
that light-is that swing-his/her-is
‘That is light’ ‘That is his swing’

Post-focal
un ‘to/bef-e’ un ‘tob-e’
‘THAT is light’ ‘THAT is his swing’

Focal
tɒ ‘tob-e’ un ‘tob-e’
‘That is LIGHT’ ‘That is his SWING’

Results
ANOVA on Duration with structure (2), voice (2), focus(3), mode(2), segment (7).
• Two-way interactions: STRUCTURE × SEGMENT (trend); MODE × SEGMENT; VOICE × SEGMENT
• Main effect: FOCUS
• Penultimate [e] is 17 ms longer in accented condition and [p/b] is 19 ms longer in accented condition.
• Final [e] is longer in the interrogative.

Declaratives
Neutral
un ‘tob’ vs ‘tob-e’
‘light’ ‘swing-3SG’

Focal
un ‘tob’ vs ‘tob-e’
‘light’ ‘swing-3SG’

Conclusions
• Persian words have a pitch accent on their final syllable.
• Final clitics are not pitch accented.
• Declaratives end in L%.
• Interrogatives end in 0% (no tone).
• Post-final words are pronounced with reduced pitch range, but not deaccented, as supported by the results of a perception experiment.

References

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