論文の内容の要旨

論文題目　The Phonology and Phonetics of Prosodic Prominence in Persian

（ペルシア語における韻律的プロミネンスの音韻論と音声学）

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　　　　This dissertation explores the phonological representation and the phonetic realization of prosodic prominence in Persian. It comprises two related parts: the first part addresses prosodic phrasing in Persian sentences, while the second part deals with phonetic correlates of prosodic prominence by reporting conducted production and perception experiments. The phonological part is carried out within the framework of Prosodic Phonology, and aims at determining the prosodic structure of Persian from foot level, up to utterance level. By adopting Optimality Theory, it tries to explain how morphosyntax-phonology interface constraints together with prosodic markedness constraints form the prosodic structure of the language. It begins with foot level and suggests that in languages like Persian which have one non-iterative weight-insensitive edgemost stress per word, a single foot which is edge-aligned with the minimal Phonological Word best explains the prosodic pattern at word level. This part also focuses on prosodic differences between lexical words and weak function words (clitics) and shows that any attempt to describe the prosodic structure of Persian without addressing this crucial difference, will not be able to provide explanation for a wide range of phenomena. This study suggests that proclitics and enclitics behave asymmetrically in Persian: enclitics prosodize as affixal clitics, while proclitics are free clitics. Next, it addresses the problem of weak function words which are not a part of their preceding or following XPs, and demonstrates how the phonological well-formedness constraints determine the direction of cliticization in these XP-external function words. It also deals with the issue of clitic clusters in Persian which was not

explored in the previous works. Another contribution of this study is reclassification of so-called exceptionally initial-stressed words.

This dissertation also deals with the longstanding problem of Ezafe constructions and by reviewing previous proposals on the prosodic structure of these constructions, based on phonological evidence and phonetic observations suggests that each lexical word in an Ezafe construction maps onto a Phonological Phrase, and the Ezafe morpheme phrases with its preceding material to satisfy the phonological well-formedness constraint ONSET. The prosodic structure of XP-external clitics such as the Ezafe morpheme is explained by adopting a syntax-prosody interface constraint namely MAP-XP, that bans two sister XPs inside a single Phonological Phrase. This study proposes a ranking of OT constraints by which the prosodic structure of Ezafe constructions and other syntactic phrases such as DPs and VPs can be predicted and explained uniformly. It also proposes that the interaction between morphosyntax-phonology interface constraints and prosodic markedness constraints determine prosodic constituents of all levels and their heads, and other constraints require the heads of phonological phrases to be associated with audible accents. The rightmost Phonological Phrase in an Intonational Phrase is the head. This head associates with an accent which is perceived more prominently than the other accents. One further issue explored here is the fact that in lexicalized Ezafe constructions and also in the ones containing given/old information, some words may appear without audible accent.

The phonetic difference between final and non-final accents is the subject of the second half of this dissertation. Previous research on Persian has shown that the main acoustic correlate of prosodic prominence is f0. This study reports production and perception experiment results conducted in order to answer the question whether final (nuclear) accents are perceived more prominently than the other ones only because they are not followed by any other accent, or because they are phonetically different from the non-final (pre-nuclear) accents. The results of production experiments reveal that nuclear accented syllables have a lower f0 range, but a longer duration in comparison with pre-nuclear accented ones. Other parameters such as overall intensity, spectral tilt and vowel quality do not differ significantly in the two types of accents. Perception experiments reveal that native listeners can indeed distinguish the two types of accents without having access to the portion of the utterance that follows the final accent. This proves that the two types of accents are phonetically different. Perception tests also show that the difference between the shapes of f0 curves in the two types of accents is the main acoustic parameter that helps the listeners distinguish them from each other. In pre-nuclear accented words, the f0 peak is at the right edge of the metrically strong syllable, and the curve has a rising slope at this point. In these syllables, the peak may even occur on the initial syllable of the following

word. However, in the syllables associated with nuclear accents, the f0 peak is located inside the syllable, and the curve has a falling slope at the right edge of the syllable.

If the f0 at the right edge of a nuclear accented syllable is manipulated and raised so that the f0 peak is moved to the right edge, the native listeners will perceive the word containing this syllable as a pre-nuclear accented word. This study also shows that duration alone cannot cue the difference between the two types of accents. However, when accompanied by f0 changes, it can help the listeners distinguish the two accents more easily and more efficiently.