

THE COMPUTATION OF PROSODY

by

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ABSTRACT

This thesis presents a new theory of metrical representations and computations. This theory emphasizes that the metrical grid is a separate module of the phonology, devoted to the calculation of partitionings of phonological elements. The metrical grid consists of parallel tiers composed of three kinds of elements: grid marks and left and right boundaries. A single boundary serves to define a metrical constituent: a left boundary creates a grouping of the elements to its right, a right boundary creates a grouping of the elements to its left.

The calculation of the metrical grid is accomplished through the use of both rules and constraints. This division of labor accounts for observed properties of stress systems in a succinct manner. Metrical rules apply successively in a derivation, thus modelling the functional character of metrical structure assignment. The constraints prevent the application of metrical rules that would generate universal or language-particular disfavored configurations.

The interface to the metrical grid module is controlled by two parameters of projection, which provide the initial grid marks and boundaries. Further parameterized rules of Edge marking, Iterative constituent construction and Headedness complete the construction of the grid.

This theory allows the derivation of Extrametricality effects through the interaction between Edge marking and Iterative constituent construction. Constraints against particular configurations yield both clash effects and a ternary parsing ability.

Further, the Edge marking parameter provides the requisite formal power to deal with stress introduced by specific morphemes in such languages as Turkish, Macedonian, Polish, Russian, Cayuvava, Shuswap (Salish) and Moses-Columbian (Salish).

Thesis Supervisor: Morris Halle
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To Jane.

“It’s not an explanation,” he said, and laughed again. “There ain’t any explanations. Not of anything. All you can do is point at the nature of things. If you are smart enough to see ‘em.”

Robert Penn Warren

All the King’s Men

Contents

1.	Basic mechanisms for constructing metrical grids -----	7
1.1.	Introduction-----	7
1.2.	Koya-----	9
1.3.	Warao and Weri-----	17
1.4.	Tubatulabal-----	22
1.5.	Macedonian I -----	23
1.6.	Selkup and Khalkha Mongolian -----	25
1.7.	Turkish -----	29
1.8.	Polish -----	34
1.9.	Macedonian II -----	37
2.	Constraints on the construction of metrical grids -----	45
2.1.	Clash avoidance-----	45
2.1.1.	Malayalam and Wolof-----	46
2.1.2.	Garawa -----	50
2.2.	Edge avoidance -----	53
2.2.1.	Latin-----	54
2.2.2.	Western Aranda-----	56
2.3.	Ternary constituents -----	58
2.3.1.	Cayuvava -----	60
2.3.2.	Chugach Alutiiq -----	65
2.4.	Parenthesis deletion-----	69
2.4.1.	Diyari -----	70
2.4.2.	Winnebago -----	73
3.	Conflation and multiple metrical parameters -----	81
3.1.	Introduction-----	81
3.2.	Bidirectional stress rules -----	81
3.2.1.	Cahuilla -----	81
3.3.	Conflation and circumscription -----	84
3.3.1.	Lenakel -----	92

3.3.2.	Auca-----	97
3.3.3.	Klamath-----	102
3.3.4.	Seneca-----	105
4.	Case studies in lexical stress-----	109
4.1.	Introduction-----	109
4.2.	Russian-----	109
4.2.1.	Noun inflections-----	111
4.2.2.	Jers and stress shift-----	115
4.2.3.	Stress retraction-----	118
4.2.4.	Verbal inflections-----	123
4.2.4.	Stress and derivational morphology-----	128
4.3.	Stress in Shuswap and Moses-Columbian-----	135
4.4.	Shuswap glottalized sonorants-----	145
5.	Rules and representations in metrical theory-----	154
5.1.	Introduction-----	154
5.2.	Representations of bracketed grids-----	154
5.2.1.	Boundary representations-----	155
5.2.1.1.	Left and right parentheses-----	156
5.2.1.2.	Foot separators-----	159
5.2.2.	Grid marks as feature matrices-----	160
5.2.3.	Autosegmental representations-----	161
5.2.3.1.	Autosegmental edges-----	161
5.2.3.2.	Autosegmental feet-----	163
5.2.4.	Summary-----	166
5.3.	Constraints versus rules-----	167
5.3.1.	Iterative parenthesis insertion-----	167
5.3.2.	Constraint-only metrical theory-----	172
6.	Conclusions-----	187
	References-----	190