

**BINARITY AND TERNARITY IN METRICAL THEORY:  
PARAMETRIC EXTENSIONS**

Publication No. \_\_\_\_\_

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This dissertation proposes and motivates an approach to metrical constituent structure assignment in which cross-linguistic variation follows from the parameterization of the mapping of constituents to syllables. There are two central claims. The first is that the inventory of metrical constituents is symmetric. The second is that exhaustive mapping of constituents to syllables allows the derivation of surface ternary alternations within a theory in which constituents are maximally binary.

Chapter One reviews some of the basic tenants of metrical theories of stress assignment and presents the recently emerging perspective that the foot inventory is asymmetric. This chapter closes with a proposal for generating metrical structure. The suggested approach entails the selection of a template which serves to specify constituents as either right- or left-headed. A set of parameters is proposed for the mapping of the templates to syllables. These parameters allow, for example, even or uneven mapping, unevenly mapped constituents having bi-moraic heads, while

evenly mapped ones have heads and non-heads which are both mono-moraic. Additional parameters must be set to determine the details of uneven mapping. The mapping must be specified as “weak” or “strong,” indicating the acceptability or unacceptability of “non-canonical” constituents; i.e., a language with unevenly mapped constituents may or may not allow the presence of even constituents when an uneven one cannot be formed. This contrast corresponds roughly to the distinction between the traditional Quantity Sensitive constituent and the Obligatory Branching constituent. Constituents which are mapped as uneven and strong must further be specified by determining the value of the “tautosyllabicity” parameter. Systems with non-tautosyllabic mapping allow the crossing of a syllable boundary to gather sufficient material for a bi-moraic head. The crossing of syllable boundaries is constrained by a notion of syllable integrity. Some systems with non-tautosyllabic mapping are also shown to employ additional metrical operations, such as de-stressing or metrical restructuring to achieve the obligatorily bi-moraic head.

Chapter Two presents the empirical and analytical motivation for the claim that the inventory of metrical constituent is symmetrical. Several languages are analyzed with constituents corresponding to what are traditionally called Quantity Sensitive left-headed constituents and Quantity Insensitive right-headed constituents. The arguments in this chapter are based not only on the distribution of stress but also in the potential characterization of other phonological processes with reference to metrical structure. The languages analyzed include Selayarese, Bani-Hassan Arabic, Southeastern Tepehuan, Manam, Winnebago, and Eastern Pomo. The illustration of non-tautosyllabically mapped constituents includes analyses of Gidabal, Old English, and Cayuvava.

Chapter Three is a detailed discussion and analysis of the word level prosody of the Chugach dialect of Alutiiq. Chugach is argued to have a metrical system derived by non-tautosyllabically mapping uneven, left-headed constituents across the word. This analysis has at least two strengths. First, it is able to characterize the metrical system of Chugach as fundamentally binary. Second, it provides motivation for and a detailed characterization of the circumstances under which metrical restructuring occurs; this improves on previous analyses, which have utilized ad hoc restructuring mechanisms to derive some of the stress patterns displayed by the language.

Chapter Four returns to both Chugach and Cayuvava as the two languages which have been proposed to motivate the existence of the amphibrach, a ternary metrical constituent. In this chapter, the “skipping” analyses which have recently been advanced are critiqued. There are at least three of these analyses, and they share the claim that ternary constituents are derived by iteratively constructing binary constituents with an intervening unfooted syllable. These analyses are argued to be deficient on both empirical and theoretical grounds.

Chapter Five examines the possible relationship between the properties of a linguistic theory of stress assignment and tendencies in extra-linguistic parsing. Research by Woodrow (1909, 1911, 1951) has been cited as offering evidence for characterizing iambic constituents as fundamentally uneven and trochaic constituents as fundamentally even. The questions raised in Woodrow’s work are re-examined by replicating and expanding his experiments. The format for the experiments and statistical analyses of the results are presented in this chapter. This study establishes the groundwork for future research which may reveal more compelling tendencies,

**but it also argues against incorporating into metrical theory now an absolute law of rhythmic structure based on experimentation involving extra-linguistic stimuli.**

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