This paper presents new evidence in support of the view that front vowels and coronal consonants are members of the natural class of coronal sounds. Evidence is drawn from coronal consonant/front vowel parallels in Maltese where these segments pattern together in default assignment, in vowel-to-coronal consonant assimilation, and in the more general process of coronal assimilation. The significance of the present study goes beyond the support that it offers for the coronality of front vowels; it also bears directly on the representation of consonant/vowel interaction in nonlinear phonology. Further, the evidence from consonant/vowel parallels as default segments is of particular interest in light of proposals suggesting that [coronal] is the unmarked place of articulation for consonants. In this work, it is proposed that the unmarked status of [coronal] can be extended naturally to include not only consonants but vowels as well.

0. Introduction

One of the primary goals of feature theory is to be able to refer to natural classes of sounds, and only those, in terms of a single set of features. An important result of doing so is that it allows for the expression of natural phonological processes in simple terms and at the same time makes strong predictions concerning what does and does not constitute a natural process. Cross-linguistic evidence showing the patterning of coronal consonants and front vowels as a natural class has brought into question the feature specification originally proposed in Chomsky and Halle (1968) in which coronal consonants are [+coronal] and front vowels are [-back]. Given this specification, the relationship between front vowels and coronal consonants is an arbitrary one; there is nothing in the theory that would predict these sounds to pattern together to the exclusion of others. That this affinity exists is demonstrated by the recurrent patterning of these sounds in processes such as consonant-to-vowel assimilation (Broselow and Niyondagara 1989, 1990; Hume 1988, 1990, 1994; Mester and Itô 1989; Lahiri and Evers 1991; see also Pulleyblank 1989), dissimilatory constraints (Clements 1990, 1993a), vowel strengthening (Hume 1994),

* This paper is based on portions of Hume (1994 [1992]), some of which have been revised and augmented. I gratefully acknowledge the comments on this and/or earlier versions of this work of Ellen Broselow, Nick Clements, Abigail Cohn, Beverley Goodman, John Kingston, David Odden, Frederick Parkinson, and two anonymous reviewers. Parts of this paper were presented at WECOL 20, Northwestern University, The University of Iowa, and The Ohio State University, and I am grateful to members of these audiences for their input. Support for this research was provided in part by a grant from the Social Sciences and Humanities Research Council of Canada.
and vowel-to-consonant assimilation (Cheng 1989, Hume 1991, 1994). In Clements’ (1976) seminal work, it is proposed that front vowels and coronal consonants are best viewed as members of the natural class of coronal sounds, thus recognizing the nonarbitrary relationship between these sounds.

The purpose of this paper is to present new evidence in favor of this approach. The data under consideration are from Maltese, a language spoken on the Mediterranean island of Malta. In Maltese, the imperfective stem of the triliteral verb bears a CV- prefix. I argue that the realization of the prefix vowel [i] in a regular subset of these verbs is most insightfully viewed as the result of vowel-to-consonant assimilation in which the vowel acquires the place specification [coronal] of a following coronal obstruent. Although cases of consonant-to-front vowel assimilation are common cross-linguistically, instances of vowel-to-coronal consonant assimilation are less frequently reported. For this reason, the present study is of particular significance as it provides new data on a less well-studied phenomenon.

The organization of this paper is as follows. In Section 1, I provide a brief discussion of the Maltese segmental inventory and outline my assumptions concerning feature underspecification. Section 2 describes the typical realization of the imperfective prefix vowel as well as its realization before stem-initial coronal obstruents, the central focus of the paper. The following section reviews cross-linguistic evidence for the natural class of front vowels and coronal consonants, while Section 4 focusses on the analysis accounting for the interaction of these sounds in Maltese. The patterning of the prefix consonant and the default consonant in Maltese is treated in Section 5. Following this, parallels between the behavior of the prefix and default consonant, and the prefix and default vowel are examined. I conclude with a discussion of some of the implications of this study for the typology of consonant/vowel interaction.

1. MALTESE: PRELIMINARIES

Maltese is spoken on the island of Malta, situated approximately 60 miles south of Sicily and 180 miles east of the Tunisian coast. The data in this paper are representative of Standard Maltese and are drawn from a range of sources which include Aquilina (1959), Berrondonner et al. (1983), Borg (1973), Brame (1972, 1973), Bugeja (1984), Busuttil (1981), Butcher