Of great interest to many phoneticians, phonologists, and historical linguists is the nature of the genesis of sound change processes—the inception of sound change, or how and why sound changes occur. In earlier works (Recasens et al., 1997; Recasens, 2006) Daniel Recasens and colleagues postulate that, to a large extent, sound change processes can be modeled, explained, and predicted according to a ranking of the degrees of articulatory and aerodynamic control required for the production of the individual speech sounds involved in a given process—a framework which they call the degree of articulatory constraint (DAC) model. In addition to providing a hierarchy of coarticulatory resistance (i.e., how and to what degree a particular sound resists coarticulatory change from neighboring sounds) and coarticulatory influence (i.e., how and to what degree a particular sound induces coarticulatory change in neighboring sounds), the DAC model also makes predictions about: (1) which types of sound change are likely to occur for a given combination of adjacent sounds based on the specific articulatory constraints of these sounds, and (2) in which direction the coarticulation is predicted to occur (i.e., progressively or regressively). In the current monograph, Recasens applies the framework of the DAC model to data on Romance languages in order to demonstrate—quite convincingly—how sound change patterns which have occurred throughout the evolution of Romance can be accounted for by phonetic coarticulatory effects. This monograph brings together data from diachronic lexical research on sound change in Romance and from synchronic speech production and perception research performed over the past fifty years, in order to provide evidence that the phonetic origins of these sound change processes are rooted in the nature of the specific constraints governing the articulatory and aerodynamic characteristics of the sound segments involved in each process.
Chapter 1 (“Introduction”) begins with a general description of the DAC model, which forms the basis of the theoretical framework underpinning this monograph. In this chapter, Recasens describes how the DAC model fits within the theoretical arena of sound change research. Much of early phonological research viewed the study of coarticulation as tangential to the problem of sound change, since processes were often considered to operate on a fundamentally categorical basis, with discrete features spreading from a conditioning sound segment to its target. However, it was later discovered that phonetic segments are not completely neutral with regard to the articulatory dimension of a category feature, even when the segment is unspecified for the feature—e.g., the non-labial fricative [s] may involve some degree of active lip retraction, which may interfere with the degree of rounding of [u] in the sequence [su]. With this understanding that the process of coarticulation can be affected (in both degree and temporal extent) by the articulatory characteristics of each sound segment involved, regardless of the specific feature specification of the individual sound segments, the DAC model builds on previous work on coarticulatory resistance (Öhman, 1966, 1967; Bladon and Al-Bamerni, 1976; Bladon and Nolan, 1977) which has shown that sound segments may be more or less resistant to coarticulatory effects from other, neighboring sound segments. The DAC model improves upon this knowledge by providing a general hierarchy of coarticulatory resistance values for all consonants and vowels, which gives the model the power to predict the characteristics of sound change processes for any particular sound sequence. This introductory chapter includes a broad explanation of how the DAC model can account for different types of sound change processes, a description of the organization of the rest of the monograph, as well as background information on Romance languages which serves to aid the reader in understanding the subsequent chapters.

Chapters 2–4 constitute the data-rich core of the book, in which specific sound change processes are examined within the framework of the DAC model, providing diachronic and synchronic data on Romance languages (as well as limited data from other languages) as supporting evidence for how the model accounts for these processes. Chapter 2 (“Consonant-dependent processes involving target vocalic segments”) focuses on the effect of consonants on the processes of vocalic insertion, elision, assimilation, and dissimilation. The chapter opens with a classification of different types of consonants and their articulatory and coarticulatory properties, i.e., their degree of “coarticulatory sensitivity” (how susceptible they are to coarticulatory influence from other segments) and “coarticulatory aggressiveness” (how likely they are to influence other segments). Predictions are made for each type of consonant