The phonologically conditioned alternation between voiced stops and voiced non-strident fricatives is usually presented as regular, categorical, and largely unproblematic. I examine some approaches to lenition from an Optimality Theory perspective. A corpus of oral texts from eastern Catalonia and the Balearic islands, in phonetic transcription, recorded as part of the Catalan dialect atlas research programme (Veny & Pons 1998), allows a more finely grained analysis of lenition contexts. Only in word-medial intervocalic contexts is lenition truly categorical, and even then, only on the mainland. Hierarchies are established of contexts favouring lenition to varying degrees, reflecting the interaction of Effort, Positional Faithfulness, and Paradigm Uniformity constraints. In addition the especially low frequency of lenition of /b/ in Majorca is attributed to ‘Contrast Maintenance’, given the presence of a voiced labio-dental fricative /v/ phoneme in that variety.