The present study is an attempt at describing some of the phonological phenomena of Sambalpuri in the SPE model. It is organised in five chapters. The First Chapter projects the aims, objectives, the data and the approach adopted in the thesis. This chapter ends giving a brief sketch of the language and literature, land and the people, and dialectal variations. The Second Chapter presents in some detail the theoretical groundwork on which the analyses are made. It also makes a survey of pre-generative and post-generative phonological theories. Further, it highlights the advantages of the Distinctive Feature Analysis as presented in SPE and argues in favour of our preference of it as the framework of our analysis of Sambalpuri. The Third Chapter makes a Taxonomic Phonemic analysis of the language and gives an inventory of all the Sambalpuri phonemes based on a comprehensive data. The Fourth Chapter enumerates the distinctive features of each of the phonemes and also captures some of the redundancy rules found in the language. The Fifth and Concluding Chapter records the rules relating to the phonological processes involved in the Sambalpuri language.