UNIVERSITY OF CALIFORNIA

SANTA CRUZ

NASALIZATION, NEUTRAL SEGMENTS, AND OPACITY EFFECTS

A dissertation submitted in partial satisfaction
of the requirements for the degree of

DOCTOR OF PHILOSOPHY

in

LINGUISTICS

by

Rachel Leah Walker

June 1998

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Abstract

NASALIZATION, NEUTRAL SEGMENTS, AND OPACITY EFFECTS

Rachel Leah Walker
June 1998
Directed by Professor Jaye Padgett

This thesis explores cross-linguistic variation in nasal harmony. The goal is to unify our understanding of nasal harmony so that patterns across languages conform to one basic character and to examine the wider implications of this account for phonological theory.

The analysis builds on generalizations from a comprehensive survey documenting variation in three descriptive sets of segments in nasal harmony: *targets*, which become nasalized, *blockers*, which remain oral and block spreading, and *transparent segments*, which remain oral but do not block. The typological generalizations established by this study provide strong support for a unified view of nasal harmony in which variation is limited in a hierarchical fashion.

To capture cross-linguistic variation, this analysis draws on a phonetically-grounded constraint hierarchy ranking segments according to their incompatibility with nasalization (building on Schourup 1972; Pulleyblank 1989; Piggott 1992; Cohn 1993c; Padgett 1995c; Walker 1995). Constraint ranking and violability, fundamental concepts in Optimality Theory (Prince and Smolensky 1993), also play a crucial role. Ranking a [nasal] spreading constraint at all points in relation to the hierarchy of violable nasalization constraints achieves precisely the attested set of patterns.

Another typological discovery is that transparent segments pattern with targets and should be regarded as belonging to this set of segments. A theoretical consequence is that [nasal] spreading never skips a segment, finding new support for strict segmental locality (Ní Chiosáin and Padgett 1997; cf. Gafos 1996). The resulting challenge is determining what produces surface-transparent outcomes. Building on early derivational approaches (e.g. Clements 1976; Vago 1976), I propose to analyze segmental transparency as a derivational opacity effect. Following McCarthy (1997) and extensions by Itô and Mester (1997a), I achieve derivational opacity effects in Optimality Theory through a correspondence relation between the actual output and a designated 'sympathetic' (failed) member of the candidate output set. Sympathetic correspondence realizes transparency by selecting the output most closely resembling the nasal character of the fully-spread sympathetic form, while respecting nasal

incompatibility constraints for segments that behave transparent. Importantly, by bringing segmental transparency under the wing of derivational opacity, transparency-specific representations can be eliminated from the theory.

Chapter 1 presents background. In chapter 2, I develop a unified description and analysis of a cross-linguistic typology of nasal harmony. Chapter 3 turns to the analysis of transparent segments and a case study of nasal harmony in Tuyuca. Chapter 4 presents an acoustic study of nasal harmony forms in Guaraní which verifies that voiceless stops are truly surface-transparent. In chapter 5 I consider other proposals for the analysis of transparent segments, and in chapter 6 I examine other phenomena that may be mistaken for [nasal] feature spreading. Nasal agreement in Mbe forms a case study involving reduplication.

Acknowledgements

There are a great number of people to whom I am grateful, and it is impossible to name them all here. The following is just a partial list.

First, I extend my deep gratitude to Jaye Padgett, who put a tremendous amount of energy into advising me on this dissertation. His continual advice, encouragement, and patience was fundamental in sustaining me through this process. I would also like to thank the other members of my committee, Junko Itô and Armin Mester, for their extensive comments on this work and supportive suggestions. The participation of each of my committee members has led to great improvements in this dissertation.

I feel as if I have an extended committee in four other professors who gave me detailed feedback on aspects of this work. This dissertation has benefitted from challenging discussions with Geoff Pullum. During my semester at UMass I received many suggestions and comments from John McCarthy, Diamandis Gafos, and John Kingston. I would like to thank John McCarthy for sponsoring my visit to UMass and for inviting me to participate in his NSF grant phonology meetings. I am grateful to John Kingston for advice on my Guaraní project.

Special mention goes to Will Leben for his participation in my thesis prospectus defense, to John Ohala for his help with the analysis of the Guaraní data, and to Sharon Inkelas for stimulating discussions when I first started thinking about nasal harmony. I would also to like to thank all of the linguistics faculty at UCSC; they have each contributed to my understanding of what it means to be a good researcher and a good teacher.

My friends and colleagues at UCSC have played an important role in my making it successfully through graduate school. Jason Merchant has been a true friend and a great classmate. Motoko Katayama and Chris Kennedy have also been great friends and offered tremendous support in making it through the dissertation year. For contributing to the friendly phonology community at Santa Cruz thanks to Dan Karvonen, Kazutaka Kurisu, Jaime Rodriguez, Nathan Sanders, Adam Sherman, and Philip Spaelti. I am grateful to Chris Gunlogson and Kari Swingle for being good listeners, and for setting a good example, thanks to Ted Fernald, Michael Johnston, Eric Potsdam, and Peter Svenonius.

I would also like to express my gratitude to people at other institutions. At UMass I benefitted greatly from conversations with John Alderete and Brett Baker; also Jose Benki, Katy Carlson, Caroline Jones, Andre Isaak, Kiyomi Kusumoto, Anna Lubowicz, Elliott Moreton, Marc van Oosterdorp, and Jennifer Smith. Thanks to Bart

Hollebrandse and Winnie Lechner for their friendship. For useful discussions I am grateful to Eric Bakovic, Jill Beckman, Andy Dolbey, Larry Hyman, Orhan Orgun, Joe Pater, Alan Prince, Sharon Rose, Ron Sprouse, Su Urbanczyk, Moira Yip, and Cheryl Zoll.

Thanks are also due to friends and teachers at the University of Toronto, where I started my career in linguistics. I am particularly grateful to Keren Rice, who has been a continual support, advisor, and friend; also Liz Cowper, Elan Dresher, Hank Rogers, Peter Avery, and Tom Wilson. Andrew Carnie, who I have known since that first introductory class in linguistics, has been a great friend through the years.

Various aspects of the dissertation research have been presented at the following conferences: ESCOL at the University of South Carolina (1994), WECOL at UCLA (1995), NWLC at the University of Washington (1996), AFLA at UCLA (1996), TREND at Stanford University (1996), the annual meeting of the LSA in New York (1998), WCCFL at the University of British Columbia (1998), and the Phonetics-Phonology Mini-Symposium at UC Berkeley (1998). I am grateful to audience members at all of these meetings for their questions and comments. This research was supported by a doctoral fellowship 752-93-2397 from the Social Sciences and Humanities Research Council of Canada, also NSF grant SBR-95-10868 to Junko Itô and Armin Mester, and it benefitted from ideas discussed in meetings for NSF grant SBR-94-20424 to John McCarthy.

For all the support they have given me over the years, thanks to my family, Mom and Richard, Dad and Laurie, and Rebecca and Aaron. Grandma and Grandpa Hamill were both an inspiration. Finally, to my husband Geoff, thank you for the endless patience, love, and support you have given me; this is dedicated to you.