The Articulatory Basis of Locality in Phonology

by

Adamantios I. Gafos

Notes:


3. How to navigate through this document. The entire dissertation is comprised of 8 separate pdf files broken into chapters, bibliography and index for the benefit of users who have a slow internet connection. Hyperlinks to each chapter (Chapter 1, 2, 3, etc.), bibliography and index are found in the Contents (Table of Contents) page of this file. The hyperlinks are high-lighted with either a magenta or blue colored text.

A hyperlink (Table of Contents) located on the upper right-hand corner of Page 1 of each chapter links that chapter back to this page.
Dedication

to my parents,

Ioannis and Ioanna

and

to my sisters,

Anthippi and Ioudia
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Preface

This book is about the notion of locality in phonology. Sounds assimilate in terms of their phonetic properties to other sounds. There appear to be restrictions on how far two sounds can be to show assimilatory interaction. These restrictions constitute the locality conditions that this book attempts to understand and define.

The work reported here is my 1996 Ph.D. dissertation, completed in the Department of Cognitive Science at Johns Hopkins University, which I have been given the privilege to publish as such. The text is almost identical to that of the dissertation, with the exception of an updated bibliography, an index, an expanded section on vowel harmony in chapter 2, and pointers to subsequent publications for the reader interested in the development of this work. These publications refer to work by the author or others whose work builds on this dissertation.

New York City, New York
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A. I. G.
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Outside of The Johns Hopkins University, Stephen Anderson at Yale University, Linda Lombardi at the University of Maryland, College Park, and Jaye Padgett at the University of California, Santa Cruz, also read parts of this dissertation, providing comments from their own perspectives. In Steve’s phonology class, I first understood how to construct an argument in linguistics. Linda and Jaye kept me in touch with current ideas on phonology, often helping to drag me out of the inward labyrinths in which my research could have left me. They also recalled, for my benefit, valuable memories from their own relatively recent dissertation experiences.
I have benefitted from liberal access to the researchers at Haskins Laboratories, New Haven, Connecticut, and particularly from discussions with Catherine Browman, Carol Fowler, and Louis Goldstein. All have contributed to my thinking in essential ways. Maureen Stone and her Vocal Tract Visualization Laboratory, at the Medical School of the University of Maryland, Baltimore, helped me to become aware of the cross-sectional dimension of articulation, ultimately leading to the development of a chapter in this work. John McCarthy at the University of Massachusetts, Amherst, Donca Steriade at the University of California, Los Angeles, Lisa Zsiga at Georgetown University, and Cheryl Zoll at the Massachusetts Institute of Technology also provided cogent advice. Finally, I wish to thank the department of Cognitive Science at Johns Hopkins University for providing me with a fertile environment offering all the essential ingredients necessary for allowing me to profitably ‘boil in my own water’.

Baltimore, Maryland
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February 1999
Illustrations

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Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>!</td>
<td>fatal constraint violation</td>
</tr>
<tr>
<td>+</td>
<td>morpheme boundary</td>
</tr>
<tr>
<td>*</td>
<td>ungrammatical form</td>
</tr>
<tr>
<td>#</td>
<td>word boundary</td>
</tr>
<tr>
<td>µ</td>
<td>mora</td>
</tr>
<tr>
<td>σ</td>
<td>syllable</td>
</tr>
<tr>
<td>a:</td>
<td>long vowel</td>
</tr>
<tr>
<td>ā</td>
<td>long vowel</td>
</tr>
<tr>
<td>aa</td>
<td>long vowel</td>
</tr>
<tr>
<td>alv</td>
<td>alveolar (constriction location)</td>
</tr>
<tr>
<td>ant</td>
<td>Anterior</td>
</tr>
<tr>
<td>ATB</td>
<td>across-the-board application of rule</td>
</tr>
<tr>
<td>ATR</td>
<td>Advanced tongue root</td>
</tr>
<tr>
<td>C</td>
<td>consonant</td>
</tr>
<tr>
<td>CD</td>
<td>constriction degree (of gesture)</td>
</tr>
<tr>
<td>CL</td>
<td>constriction location (of gesture)</td>
</tr>
<tr>
<td>cont</td>
<td>Continuant</td>
</tr>
<tr>
<td>Cor</td>
<td>Coronal</td>
</tr>
<tr>
<td>cps</td>
<td>cycles per second</td>
</tr>
<tr>
<td>crit</td>
<td>critical (degree of constriction)</td>
</tr>
<tr>
<td>dent</td>
<td>dental (location of constriction)</td>
</tr>
<tr>
<td>dist</td>
<td>Distributed</td>
</tr>
<tr>
<td>Dor</td>
<td>Dorsal</td>
</tr>
<tr>
<td>Hz</td>
<td>Hertz</td>
</tr>
<tr>
<td>IPA</td>
<td>International Phonetics Association</td>
</tr>
<tr>
<td>Lab</td>
<td>Labial</td>
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</tbody>
</table>

xvii
Lar  Laryngeal
LDC-spreading  long distance consonantal spreading
OCP  Obligatory Contour Principle
Phar  Pharyngeal
pl  plural
PrWd  prosodic word
rnd  Round
RTR  Retracted tongue root
sg  singular
SPE  Sound Pattern of English
TB  tongue-body
TT  tongue-tip
TTCA  tongue-tip constriction area
TTCO  tongue-tip constriction orientation
V  vowel
VEL  velic (gesture)
\(x >> y\)  constraint \(x\) is ranked higher than constraint \(y\)
\(/x/\)  underlying representation
X  skeletal slot
[x]  phonetic representation
\(\#\)  locator of optimal candidate
...  variable content
–  morpheme boundary
\(\rightarrow\)  ‘becomes’ (from underlying to surface form)