

ARTUR KIJAK

LABIAL-DORSAL INTERACTIONS

A Phonologically Based Approach



WYDAWNICTWO
UNIwersYTETU ŚLĄSKIEGO
KATOWICE 2017

LABIAL-DORSAL INTERACTIONS

A PHONOLOGICALLY BASED APPROACH

Prace Naukowe



Uniwersytetu Śląskiego
w Katowicach
nr 3642

50 lat
**Uniwersytetu
Śląskiego**
w Katowicach

LABIAL-DORSAL INTERACTIONS

A PHONOLOGICALLY BASED APPROACH

ARTUR KIJAK

Editor of the series: Językoznawstwo Neofilologiczne
MARIA WYSOCKA

Referee
EUGENIUSZ CYRAN

Copy editing: KRYSZYNA WARCHAŁ
Cover design: KONRAD SZCZEŚNIAK
Proofreading: GABRIELA MARSZOLEK
Technical editing: MAŁGORZATA PLEŚNIAR
Typesetting: GRAŻYNA SZEWCZYK

Copyright © 2017 by
Wydawnictwo Uniwersytetu Śląskiego
All rights reserved

ISSN 0208-6336
ISBN 978-83-226-3252-9
(print edition)
ISBN 978-83-226-3253-6
(digital edition)

Publisher
Wydawnictwo Uniwersytetu Śląskiego
ul. Bankowa 12B, 40-007 Katowice
www.wydawnictwo.us.edu.pl
e-mail: wydawus@us.edu.pl

First impression. Printed sheets 12.25. Publishing sheets
14.5. Offset paper III grade, 90 g Price 28 zł (+ VAT)

Printing and binding: "TOTEM.COM.PL Sp. z o.o." Sp.K.
ul. Jacewska 89, 88-100 Inowrocław

TABLE OF CONTENTS

PREFACE AND ACKNOWLEDGMENTS	7
CHAPTER ONE	
LABIALS AND DORSALS IN CROSS-THEORETICAL PERSPECTIVE	
1. Preliminaries	11
2. Segmental phonology	13
2.1 Major place features	16
3. Labials and dorsals in classical distinctive feature theories	18
3.1 Auditory-acoustic features (Jakobson, Fant and Halle 1952)	18
3.2 Articulatory features (Chomsky and Halle 1968)	19
3.3 SPE under fire and post-SPE advancement	22
4. Labials and dorsals in contemporary theories	27
4.1 Feature geometry	27
4.2 Dependency Phonology	33
4.3 Perceptually oriented theories	36
5. Element Theory	43
5.1 Kaye, Lowenstamm and Vergnaud (1985, 1990)	48
5.2 Harris and Lindsey (1995)	49
5.3 Van de Weijer (1996)	51
5.4 Scheer (2004)	52
5.5 Huber (2007b)	53
5.6 Backley (2011)	55
6. Summary and conclusions	60
CHAPTER TWO	
LABIAL-DORSAL INTERACTIONS CROSS-LINGUISTICALLY	
1. Introduction	63
2. Labial-dorsal mutual interactions: a cross-linguistic perspective	64
2.1 Germanic and other Indo-European languages	66
2.1.1 Velar > labial shifts	66
2.1.2 Labial > velar shifts	77
2.2 Non-Indo-European languages	84

3. Interactions of labials and dorsals with coronals: cross-class perspective	87
3.1 Dorsals and back rounded vowels	89
3.2 Labials and round vowels	92
4. Interactions of dorsals with vowels: cross-process perspective	94
4.1 Palatalization	94
4.2 Gliding	100
4.3 Vocalization	104
5. Labial-velars (double articulation)	109
5.1 Labio-velars (secondary articulation)	112
5.2 The labio-velar glide [w]	115
6. Summary and conclusions	116

CHAPTER THREE

LOVE TRIANGLE, OR PHONOLOGICAL PATTERNING OF LABIALS, DORSALS, AND BACK VOWELS

1. Introduction	119
2. Place definers	120
2.1 Palatals and front vowels	121
2.1.1 Coronals	121
2.1.2 English coronals	122
2.2 Labials and round vowels	126
2.3 Dorsals	128
3. Polemic with the mainstream solution	130
4. Complex segments	134
5. Labial > velar shifts: the case of Dutch	137
5.1 Velar epenthesis in Spanish	142
6. Palatalization revisited	143
7. Velar > labial shifts in the history of English	150
7.1 Velar fricative vocalization (gliding) in Old English	151
7.2 Old English Breaking	153
7.3 Vowel rounding before velars in Old and Middle English	164
7.4 Middle English diphthongization	166
7.4.1 The voiced velar fricative [ɣ]	166
7.4.2 The voiceless velar fricative [x]	168
7.4.2.1 Middle English labialization	172
7.4.3 The velarized lateral [ɫ]	175
8. Summary and conclusions	178

CONCLUSIONS	179
-----------------------	-----

REFERENCES	181
----------------------	-----

STRESZCZENIE	195
------------------------	-----

ZUSAMMENFASSUNG	196
---------------------------	-----

PREFACE AND ACKNOWLEDGMENTS

Over the past several decades, there has been a huge increase in the number of studies of the consonantal place features. This has brought about the accumulation of a large amount of new evidence and knowledge, and in consequence has contributed to a prevailing view that place features are one of the best studied areas in phonology. What is more, there is little disagreement about the major regions of labial, coronal, dorsal, radical, and laryngeal. However, a closer look at this idyllic picture reveals some cracks, and it turns out that there are still numerous problems calling for explanation. For instance, it has been repeatedly pointed out that even though the major division of consonants into classes is well established, some sounds do not appear to fit neatly into these categories, such as, labio-dentals, which involve both a labial and a coronal component, and some gutturals, which pattern with both dorsals and radicals, not to mention the continuing debate around the nature of the coronal sub-places. One such particular problem will be made the object of investigation in the present study. Specifically, this book seeks to offer an explanation for the phonological patterning of two articulatorily distant consonant classes: labials and dorsals. In this way, it contributes to the broader discussion of segmental phonology or, more exactly, to the issue of the consonantal place features. It must be clarified right at the outset that in this study the term dorsal is used to cover velars and uvulars only. Other dorsal consonants, such as radicals (guttural consonants) and laryngeals, are not included in the following discussion, and so they are only briefly mentioned when appropriate.

The deep complexity of the issue is caused by the curiously unique character of the labial-dorsal mutual interactions, in that they involve a radical change in the place of articulation. More frequent sound changes, by contrast, involve a change only in the manner of articulation, for example, [p] > [f], or possibly a change to an adjacent place of articulation, for instance, palatalization. Labial-velar changes also distinguish themselves from other changes because they can take place in both directions. Furthermore, the relationship between labials and dorsals is frequently manifested indirectly via various apparently

unrelated processes, such as vocalization, gliding, epenthesis, and diphthongization. It follows that a discussion of the mutual interactions between labials and dorsals must encompass vocalic segments. The inevitability of this move is dictated by the high frequency of the processes in which labial vowels interact with dorsals.

The explanation of the intimate triangular relationship of labials, dorsals, and rounded vowels inescapably leads to a discussion of the internal structure of segments and, more generally, to the decision on the theoretical model which can best capture this relationship. There are several decisive factors making Element Theory an optimal choice for the task ahead of us. These factors include the ability to capture the vowel-consonant unity and the cognitive character of the primes, among many others. Element Theory is a model of segmental structure which rejects feature definitions based on articulation or raw acoustics. Instead, it holds that “the mental representation of speech sounds is constituted not of tongue heights, (...) nor of formant heights, nor for that matter of basilar stimulation points. Rather it is constituted of information-bearing patterns which humans perceive in speech signals” (Harris and Lindsey 2000: 186). Moreover, this model assumes that phonological behavior can say more about segmental structure than phonetic (articulatory and acoustic) details. It means that the phonological classes of segments are modelled on linguistic behavior, which does not always coincide with place of articulation labels, like palatal, labio-dental, and so on. As Backley (2011: 105) points out, it is “feature theories in which a particular articulatory feature is universally associated with a particular phonological place category. This may be sufficient for describing articulation, but it does not tell us much about phonology.” This stance explains the meaning of the phonologically based perspective adopted in this study and contained in its title. In short, the intrasegmental structure is established on the basis of a segment’s phonological behavior rather than on its acoustic properties. And since it is frequently the historical data we look at in the following discussion, the “phonological approach” suits perfectly the analysis of the sound systems of some earlier stages in language development. Finally, the present study adopts the view that phonological representation is organized by a series of alternating non-branching onsets and nuclei characteristic of the Strict CV version of Government Phonology (Lowenstamm 1996; Scheer 2004; Cyran 2010).

A preliminary hypothesis is that the key to understanding the phonological activity of velars and their common interactions with labials and round vowels lies in their internal structure. And it is the representation of velars which has always bothered phonologists. This has led to the appearance of two main phonological camps. The representatives of one group assume velars to be defective segments in that they are either negatively specified (classical Generative Phonology) or empty (Radical CV Phonology). On the other hand, the proponents of the opposite view, such as Roman Jakobson, Alastair Cambell, David Oden,

Robert Vago, and John Anderson, maintain that velars do contain the phonological material in the form of a relevant prime. Interestingly, Element Theory (ET) practitioners are divided into two camps, too. According to the dominant group (e.g., John Harris, David Huber), velars are devoid of any place definers, while the opposition group holds that velars are specified for such primes (Judith Broadbent, Phillip Backley). The findings in this study place us in the group of the proponents of the latter view. Note further that the discussion of the internal structure of segments in general and the content of velars in particular right from the beginning disqualifies certain theoretical models. This is the case of, for example, Optimality Theory (OT), which is first of all a theory of phonological alternations and as such does not impose any restrictions on possible phonological representations. Since, in principle, it could be combined either with the abstract features used in the Sound Pattern of English (SPE) and feature geometry, or with concrete phonetic specifications, or, as the case may be, with both of them at the same time, it is not an optimal candidate for the analysis of the internal structure of segments.

The book is organized into three chapters, which can be approached either separately or as a self-contained whole. Readers who are interested in segmental phonology and the formal solutions proposed for the representation of phonological segments over recent decades are referred to Chapter One. This chapter is also addressed to those who might be seeking better formal tools to solve the labial-dorsal relationship puzzle and ways to compare it with the previous models. Chapter Two is to be thought of as a data repository containing cross-linguistic data. It may prove useful for those who are looking for labial-dorsal related phenomena. Additionally, since it is theoretically neutral, the data in Chapter Two can be used as a testing ground by younger researchers. Finally, Chapter Three offers a representation for velars and tests it against a selected group of cross-linguistic processes. A part of Chapter Three is based on my earlier published work (Kijak 2009, 2010, 2014 and 2015), which has been thoroughly revised and expanded for the purposes of this book. This chapter is addressed to all those interested in the formal analysis of the labial-dorsal interactions within the Element Theory model and those who look for the solution of particular phonological phenomena. Finally, it is hoped that this book can also be of help for students who are interested in the development of segmental phonology in general and Element Theory in particular. Needless to say, the central theme which threads all three chapters is the phonological patterning of labials and dorsals.

I wish to thank all my friends and colleagues who have contributed to the appearance of this book. I am especially grateful to Rafał Molecki for his invaluable advice, encouragement, critical reading of the manuscript, and detailed comments. I would like to thank the reviewer, Eugeniusz Cyran, for his helpful comments on and constructive criticism of the preliminary draft. I would also

like to thank David Schauffler and Krystyna Warchał for helping me to eliminate linguistic imperfections. All remaining errors are my own.

Finally, I would like to thank my wife Katarzyna for her patience and support, and my daughter Martyna, who is still teaching me how to overcome great adversities in life.

Artur Kijak

INTERAKCJE MIĘDZY SPÓŁGŁOSKAMI WARGOWYMI A DORSALNYMI
W UJĘCIU FONOLOGICZNYM

Streszczenie

Głównym celem monografii jest wyjaśnienie bliskich fonologicznych relacji między dwiema artykulacyjnie odległymi klasami: spółgłoskami wargowymi (labialnymi) i grzbietowymi (dorsalnymi). Zaproponowane rozwiązanie sprowadza się do postulowania wspólnego dla tych grup elementu, reprezentującego miejsce artykulacji rzeczonych klas, co pozwala wyjaśnić ich częste interakcje przejawiające się w wielu procesach fonologicznych. Ponadto element ten charakteryzuje grupę samogłosek labialnych i półsamogłoskę [w], tłumacząc w ten sposób ich bliskie pokrewieństwo zarówno ze spółgłoskami labialnymi, jak i dorsalnymi. Zagadnienia poruszane w pracy wpisują ją w szeroki nurt badań nad wewnętrzną strukturą fonologicznych segmentów i wzajemnymi relacjami pomiędzy klasami (fonologia segmentalna), a bardziej szczegółowo, w badania nad właściwościami cech odpowiedzialnych za miejsce artykulacji spółgłosek oraz nad bliskimi relacjami tych ostatnich z samogłoskami. Wartościowym elementem podjętego tematu badań jest niewątpliwie złożoność zagadnienia i bogactwo procesów, w których ujawniają się wzajemne relacje spółgłosek labialnych i dorsalnych. Przykładem może być wokalizacja, epenteza czy dyftongizacja, które to procesy po bliższej analizie mogą przyczynić się do ujawnienia wewnętrznej struktury badanych klas.

Słowa kluczowe: teoria elementów, miejsce artykulacji, spółgłoski labialne, spółgłoski dorsalne

Artur Kijak

DIE INTERAKTIONEN ZWISCHEN LABIALEN UND DORSALEN KONSONANTEN
NACH PHONOLOGISCHER AUFFASSUNG

Zusammenfassung

Das Hauptziel der Monografie ist, enge phonologische Beziehungen zwischen den zwei hinsichtlich des Artikulationsmodus entfernten Klassen: labialen und dorsalen Konsonanten auszuführen. Der Verfasser schlägt vor, ein für die beiden Klassen gemeinsames und für den Artikulationsort der Konsonanten repräsentatives Element zu finden, was deren häufige, in vielen phonologischen Prozessen zum Ausdruck kommende Interaktionen zu klären lässt. Das Element charakterisiert überdies die Gruppe der labialen Konsonanten und Halbkonsonanten, indem es deren nahe Verwandtschaft sowohl mit labialen, als auch mit dorsalen Konsonanten rechtfertigt. Die in der Arbeit behandelten Fragestellungen gehören in groß angelegte Forschungen über innere Struktur der phonologischen Segmente und über die Wechselwirkung zwischen den einzelnen Klassen (Segmentphonologie), und genauer in die Forschungen über die Eigenschaften von den für Artikulationsort der Konsonanten verantwortlichen Merkmalen und über nahe Verwandtschaft der letzteren mit den Vokalen. Für große Bedeutung des aufgegriffenen Forschungsthemas sprechen zweifellos die Komplexität des Problems und die Vielfalt von Prozessen, in deren Folge sich die zwischen labialen und dorsalen Konsonanten bestehenden Interaktionen offenbaren. Ein gutes Beispiel dafür sind Prozesse der Vokalisierung, Epenthese oder Diphthongierung, welche nach genauerer Analyse zur Enthüllung der inneren Struktur der hier zu untersuchten Klassen beitragen können.

Schlüsselwörter: Theorie der Elemente, Artikulationsort, labiale Konsonanten, dorsale Konsonanten

ISSN 0208-6336

About this book

Price 28 PLN (+ VAT)

ISBN 978-83-226-3253-6



9 788322 632536



LABIAL-DORSAL INTERACTIONS

ARTUR KIJAK

Over the past several decades, there has been a huge increase in the number of studies of the consonantal place features. This has brought about the accumulation of a large amount of new evidence and knowledge, and in consequence has contributed to a prevailing view that place features are one of the best studied areas in phonology. What is more, there is little disagreement about the major regions of labial, coronal, dorsal, radical, and laryngeal. However, a closer look at this idyllic picture reveals some cracks, and it turns out that there are still numerous problems calling for explanation. For instance, it has been repeatedly pointed out that even though the major division of consonants into classes is well established, some sounds do not appear to fit neatly into these categories, such as labio-dentals, which involve both a labial and a coronal component, and some gutturals, which pattern with both dorsals and radicals, not to mention the continuing debate around the nature of the coronal sub-places. One such particular problem will be made the object of investigation in the present study. Specifically, this book seeks to offer an explanation for the phonological patterning of two articulatorily distant consonant classes: labials and dorsals. In this way it contributes to the broader discussion of segmental phonology or, more exactly, to the issue of the consonantal place features. It must be clarified right at the outset that in this study the term dorsal is used to cover velars and uvulars only. Other dorsal consonants, such as radicals (guttural consonants) and laryngeals, are not included in the following discussion, and so they are only briefly mentioned when appropriate.

The deep complexity of the issue is caused by the curiously unique character of the labial-dorsal mutual interactions, in that they involve a radical change in the place of articulation. More frequent sound changes, by contrast, involve a change only in the manner of articulation, for example, [p] > [f], or possibly a change to an adjacent place of articulation, for instance, palatalization. Labial-velar changes also distinguish themselves from other changes because they can take place in both directions. Furthermore, the relationship between labials and dorsals is frequently manifested indirectly via various apparently unrelated processes, such as vocalization, gliding, epenthesis, and diphthongization. It follows that a discussion of the mutual interactions between labials and dorsals must encompass vocalic segments. The inevitability of this move is dictated by the high frequency of the processes in which labial vowels interact with dorsals.