

A Historical Phonology of Central Chadic

Of all of the African language families, the Chadic languages belonging to the Afroasiatic macro-family are highly internally diverse due to a long history and various scenarios of language contact. This pioneering study explores the development of the sound systems of the ‘Central Chadic’ languages, a major branch of the Chadic family. Drawing on and comparing field data from about 60 different Central Chadic languages, H. Ekkehard Wolff unpacks the specific phonological principles that underpin the Chadic languages’ diverse phonological evolution, arguing that their diversity results to no little extent from historical processes of ‘prosodification’ of reconstructable segments of the proto-language. The book offers meticulous historical analyses of some 60 words from Proto-Central Chadic, in up to 60 individual modern languages, including both consonants and vowels. Particular emphasis is on tracing the deep-rooted origin and impact of palatalisation and labialisation prosodies within a phonological system that, on its deepest level, recognises only one vowel phoneme */a/.

H. EKKEHARD WOLFF is Professor and Chair emeritus (African linguistics) at Leipzig University. He has more than 170 publications to his credit (incl. 30 books) on descriptive, typological, comparative, applied linguistics and sociolinguistics of African languages. He is Editor of *The Cambridge Handbook of African Linguistics* (2019) and of *A History of African Linguistics* (2019).

A Historical Phonology of Central Chadic

Prosodies and Lexical Reconstruction

H. Ekkehard Wolff



CAMBRIDGE
UNIVERSITY PRESS

Cambridge University Press & Assessment
 978-1-009-01067-2 — A Historical Phonology of Central Chadic
 H. Ekkehard Wolff
 Frontmatter
[More Information](#)



CAMBRIDGE
 UNIVERSITY PRESS

Shaftesbury Road, Cambridge CB2 8EA, United Kingdom
 One Liberty Plaza, 20th Floor, New York, NY 10006, USA
 477 Williamstown Road, Port Melbourne, VIC 3207, Australia
 314–321, 3rd Floor, Plot 3, Splendor Forum, Jasola District Centre, New Delhi – 110025, India
 103 Penang Road, #05–06/07, Visioncrest Commercial, Singapore 238467

Cambridge University Press is part of Cambridge University Press & Assessment, a department of the University of Cambridge.

We share the University's mission to contribute to society through the pursuit of education, learning and research at the highest international levels of excellence.

www.cambridge.org
 Information on this title: www.cambridge.org/9781009010672

DOI: 10.1017/9781009024310

© H. Ekkehard Wolff 2022

This publication is in copyright. Subject to statutory exception and to the provisions of relevant collective licensing agreements, no reproduction of any part may take place without the written permission of Cambridge University Press & Assessment.

First published 2022
 First paperback edition 2025

A catalogue record for this publication is available from the British Library

Library of Congress Cataloging-in-Publication data

Names: Wolff, Ekkehard, author.

Title: A historical phonology of Central Chadic : prosodies and lexical reconstruction / H. Ekkehard Wolff.

Description: Cambridge, UK ; New York : Cambridge University Press, 2021. | Includes bibliographical references and index.

Identifiers: LCCN 2021028425 (print) | LCCN 2021028426 (ebook) | ISBN 9781316519547 (hardback) | ISBN 9781009010672 (paperback) | ISBN 9781009024310 (epub)

Subjects: LCSH: Chadic language—Phonology. | BISAC: LANGUAGE ARTS & DISCIPLINES / Linguistics / Phonetics & Phonology | LANGUAGE ARTS & DISCIPLINES / Linguistics / Phonetics & Phonology

Classification: LCC PL8026.C531 W65 2021 (print) | LCC PL8026.C531 (ebook) | DDC 493/.7—dc23

LC record available at <https://lcn.loc.gov/2021028425>

LC ebook record available at <https://lcn.loc.gov/2021028426>

ISBN 978-1-316-51954-7 Hardback
 ISBN 978-1-009-01067-2 Paperback

Cambridge University Press & Assessment has no responsibility for the persistence or accuracy of URLs for external or third-party internet websites referred to in this publication and does not guarantee that any content on such websites is, or will remain, accurate or appropriate.

Dedicated to the memory of three excellent fellow Chadicists,
who contributed insights to the study of prosodies in
Chadic languages

Carl F. Hoffmann (1925–2007)

Daniel Barreteau (1950–2007)

Russell G. Schuh (1941–2016)

Contents

<i>List of Figures</i>	page xii
<i>List of Tables</i>	xiii
<i>Preface</i>	xv
<i>Acknowledgements</i>	xvii
<i>Glossonyms Used for Central Chadic Languages and</i>	
<i>Language Variants</i>	xviii
<i>Abbreviations and Symbols</i>	xx
 1. Introduction	 1
1.1 Comparative Chadic Linguistics, and Why It Is So Problematic to Reconstruct Lexical Items for Proto-Chadic in General, and for Proto-Central Chadic in Particular	 2
1.2 A Model for the Evolution from Proto-Central Chadic ‘Simple Roots’ to Phonetic Surface Representations in Central Chadic Languages	17
1.3 Root Type	20
1.4 Root Augmentation	20
1.5 Vowel Pro-/Epenthesis	21
1.6 Phonological Prosodies	22
1.7 Morphological Prosodies	23
 2. Methodological Preliminaries	 27
2.1 General	27
2.1.1 The Extra-Linguistic Historical Background	28
2.1.2 The Exceptional Typology of Central Chadic Languages	30
2.1.3 The Enigmatic Vocalic Domain	31
2.1.3.1 The Status of Schwa	32
2.1.3.2 No True Vowel Contrasts	32
2.1.3.3 Underspecified ‘Weak Radicals’: */y/, */w/	33
2.1.3.4 Impact of Prosodies	33
2.1.4 Completeness and Explicitness of Description	34
2.2 The Comparative Method and Dialectological Approaches	38
2.3 Internal Reconstruction	41
2.4 The Database and Conventions of Transcription	46
2.5 Theoretical Modules Underlying Central Chadic Lexical Reconstruction Work	47
2.5.1 Epenthesis Theory	48
	vii

viii	Contents	
	2.5.2 Weak Radical Theory	52
	2.5.3 Vocalisation Theory	53
	2.5.4 Prosody Theory	55
	2.5.5 Prosodies as Traces of Diachronically Lost Segments	62
2.6	Confronting Alternative Approaches	65
	2.6.1 The Notion of 'Prosody-Type Languages' in Central Chadic	70
	2.6.2 The Vocalic Domain in Central Chadic: What to Reconstruct and How Many?	71
	2.6.3 The Present Study	74
3.	Proto-Central Chadic Diachronic Phonology and Morphophonology: Inventories and Principles	76
	3.1 General Observations	76
	3.1.1 Templatic Approach: Root-and-Pattern	76
	3.1.1.1 Underlying 'Root Types'	76
	3.1.1.2 Radical Consonant Slots	77
	3.1.1.3 Vocalisation: Vowel Slots and Syllables	78
	3.1.1.4 The Ambiguous Nature of 'Weak Radicals'	78
	3.1.1.5 The Relevance of the Templatic Approach to Historical Reconstruction in Chadic	79
	3.1.2 Diachronically Simple and Augmented Roots	82
	3.1.2.1 Simple Root and Root Types	86
	3.1.2.2 Diachronic Loss of Segments	88
	3.1.2.3 Affixal Root Augmentation and Petrification	96
	3.1.2.4 Reduplicative Augmentation and Petrification	97
	3.1.2.5 Similarity of Inventories of Pre- and Suffixal Augments	97
	3.1.3 Metathesis	98
	3.1.4 Prosodification	101
3.2	Issues in Central Chadic Diachronic Phonology	103
	3.2.1 Inventory: Consonants	103
	3.2.2 The Double Origin of Prosodies	106
	3.2.2.1 Lexical Prosodies: Phonological Palatalisation and Labialisation	107
	3.2.2.2 Grammatical Prosodies: Morphological Palatalisation and Labialisation	110
	3.2.3 Labialisation Prosody	110
	3.2.3.1 Suffixal Augment	113
	3.2.3.2 Prosodising *{-k ^w }	113
	3.2.3.3 Non-Prosodising *{-k ^w }	114
	3.2.3.4 Is Morphological Labialisation Older Than Phonological Labialisation?	114
	3.2.4 Palatalisation Prosody	117
	3.2.4.1 Suffixal Augment	119
	3.2.4.2 Prosodising *{-y}	119
	3.2.4.3 Non-Prosodising *{-y}	122
	3.2.5 Combined Y- and W-Prosodies	123
	3.2.5.1 Separate Domains for Each Prosody	124
	3.2.5.2 Prosody Fusion in Same Domain (*a/ ^w y > œ)	125
3.3	Diachronic Sources of Morphological Prosodies	126
3.4	The Origins of Final */a/ and [ə]	127

Contents	ix
3.4.1 Final */a/	127
3.4.2 Final Consonant (Ø Vowel)	128
3.4.3 Final Schwa	128
3.5 A Note on the Integration of Loan Words into Central Chadic Phonology	129
4. Diachronic Processes in Central Chadic Language Evolution	133
4.1 Vowel Epenthesis	133
4.2 Prosodic 'Colouring' of Pro- and Epenthetic Schwa	134
4.3 Prosodic Effects on */a/	134
4.4 Syllabification of Underlying *y and *w	135
4.4.1 Weak Radicals *y and *w in Medial Position	135
4.4.2 *y and *w in Suffixal Augments in Final Position	136
4.5 Intersegmental Fusion of Features Affecting Radical Consonants	140
4.6 Accounting for Differences between Very Closely Related Languages	141
4.6.1 Underlying Root Type	141
4.6.2 Root Augmentation, Consonantal Sound Changes, and Prosodies	142
4.7 From PCC to Modern Central Chadic Languages: Phonemicisation of Allophones	142
4.8 On the Emergence of Long Vowels in Modern Central Chadic Languages	147
4.8.1 The Emergence of Long [ii]	148
4.8.2 The Emergence of Long [uu]	149
4.9 Summary of Diachronic Processes from PCC to Modern Central Chadic Languages	150
5. Central Chadic Languages and the Neogrammarian Hypothesis	158
5.1 Individual Language Histories: Evidence from Lamang and Hdi	161
5.2 Scrutinising the Notion of 'Regular Sound Correspondence' in the Vocalic Domain	176
6. Full Lexical Reconstructions	187
6.1 Alternative Option for Not Reconstructing */a/	187
6.2 Alternative Option for Not Reconstructing */i/	191
6.3 Alternative Reconstructions of the Proto-Central Chadic Lexicon	192
6.3.1 Reconstructions Licensing [i] in Phonetic Surface Representation	193
6.3.1.1 [i] in Final Position	194
6.3.1.2 [i] in Medial Position	195
6.3.1.3 [i] in Initial Position	198
6.3.2 Reconstructions Licensing [u] in Phonetic Surface Representation	198
6.3.2.1 [u] in Final Position	198
6.3.2.2 [u] in Medial Position	200
6.3.2.3 [u] in Initial Position	200
6.3.3 Reconstructions Licensing Mid Vowels [e] and [o] in Both Medial and Final Positions in Phonetic Surface Representation	201
6.3.4 Reconstructions Licensing Final Schwa in Phonetic Surface Representation	201
6.3.5 Reconstructions Involving */a/ as Medial Vowel	203
6.3.6 Regarding Glottal Stop and Glottalisation	211
6.3.6.1 Emergence of Glottal Stops in Surface Representations	212
6.3.6.2 ['w] (and [p']?) Reflecting PCC */C ^w /	213
6.3.6.3 */ʔ/ as an Unidentified Root Augment?	214

6.3.6.4	Another Look at the Root for ‘Water’	214
6.3.6.5	Are there Traces of ‘Glottalisation Prosody’?	215
6.4	PCC Lexical Reconstructions: Data and Details	218
	arm	221
	ashes	224
	beard	227
	beer	230
	belly	231
	bite, to	235
	blow, to	237
	boil, to	239
	bone	242
	bow	248
	brain	253
	butterfly	255
	camel	258
	cook, to	268
	cow	271
	crocodile	275
	cry, to	276
	die, to	281
	dog	287
	donkey ₁	291
	donkey ₂	295
	donkey ₃	296
	dream	299
	earth	305
	eight	308
	elephant	310
	extinguish, to	311
	faeces	314
	five	316
	fly	319
	foot	327
	give birth, to	329
	grandfather	336
	grasshopper	339
	hair	343
	hare	345
	hedgehog	349
	hide, to	351
	horn ₁	353
	horn ₂	357
	horse	358
	laugh, to	363
	lion	368
	market	371
	moon	377
	navel	381
	night	385

Contents	xi
quiver	391
ram	393
razor ₁	396
razor ₂	398
root	400
six	406
spit, to	406
suck, to	411
sun	418
thorn	424
three	428
two	434
wash, to	435
water	439
whistle, to	446
white	450
work	453
<i>APPENDIX: Alphabetical List of Glosses with Alternative Reconstructions and Prosodies</i>	458
<i>References</i>	461
<i>Index: Languages and Lexical Items</i>	466

List of Figures

1.1	Vocoids and contoids	<i>page</i> 14
1.2	Abstract model of the evolution of Central Chadic lexical items	19
2.1	Phoneme split affecting the so-called weak radicals */y/ and */w/	32
2.2	Lamang–Hdi: look-alikes or cognates?	42
2.3	Lamang–Hdi: cognation	43
3.1	Diachronic root type dynamics	87

List of Tables

1.1 ‘nose’ and ‘ear’ in so-called Wandala-Lamang (1)	<i>page</i> 8
1.2 ‘nose’ and ‘ear’ in so-called Wandala-Lamang (2)	9
2.1 Underlying vs. surface representations in the vocalic domain	34
2.2 Representation format of lexical reconstructions	36
2.3 Prenasalisation as prosody?	63
2.4 From segments to prosodies	64
2.5 Alternative reconstructions of diachronic ‘root’	69
2.6 Conflated representations and dissolution of root types	69
2.7 Choice of root types	69
3.1 Inventories of pre- and suffixal root augments	98
3.2 Diachronic desegmentalisation and prosodification	102
3.3 Re-segmentalisation and labialisation transfer	102
3.4 Re-segmentalisation and glottalisation transfer	103
3.5 Consonant inventory (1)	104
3.6 Consonant inventory (2)	104
3.7 Different paths of loans into Central Chadic for ‘camel’	131
4.1 The vocalic domain of Proto-Central Chadic	144
4.2 Synchronic vowel qualities in Central Chadic languages	145
4.3 The vocalic space in Central Chadic languages: tongue height and position	145
4.4 The vocalic space in Central Chadic languages: diachronic vocoids	146
4.5 The vocalic space in Central Chadic languages: prosodies	147
4.6 Phonetic ‘colouring’ of epenthetic schwa in Central Chadic languages	147
4.7 Matching of PCC reconstructions with modern forms	152
5.1 Frequency of rule applications	175
5.2 ‘nose’ and ‘ear’ in so-called Wandala-Lamang (3)	178
5.3 Reconstructing ‘nose’ in so-called Wandala-Lamang	180

xiv	List of Tables	
5.4	Consonantal sound changes in so-called Wandala-Lamang (1)	180
5.5	Reconstructing ‘ear’ in so-called Wandala-Lamang	182
5.6	Consonantal sound changes in so-called Wandala-Lamang (2)	183
6.1	Neutralisation of structural contrasts	189

Preface

Historical-comparative linguistic research in the Afroasiatic language phylum suffers from deficits regarding robust comparative studies in the branches and sub-branches of its African member families, which constitute the vast majority of its currently known 382 member languages. One of the most under-researched language families within Afroasiatic is Chadic, whose almost 200 named languages constitute the largest language family within the phylum. Among the Chadic languages, the Central Chadic (aka ‘Biu-Mandara’) branch with its about 80 languages again constitutes the majority. Central Chadic languages are notorious for their internal diversification not least due to an assumed immense time-depth, which eminent experts like the late Russell G. Schuh have occasionally compared to Indo-European rather than to any of the latter’s constitutive families, like Germanic, Romance etc.

The current volume provides an in-depth study of the historical phonology of Central Chadic, unravelling the structural principles and diachronic developments that link the highly diverse phonetic surface representations in modern Central Chadic languages, as they are spoken in North-Eastern Nigeria, Northern Cameroon and Western Chad, i.e. roughly along the southern shorelines of the former Mega-Chad Lake, to Proto-Central Chadic (PCC) lexical reconstructions. The study rests on an online database (Gravina 2014b) comprising published and unpublished data on 250 lexical items from 60 (plus 6 language varieties) of the then known 78 named languages of this branch (Lewis 2009). The book offers meticulous historical analyses of some 60 selected lexical items, which could be considered controversial in terms of both synchronically underlying and historically reconstructed phonological units that make up the vocalic domain. It covers diachronic processes starting from an archaic *root-and-pattern* structure in PCC to the modern Central Chadic languages, and it distinguishes strictly between the regimes of *phonological* (‘lexical’) and *morphological* (‘grammatical’) *prosodies*, which extensively influence the surface forms of lexical items in the present-day languages. Particular emphasis is placed on tracing the deep-rooted origin and impact of *palatalisation* and *labialisation prosodies* within a phonological

system that, on its deepest level of analysis, recognises only one vowel phoneme */a/.

The study refines the classic *comparative method* and *internal reconstruction* approaches to cope with the needs of Central Chadic language typology, and it does so in combination with a bottom-up *dialectological* perspective. It remains informed by received typological wisdom from Afroasiatic linguistics regarding root-and-pattern and *weak radical* structures, applying it to a branch of Chadic that had long been considered innovative rather than archaic, because of the almost complete loss of a few diagnostic typological features of the common proto-language (like grammatical gender, broken plurals, etc.), yet ignoring aspects of phonology and morphophonology (like root-and-pattern and weak radicals) that reflect early or even pre-Chadic retentions rather than branch-internal innovations. The book provides new insights into historical (Central) Chadic phonology, in particular with regard to constitutive phonological units in the vocalic domain and their diachronic evolution. By identifying the ultimate segmental sources of palatalisation and labialisation prosodies, it unearths their deep-seated historical origins and describes their continuing effects on synchronic representations that tend to veil etymological relationships between lexical items in modern Central Chadic languages far beyond recognisability.

Acknowledgements

The author gratefully acknowledges valuable comments on a pre-final draft of the book by Paul Newman, with whom the author shares half a century of rewarding professional and personal relationship.

The author further acknowledges welcome input by two anonymous reviewers regarding the overall structure of the final version of the book.

Glossonyms Used for Central Chadic
Languages and Language Variants

GROUP	language
BATA	Bachama
	Bata
	Gude
	Jimi
	Sharwa
DABA	Tsuvan
	Buwal
	Mbudum
	Gavar
	Mazagway Hidi
MAFA	Daba
	Mafa
	Cuvok
TERA	Mefe
	Tera
	Nyimatli
	Ga'anda
SUKUR	Hwana
	Sukur
HURZA	Mbuko
	Vame
	Ndreme
MARGI	Bura
	Margi
	Margi-South
	Kilba
MANDARA	Matal
	Podoko
	Mandara
	Malgwa
	Glavda
	Dghwede
	Guduf
	Gwara

Glossonyms for Languages and Language Variants		xix
MOFU	Ouldeme	
	Muyang	
	Mada	
	Moloko	
	Zulgo	
	Gemzek	
	Merey	
	Dugwor	
	Mofu North	
	Mofu-Gudur	
MAROUA	Giziga	
	Giziga-Muturwa	
	Giziga-Marva	
	Mbazla	
LAMANG	Lamang	
	Hdi	
	Mabas	
HIGI	Kamwe-Nkafa	
	Kamwe-Futu	
	Kirya	
	Psikye	
	Bana	
KOTOKO-ISLAND	Buduma	
KOTOKO-NORTH	Afade	
	Mpade	
	Malgbe	
	Maltam	
KOTOKO-CENTRAL	Lagwan	
	Mser	
KOTOKO-SOUTH	Zina	
	Mazera	
MUSGUM	Vulum	
	Mulwi	
	Mbara	
	Muskum	
GIDAR	Gidar	

Abbreviations and Symbols

Ø	deletion of diachronic or synchronically underlying segment; non-representation of category
* —	reconstructed/hypothetical root or segment
^x —	invalid reconstruction
/.../	phonemic representation
[...]	phonetic representation; distinctive feature
[±syll]	ambivalent/underspecified for feature ‘syllabic’
>	input to output; change to
<	output from input; derived/stemming from
/_#	in (word-) final position
+	juncture between REDuplicated units; re-segmentalisation/phoneme split, e.g. /C ^w / > /C+w/
√	root shape incl. vocalisation slots (blanks, or filled by /a/)
√... (C)a	final lexical root vowel */a/
√... C(a)C...	optional medial slot for */a/
ə	epenthetic vowel schwa
+W	labialisation prosody (operating on the particular lexical item)
+Y	palatalisation prosody (operating on the particular lexical item)
— ^y , — ^w	indication of prosody (source/affected domain to the left)
aka	also known as
a ^y	/a/ affected by Y-prosody: usually yielding [e]
a ^w	/a/ affected by W-prosody: usually yielding [o]
ə ^y	epenthetic vowel affected by Y-prosody: usually yielding [i] or [i]
ə ^w	epenthetic vowel affected by W-prosody: usually yielding [u] or [u]
C ^y	palatalised consonant (by origin, or as affected by Y-prosody)
xx	

Abbreviations and Symbols		xxi
C ^w	labialised consonant (by origin, or as affected by W-prosody)	
^m b, ⁿ d, ^ŋ g, ...	prenasalised obstruents	
C	consonant (slot)	
CV.CV.CV.	syllable structure	
CC	Central Chadic	
fn.	footnote	
FV	final vowel */a/ (optional, following suffixal root-augmental element)	
incl.	including	
IPA	International Phonetic Alphabet	
PC	Proto-Chadic	
PCC	Proto-Central Chadic	
PLH	Proto-Lamang-Hdi	
RED	reduplicative root augment	
SIL	SIL International (formerly Summer Institute of Linguistics)	
V	vowel (slot)	
vs.	versus, as opposed to	