

9760.d.1222

Proceedings of the Ninth International Congress of
Phonetic Sciences, Copenhagen 1979

Actes du Neuvième Congrès International des
Sciences Phonétiques, Copenhague 1979

Akten des neunten internationalen Kongresses für
phonetische Wissenschaften, Kopenhagen 1979

PROCEEDINGS OF THE NINTH INTERNATIONAL CONGRESS
OF
PHONETIC SCIENCES

HELD IN COPENHAGEN 6 - 11 AUGUST 1979

VOLUME II



COPENHAGEN
1979

C O N T E N T S

VOLUME II

S y m p o s i a

Symposium No. 1

Phonetic Universals in Phonological Systems
and their Explanation

JOHN J. OHALA: Moderator's introduction (Summary)	5
THOMAS V. GAMKRELIDZE: Hierarchical relations among units as phonological universals.	9
ANDRÉ-GEORGES HAUDRICOURT: Apparition et disparition des occlusives sonores préglottalisées	16
ROBERT K. HERBERT: Typological universals, aspiration and post-nasal stops	19
JEAN-MARIE HOMBERT: Universals of vowel systems: the case of centralized vowels	27
BJÖRN LINDBLOM: Some phonetic null hypotheses for a biological theory of language	33
JOHN J. OHALA: Universals of labial velars and de Saussure's chess analogy	41
KENNETH L. PIKE: Universals and phonetic hierarchy	48

Symposium No. 2

The Psychological Reality of
Phonological Descriptions

VICTORIA A. FROMKIN: Moderator's introduction (Summary)	63
L.V. BONDARKO: On the phonological operations ensuring speech communication	67
LYLE CAMPBELL: The quest for psychological reality: external evidence in phonology	74

Editorial Committee:

ELI FISCHER-JØRGENSEN, JØRGEN RISCHER, and NINA THORSEN

assisted by the staff of the Institute of Phonetics,
University of Copenhagen

ANNE CUTLER: The psychological reality of word formation and lexical stress rules	79
BRUCE L. DERWING: Problems in establishing the psychological reality of linguistic constructs	86
WOLFGANG U. DRESSLER: Arguments and non-arguments for naturalness in phonology: on the use of external evidence	93
EDMUND GUSSMANN: Abstract phonology and psychological reality	101
KENNETH HALE: The problem of psychological reality in the phonology of Papago	108
PER LINELL: Psychological reality and the concept of phonological rule	114
ROYAL SKOUSEN: Empirical interpretations of psychological reality	121

Symposium No. 3

Acquisition of the Phonological System of the Mother Tongue

CHARLES A. FERGUSON: Moderator's introduction (Summary)	131
JOHN H.V. GILBERT: On the vowel and its nature, between eighteen months and five years	134
SARAH HAWKINS: The control of timing in children's speech	142
DAVID INGRAM: Cross-linguistic evidence on the extent and limit of individual variation in phonological development	150
HENG-HSIUNG JENG: The acquisition of Chinese phonology in relation to Jakobson's laws of irreversible solidarity	155
PATRICIA K. KUHL: Predispositions for the perception of speech by human infants	162
LISE MENN: Transition and variation in child phonology: modeling a developing system	169
PAULA MENYUK: Speech sound categorization by children	176

Symposium No. 4

Social Factors in Sound Change

EINAR HAUGEN: Moderator's introduction (Summary)	185
HENRIK BIRNBAUM: Ongoing sound change and the abductive model: some social constraints and implications	189
LARS BRINK and JØRN LUND: Social factors in the sound changes of modern Danish	196
IVAN FÓNAGY: Structure et aspects sociaux des changements prosodiques	204
WILLIAM LABOV: The social origins of sound change	212
BERTIL MALMBERG: Social structure and phonemic modification	222
FRED C.C. PENG: The reality of sound change: a socio-linguistic interpretation	229

Symposium No. 5

Temporal Relations within Speech Units

ILSE LEHISTE: Moderator's introduction (Summary)	241
GEORGE D. ALLEN: Formal and statistical models of timing: past, present, and future	245
ROBERT BANNERT: The effect of sentence accent on quantity	253
ROLF CARLSON, BJÖRN GRANSTRÖM, and DENNIS H. KLATT: Some notes on the perception of temporal patterns in speech	260
ANDREW DONOVAN and C.J. DARWIN: The perceived rhythm of speech	268
HIROYA FUJISAKI and NORIO HIGUCHI: Temporal organization of segmental features in Japanese disyllables	275
A.W.F. HUGGINS: Some effects on intelligibility of inappropriate temporal relations within speech units	283
DENNIS H. KLATT: Synthesis by rule of segmental durations in English sentences	290
SIEB G. NOOTEBOOM: Complex control of simple decisions in the perception of vowel length	298

- S.E.G. ÖHMAN, S. ZETTERLUND, L. NORDSTRAND, and O. ENG-
STRAND: Predicting segment durations in terms of a
gesture theory of speech production 305

Symposium No. 6

Motor Control of
Speech Gestures

- JAMES LUBKER: Moderator's introduction (Summary) 315
- JAMES H. ABBS: Speech motor equivalence: the need for a
multi-level control model 318
- R.A.W. BLADON: Motor control of coarticulation: linguis-
tic considerations 325
- R.G. DANILOFF and M.A.A. TATHAM: Segmental invariance re-
considered 332
- JOHN W. FOLKINS: Masseter, temporalis, and medial ptery-
goid activity with the mandible free and fixed 337
- THOMAS GAY and MICHAEL TURVEY: Effects of efferent and
afferent interference on speech production: implica-
tions for a generative theory of speech motor control 344
- HAJIME HIROSE: A correlation analysis of EMG activity
and the movement of selected speech organs 351
- JOSEPH S. PERKELL: On the use of orosensory feedback: an
interpretation of compensatory articulation experi-
ments 358
- HARVEY M. SUSSMAN: Motor unit discharge patterns during
speech: temporal reorganization due to coarticulatory
and prosodic events 365

Symposium No. 7

The Relation between Sentence
Prosody and Word Prosody

- EVA GÅRDING: Moderator's introduction (Summary) 375
- ARTHUR S. ABRAMSON: Lexical tone and sentence prosody in
Thai 380
- GÖSTA BRUCE: Word prosody and sentence prosody in Swedish 388
- J. 't HART and R. COLLIER: On the interaction of accentu-
ation and intonation in Dutch 395

- PŘEMYSL JANOTA: Some observations on the perception of
stress in Czech 403
- EUNICE V. PIKE: Word stress and sentence stress in vari-
ous tone languages 410
- NINA THORSEN: Lexical stress, emphasis for contrast, and
sentence intonation in Advanced Standard Copenhagen
Danish 417
- KAY WILLIAMSON: Sentence tone in some southern Nigerian
languages 424

Symposium No. 8

Perception of Speech versus
Non-Speech

- DAVID B. PISONI: Moderator's introduction (Summary) 433
- ANTHONY E. ADES: Speech & non-speech: what have we
learned? 438
- PIERRE L. DIVENYI: Some psychoacoustic factors in pho-
netic analysis 445
- MICHAEL F. DORMAN: On the identification of sine-wave
analogues of CV syllables 453
- M.E. GRUNKE and D.B. PISONI: Perceptual learning of
mirror-image acoustic patterns 461
- ALVIN M. LIBERMAN: Duplex perception and integration of
cues: evidence that speech is different from non-
speech and similar to language 468
- DOMINIC W. MASSARO: Issues in speech perception 474
- QUENTIN SUMMERFIELD and PETER J. BAILEY: What tells us
that speech is speech? 482

Index of Authors

493