CUMULATIVE CONTENTS

Collection of submitted material
Gary S. Tong

THE PRODUCTION OF PHONEMES
PRELIMINARY PRECEPTS

The five elements of oro-lingual geometrical mechanics

Element 1. The tongue as the center of an anchor manifold system
Element 2. The tongue divisions
Element 3. Trinodes
Element 4. Locking
Element 5. Active-stable interaction

Integration of elements

THE PRODUCTION OF PHONEMES

A KINESIOLOGICAL DESCRIPTION

PART 1— BASIC ELEMENTS

1.1 The lingual center of mass (barycenter)

1.2 Center(s) of mass of the tongue

1.3 The source of lingual nodes

1.4 Tongue divisions

PART 2— PRIMAL NODES

2.1 The primal nodes of the lingual frame

2.2 The three nodes - physical evidence of nodal masses

2.3 Directions of primal node actions — the Rule

2.4 The primary functions of the oral tract

2.4.1 Respiration

2.4.2 Feeding

2.4.3 Speech - the h, n, and m nodes

2.4.4 Anatomic factors of node generation

2.5 Equilibrium, distortion and hierarchy of node frames

2.5.1 Hierarchy of states of mergers - distortion/equilibrium

2.5.2 The lingual trinode

2.5.3 The extrinsic connections of the lingual trinode

PART 3— PRIMAL PRESETTINGS

3.1 Primal presetting positions

3.2 The mechanical roles of the primal nodes in primal presettings

3.2.1 The n nodal functions - agent of presetting

3.2.2 The h-m nodal functions - stable vs. active

3.2.3 Masking of the primary presettings

3.2.4 The role of primary presettings in oral tract functions

3.2.5 Notes on observing nodes

3.2.5a Nodes: isolated vs. engaged (pre-articulative)

3.2.5b Intrinsic (or anchor) vs. extrinsic (or manifold) agencies

3.2.5c Positional variants

PART 4—BASIC ACTIONS

4.1 The functionality of primal presettings

4.2 Inherent phonemic nodes of primal presettings

4.3 The n-node in dorsal presetting

4.4 The expansion of frame presettings

4.5 Sequential alternating

4.6 Mergers

4.6.1 The function of node merger

4.6.2 Mergers of primary nodes

4.7 Merger of dorsal, ventral and medial presettings in full articulation

4.8 Variation of force directions depending on primal presettings

4.9 Phoneme distribution in the merged phonemic ground

4.10 The merged general phonemic ground

4.11 Alternation of roles in the phonemic engine

4.12 Syllabification and alternation in tract states

4.13 - The 3 x 3 matrix

4.13.1 Field of articulation action: the 3 x 3 matrix or the general vowel quadrilateral

4.13.2 Transfer and locking of nodes

4.13.3 The 3 x 3 matrix at higher resolution

4.13.4 Gearbox mechanism

4.13.5 Superimposition and embedding of primal presettings

4.14 Primal node behavior in phoneme generation

4.14.1 Elements

4.14.2 Actions

4.14.3 Phoneme production: the roles of central, active and stabilizer nodes in articulation

PART 5—MATRIX MECHANICS
THE SIMPLE VOWELS AND SIMPLE CONSONANTS

5.1 First level mergers: simple vowels and simple consonants
5.2 General chart of first level mergers
5.3 The actions of the primal nodes in the articulative matrix
5.4 Matricial format
5.5 Geometric format
5.6 The inherent directional determinants of node movement directions: the two versions of the 3 x 3 matrix
5.7 Anatomic design of directional determination
5.8 Nodal movement in syllabification in primary settings
5.9 The two versions of matrix diagrams

PART 6—MATRICIAL GENERATION:
SIMPLE PHONEMES: THE FIRST LEVEL MERGERS

6.1 Nodal actions in producing the simple vowels

PART 7—COMPLEX CONSONANTS

7.1 Complex consonants
7.2 The three formats of complex mergers
7.3 Linear merger format
7.4 Linear format - lingual node framework of complex consonants (CCT)
7.5 The nodal positions in full articulation.
7.6 Lingual presetting aspects
7.7 Perceptibility
7.8 Relation of complex consonants taxonomy to IPA
7.9 Complex consonant secondary glide lines
7.10 CCT alernate diagrams
7.11 Node regions related to specific languages
7.12 Palatalization
7.13 Retrovection: directionality in certain phonemic consonant mergers
7.14 The j, w, l valvular faculties
7.14.1 Initial consonant clusters
7.15 Lingual presetting aspect
7.16 Comparison between IPA and CCT
7.17 Quantity of consonants in t and k lines
7.18 Voicing
7.19 Triadic functional areas
7.20 The presence of primal presettings
7.21 Divisions of articulatory targeting nodes
7.22 Infant vocalization
7.23 The quantities per node of connecting lines
7.24 Complex consonant production — matricial format
7.25 Complex consonants - orbital format

PART 8—ULTRA COMPLEX CONSONANTS

8.1 Ultra complex consonants
8.2 Merger mechanics
8.3 Ultra complex consonants - linear format
8.4 Ultra complex consonants - matricial format
8.5 Ultra complex consonants - orbital format

THE MECHANICS OF SPEECH ONTOGENY

1. Syllabic cycling - derivation —The 3x3 tongue anchor matrix

1a. The metaperistaltic tract

1b. The anchor map

1c. The (distribution of) lingual anchors in the 3x3 matrix

2. Cycles of food processing and speech

2.a.The jaw rotation factor

2b. The jaw rotation pivot register

2c. Order of anchor sequence in syllable production

2d. The McNeilage/Davis frame-content/CVsyllable mechanics interpreted as anchor-envelope process

3. Syllabification —the mandible-tongue unified coactivity

3a. The mandibular-lingual-cranial trisegment and the 3x3 temporomandibular joint register

3b. Jaw height relation to tongue shape is monadic unit activity.

3c. Five UV functions including feeding and communication are associated with specific mandibulo-lingual elevation and lingual shaping.

4. Symmetries of anchors

4a. And this in turn is an aspect of unified mandible-tongue behavior, so in the case of

4b. Jaw rotation is the essential factor

4c. Symmetries in syllable generation

4d. Shared mid-central anchoring

4e. Symmetry in antagonists pairs in mastication

4f. Symmetry in active-stable relations

4g. The Complexities

APPENDIX

B. Demonstration of frame-content affinities
C. Serial-parallel functions
D. Anatomic symmetries
E. References

END

THE MECHANICS OF MASTICATION

A. Trisegmentals in frameworks

B. The interpretation of lingual aspect of mastication as an anchor-matrix function

C. The masking factors

D. Structure

E. Action

The central anchor of mastication process

F. Deglutition initiation

G. Mandible-tongue coactivity

H. The elision:

I. Notes to chart MC: The isolated lingual anchor mechanics of the masticatory process cycle (on p. 9)

The steps in the masticatoryprocessing cycle in Chart MC :

J. Retronasal aroma perception

K. Lingual anchor m functions

1. Lingual anchor matrix: its various roles in of mastication and respiration

2. The lingual m anchor in nasal respiration mode

3. The lingual m anchor in the p-epiglottic stop tract

4. The lingual m anchor in food ingestion

5. The matrix of the n lingual anchor

6. The m-anchor in the matrix of the masticatory

7. The m lingual anchor of the full feeding function

8. The m lingual anchor in the speech

9. The m anchor in other functional mergers

Miscellaneous notes

References

THE ESSENTIALS OF SPEECH MECHANICS

A. METHOD for analyzing the speech mechanism

B. THE ESSENTIALS OF SPEECH MECHANICS

ARTICULATION (Phonation follows)

A. Anchor farmeworks

a.1 Sling attached structures — "Floaters"
a .2 - a.3 Nodes/anchors
a. 4. The speech framework

hB. Behaviors

b.1. Glottoregulation
Note: Accessibilty to measurements:
b.2. Metaperistalsis
Peristaltic patterns in articulation
b.2.1 Support for the *frame and content* theory of MacNeilage and Davis

C. Hierarchical organization

c. 1. Hierarchical series of anchor
c.2. Models of hierarchical sequence

D. The hierarchical organization of speech anchors

d.2. Definition of the term vocalization
d.3. The derivations of the speech anchor.
d.5. Hierarchical ranks of speech anchor generation
d.6. The alternate derivations of the speech anchor and phoneme sources from the respiratory and masticatory frame
d.7. Alternate hierarchical sequences of generating speech, respiration and mastication anchors

E. The anchor series of speech generated in the respiratory frame

0. The parent source anchor
1.0 General speech anchor
1.1 The alternating hierarchical series of anchors
2,1 to 3.0 are captions to figs. e. 3 and 4
3.1 Specific language general articulation
4.0 Specific phoneme anchors (sPhon⚓)
Note c: the specific Lg anchor system

F. Trimerism in the anchor system

f.6. Trimerism as metaperistalsis
f.8. Experiment

G. Anchor and envelope functions: mergers, anchor transformations

g.1 Anchor frame dynamics envelopes :
g.2. Vowel envelopes
g.4. Anchor systems - trimerism
g.5. Active vs. passive anchor agency
g.6 Envelope manifolds - definition
g.7. Example of primacy transfer in envelope manifold
g.7a. Alternation of roles
g.8. Superimposition
g.9. Mergers
g.10. Masking h
g.11. Anchor transformations
a) fluid glide
b) clutch-controlled switching
c) mixtures

H. Miscellaneous notes

I. References

Citations on monadism, p. 3

THE ESSENTIALS OF SPEECH MECHANICS - APPENDICES

Appendix 1. Chart A — annotations

Note1. Respiratory phoneme anchors and tract envelopes

Definition of channels

Note 2: Respiratory phonemes

Note 3: the m anchor

Note 4: Simple and complex mergers

Note 5: Lacunars

Note 6: Voiceless consonants

Note 7: Metaperistaltic series

Chart A

Synoptic map of the oro-velar lingual anchor channels

Chart B

The channels

Tract equalization in the channels

a. Dorsal stops:

b. Complex (diatonic) consonants

b. Complex (diatonic) consonants

c. RSP consonants

d. Vowels

Chart C

Synoptic lingual-oro-velar anchor map

Appendix 2. The metaperistaltic line of phonemes

Derivation of the linear series

Proprioception of the peristaltic line

Diagram 1. The metaperistaltic line of phonemes

Notes on the diagrams

NOTE: This file needs additional editing

Appendix 3. Phoneme production through mergers

Mergers according rank of element

Mergers according complexity

Observing phoneme merger production

Table 0. Examples of mergers according to complexity

Tables A to E

Table F. The merger patterns of complex voiceless consonants shown at three hierarchical levels\

Appendix 4. The location of the function anchors in the /p/-epiglottal stop tract

The /p/-epiglottal stop tract

The tract bisector and function anchors

The generation of the function anchors through mergers of the gate anchors of the /p/-epiglottal stop tract

Function anchors on lingual tract bisector

PHONATION

The anchor-envelopes of articulation and phonation

1. Anchor-envelopes of articulation and phonation
2. Speech respiration and active speech envelope primacies
Examples of primacy superimposition patterns in phoneme production
Voicing
Rounding
Notes on axial-transverse upper visceral tract structure
Axial tract anchor-envelope series
Transverse tract anchor-envelopes series

SYMMETRIES

Hyoid symmetries: forces balanced by the hyoid
The structural analogy of the facial-head sheet and the thoracic diaphragm