

CONCORDANCE OF PHONETIC ALPHABETS

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A concordance of 3 major phonetic alphabets used in North America is presented and discussed. Those alphabets considered are one used by the International Phonetic Association, one used for American dialectology and one used for American Indian languages. Comparisons are made in terms of vowel symbols, consonant symbols, secondary segmental symbols, and diacritic marks. Typewriter equivalents of standard symbols are also given. [phonetics, linguistics, North America, American Indians, phonetic symbols]

This paper is a brief concordance of the major phonetic alphabets currently in use by linguists and anthropologists in North America. The alphabets included are the International Phonetic Alphabet (abbreviated I in this paper), the Americanist alphabet used in the transcription of American Indian Languages (abbreviated A), and the alphabet of the Dialect Atlas of New England (abbreviated D). For convenience I have divided the concordance into five sections: 1) Primary Vowel Symbols, 2) Primary Consonant Symbols, 3) Secondary Segmental Symbols, 4) Diacritic Marks, and 5) Typewriter Symbols.

The form of I used in this paper is the 1951 revision as fully presented in The Principles of the International Phonetic Association (International Phonetic Association 1957). D is presented and discussed in the Handbook of the Linguistic Geography of New England (Kurath, Bloch and Hansen 1939). This alphabet is based on I, but includes certain modifications made to facilitate the transcription of American English dialect material. There is no single phonetic alphabet currently in use by students of American Indian Languages, for this reason I have consulted several alternate formulations of phonetic alphabets given by scholars in the field, most notably

Bloch and Trager (1942), Pike (1947), Trager (1958), and Shipley (1965). In general, I believe that I have selected Americanist symbols which are in fairly common use, and which would be accepted as standard by most workers in the field.

PRIMARY VOWEL SYMBOLS

All alphabets consulted represent with letter symbols only voiced oral vowels produced with a pulmonic egressive airstream. These vowels are described in terms of three parameters: vertical tongue position, horizontal tongue position, and lip position. In every case, these parameters are arranged in the form of two overlapping vowel quadrilaterals separated by the parameter of lip position. The lip position parameter has two values: rounded and spread or unrounded. The horizontal tongue position parameter has three values: front, central, and back. The major differences between the various systems consulted is in the number of parameter values recognized for vertical tongue position. I recognized four primary values, but inserts secondary symbols between these positions so that a total of six parameter values is ultimately recognized. Pike (1947) also recognizes six values along this parameter. Bloch and Trager (1942), Trager (1958), and Shipley (1965) add an additional value, making a total of seven. D does not actually represent vowels in terms of parameter values, rather vowels are placed at points within a vowel quadrilateral and prose statements are appended to define the degree of lip rounding associated with each vowel symbol. This makes it difficult to compare D symbols with those of the other systems, and some distortion is inevitable when vowels defined in this way are inserted into a parameter value matrix. Here, as elsewhere in this paper, the reader should consult the original works for a precise definition of symbols. A similar problem arises with the placement of I [ə] since it is recommended

in Principles (International Phonetic Association, 1957) that this symbol "be employed to denote any unrounded vowel situated in the interior of the triangle" [i. e. the triangle in the center of the vowel quadrilateral].

In the Table of Vowels [Table I], vowels from A, I, and D are displayed in terms of seven values for the tongue height parameter. Vowels on the left of each cell are unrounded, those on the right are rounded. Vowel symbols which are placed somewhat arbitrarily are I [ə], and D [ɑ], [ɒ], and [ə].

PRIMARY CONSONANT SYMBOLS

All alphabets consulted represent with letter symbols only consonants produced with a pulmonic egressive airstream (for a few exceptions see section 3). Consonants are defined in terms of three or four parameters: glottal state, tenseness, place of articulation, and manner of articulation. I and D implicitly use the tenseness parameter which is associated in the symbology with the glottal state parameter (i. e. voiced symbols are implicitly lax, voiceless symbols are implicitly tense). A recognizes tenseness only as a secondary feature represented with diacritics. The following list is a concordance of terms used in Shipley (1965), I and D for the values of the place and manner parameters.

Place of Articulation

<u>Shipley</u>	<u>I</u>	<u>D</u>	<u>Table</u>
bilabial	bilabial	bilabial	bilabial
labiodental	labiodental	labiodental	labiodental
apico-inter-dental	dental and alveolar	dental	dental
apico-post-dental	dental and alveolar	dental	dental
apico-alveolar	dental and alveolar	alveolar	alveolar
apico-palatal	retroflex	retroflex	retroflex
lamino-alveolar	palato-alveolar	alveolo-palatal	palato-alveolar

	alveolo- palatal	palato- alveolar palatal	alveolo-palatal palatal
lamino- palatal			
dorso-palatal		advanced velar	
dorso-velar	velar	velar	velar
dorso-post- velar	uvular		uvular
pharyngeal	pharyngeal		pharyngeal
glottal	glottal	glottal	glottal

Manner of Articulation

<u>Shipley</u>	<u>I</u>	<u>D</u>	<u>Table</u>
Stop (oral)	Plosive	Stop	Stop
Stop (nasal)	Nasal	Nasal	Nasal
Spirant (slit)	Fricative	Fricative (slit)	Spirant (slit)
Spirant (groove)	Fricative	Fricative (rill)	Spirant (groove)
Spirant (lateral)	Lateral		Spirant (lateral)
	Fricative		
Lateral	Lateral Non- Fricative	Lateral	Lateral
Trill	Rolled		Trill
Tap	Flapped	Flap	Flaps and Taps
Semi-vowel	Continuants and Semi-vowels	Frictionless Continuants	Approximant

In the Table of Consonants (Table II), voiceless symbols are placed on the left of each cell, voiced symbols on the right.

SECONDARY SEGMENTAL SYMBOLS

The following lists give a selection of some of the most common secondary segmental symbols employed in the I and A alphabets.

<u>Description</u>	<u>A</u>	<u>I</u>
Implosive voiced labial consonant	ɓ	ɓ
Implosive voiced dental consonant	ɗ	ɗ
Dental click		ɔ
Palatal click		ɕ
Lateral click		ɔ̣
Voiceless affricates [ts]	t ^s or c	ts or ʈ

	[tʃ]	t ^š or č	t or c
	[tʰ]	t ^h or ʰ	tʰ
Voiced affricates	[dz]	d ^ʒ or ʒ	dz or ʒ
	[dʒ]	d ^ʒ or ʒ	dʒ or ʒ
	[dl]	d ^l or ʎ	
Voiceless [w]		W	w or ʍ

DIACRITIC MARKS

The following list gives some of the most common diacritic marks classified according to use. C=any consonant, C^{vd}=any voiced consonant, C^{vl}=any voiceless consonant, V=any vowel, S=any letter symbol.

Description	<u>A</u>	<u>I</u>	<u>D</u>
Advanced	C̣ or C<	S ⁺ or Ṣ	V<, C̣
Affricated	C ^c [e.g. t ^s]	CC [e.g. t ^s]	C ^c [e.g. t ^s]
Aspirated	C ^h	C ^h	
Aspirated Strongly	Ch	Ch	Ch
Central Vowel	Ṽ	Ṽ	
Dental	C̣	C̣	C̣
Ejective	C ^ʼ	C ^ʼ	ʼC
Labialized	S _w	C, V ^ɸ	V _ɸ
Lax	Ṣ	C ^{vd}	C ^{vd}
Lowered	V [˘]	V, V ^r	V [˘]
Nasalized	Ṽ	Ṽ	Ṽ
Non-Syllabic	V̥	V̥	v
Palatized	C ⁱ	C̣ or C̣	C̣
Raised Vowel	V ^ˆ	V̆ or V ^ˆ	V ^ˆ
Retracted	C̣	Ṣ or S-	V>, C̣
Retroflex	C̣, V _r	Ṿi or V ^ɻ	Ṿ
Syllabic	C̣.C̣	C̣	
Tense	S̄	C̣ ^{vl}	C̣ ^{vl}
Voiced	C̣	C̣	C̣
Voiceless	Ṣ	Ṣ	Ṣ

In addition, the A alphabet uses Ṽ to represent a front rounded vowel if V is a back rounded vowel symbol and a back unrounded vowel if V is a front unrounded vowel symbol.

TYPEWRITER SYMBOLS

For convenience in typing phonetic materials some authors have substituted more easily typed symbols for standard symbols. These substitute symbols are most often used for spirants. The list given below shows the standard I symbol, and the most frequently substituted equivalent.

<u>I</u>	<u>Substitute</u>
ϕ	þ
β	b
ð	d
ʃ	š
ʒ	ž
γ	g
ŋ	ñ

Table I

TABLE OF VOWELS

	Front			Central			Back		
	A	I	D	A	I	D	A	I	D
High	i ï ü	i y	i y	i t	t t	t t	ï/ü u	u u	u u
Lower-High	I	ɪ ɣ	ɪ ɣ	ɛ	ɛ	ɛ	ɪ	ɔ	ɔ
High-Mid	e ö	e ø	e ø	ə	ə	ə	ɛ	o	o
Mean-Mid	E			ə	ə	ə	ɛ	ɔ	
Low-Mid	ɛ ÿ	ɛ æ	ɛ ɔ			ɛ ɔ	ʌ ɔ	ʌ ɔ	ʌ
Higher-Low	æ	æ	æ		ɐ	ɐ			ɔ
Low	ɑ	ɑ	ɑ	ɑ		ɑ	ɑ	ɑ	ɑ

Table II

TABLE OF CONSONANTS

		Bilabial	Labiodental	Dental	Alveolar	Retroflex	Palato-Alveolar	Alveolo-Palatal	Palatal	Velar	Uvular	Pharyngeal	Glottal
Stops	A	p b			t d	ʈ ɖ			c ɟ	k ɡ	q ɢ		ʔ
	I	p b			t d	ʈ ɖ			c ɟ	k ɡ	q ɢ		ʔ
	D	p b			t d	ʈ ɖ			c ɟ	k ɡ	q ɢ		ʔ
Nasals	A	m	ɱ		n	ɳ			ɲ	ŋ			
	I	m	ɱ		n	ɳ			ɲ	ŋ	ɴ		
	D	m	ɱ		n	ɳ			ɲ	ŋ			
Spirants (Slit)	A	ɸ β	f v	θ ð	ʃ ʒ		ʃ̺ ʒ̺		ç ʝ	x ɣ		ħ ʕ	h ɦ
	I	ɸ β	f v	θ ð	ʃ ʒ		ʃ̺ ʒ̺		ç ʝ	x ɣ	χ ʁ	ħ ʕ	h ɦ
	D	ɸ β	f v	θ ð	ʃ ʒ		ʃ̺ ʒ̺		ç ʝ	x ɣ			h ɦ
Spirants (Groove)	A				s z	ʂ ʐ							
	I				s z	ʂ ʐ							
	D				s z	ʂ ʐ							
Spirants (Lateral)	A				ʈ								
	I				ʈ	ɟ							
	D				ʈ	ɟ							
Laterals	A				l	ɭ			ʎ	ʟ			
	I				l	ɭ			ʎ	ʟ			
	D				l	ɭ			ʎ	ʟ			
Trills	A				ʀ	ʁ					ʀ		
	I				ʀ	ʁ					ʀ		
	D				ʀ	ʁ					ʀ		
Flaps and Taps	A				ɾ								
	I				ɾ	ɽ					ʀ		
	D				ɾ	ɽ					ʀ		
Approximants	A	w	ɥ						ɣ	ɣ			
	I	ɥ	ɥ		ɹ				ɣ	ɣ			
	D	ɥ	ɥ		ɹ				ɣ	ɣ	ʁ		

Note: Secondary articulations are included in ().

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