Phonological Features Chart (11.02)

				Corono	ıl			Pala	tal				_ N	on-co	ronal		_	J			_							(50	onorani	Cons	onants)												
		diacritic		Obstrue	nts			Obst	ruents				0)bstru	ents				L	arynge	als		-	Affric	ates			1	Vasals	& Liq	uids		Gli	des				,	Vowel	s				
		examples	[+cc	ns, -son	, +cor			[+cor	+ dors]				[+con	1s, -s	on, -c	or]			[-	cons,-	on]		[+con	s,-son	1 -/+0	ont]			[+co	15,+50	n]		[-con:	s, +sor	1]			[cons,	+son]				_
		t' th t	t d s	z 1	β θ	ð	∫ 3	с	çj	p ł	f	vф	βk	c g	хγ	qc	ξχ	к р	ſ	h fi	?		ff d	its c	dz kx	pfı	n n	ŋη	n ı	1	λr	J R	j v	vητ	цi	ıυ	ιυ	eε	оо	a a	е у у	øœ	: ə u	1
S	cons	+ + +	+ + +	+ +	+ +	+	+ +	+ +	+ +	+ +	+	+ +	+ +	+ +	+ +	+ +	+	+ +	+		- c	cons	+ +	+	+ +	+	+ +	+ +	+ +	+	+ +	+ +		-	- -		-	/						cons
Class	son					-					-						-		-		- :	son		-		-	+ +	+ +	+ +	+	+ +	+ +	+ +	+ +	+ +	+ +	+	+ +	+ +	+ +	+ +	- + +	+ +	son
O July	syll					-		•			-						-		-		- :	syll	1	-			-			-				-	- +	+ +	+	+ +	+ +	+ +	+ +	- + +	+ +	syll
la	abial					-				+ +	+	+ +	+ -				-		-		-	lab		-		+ -	+ -			-			+ +	+ -	+ +	+ +	+	+ +	+ +	+ +	+ +	- + +	+ +	lab
_	round	0 0 0	0 0 0	0 0	0 0	0	0 0	0 0	0 0				- 0	0 (0 0	0 (0	0 0	0	0 0	0 1	rnd	0 0	0	0 0	-	- 0	0 0	0 (0	0 0	0	- 4	+	- -	- 4	+		+ +		+ +	- + -	+ +	rnd
c	oronal	+ + +	+ + +	+ +	+ +	+	+ +	+ +	+ +								-		-		-	cor	+ +	+	+ -	-	- +	- +		+	- +	+ -		-	- -		-							cor
	ant	+ + +	+ + +	+ +	+ +	+				0 (0 0	0 0	0 0	0 (0 0	0 (0	0 0	0	0 0	0 :	ant		+	+ 0	0	+ 0	0 -	0 () +	0 +	+ 0	0 (0	0 0	0 0	0	0 0	0 0	0 0	0 (0 0	0 0	ant
res	dist	+				_	+ +	+ +	+ +	0 (0	0 0	0 0	0 (0 0	0 (0	0 0	0	0 0	0 (dist	+ +		- 0	0	0 -	0 -	0 () -	0 -	- 0	0 (0	0 0	0 (0	0 0	0 0	0 0	0 (0 0	0 0	dist
d atr	orsal					-		+ +	+ +				- +	+ +	+ +	+ +	+	+ -	-		- 0	dor	+ +		- +	- 1		+ +	+ +		+ -	- +	+ +	+ -	+ +	+ +	+	+ +	+ +	+ +	+ +	- + +	+ +	dor
y ac	high	0 0 0	0 0 0	0 0	0 0	0	0 0	+ +	+ +	0 (0 0	0 0	0 +	+ +	+ +		-	- 0	0	0 0	0 1	nigh	+ +	. 0	0 +	0	0 0	+ -	+ -	- 0	+ 0	0 -	+ +	+ +	+ +	+ +	+				. + +		- +	high
Pla	low	0 0 0	0 0 0	0 0	0 0	0	0 0			0 (0 0	0 0	0 -				-	- 0	0	0 0	0	low		0	0 -	0	0 0			0	- 0	0 -	- -	-	- -		-	/		+ +				low
	back	0 0 0	0 0 0	0 0	0 0	0	0 0			0 (0 0	0 0	0 +	+ +	+ +	+ +	+	+ 0	0	0 0	0 b	ack		0	0 +	0	0 0	+ -	- 4	- 0	- 0	0 +	- 4		+ -	- 4	+	/	+ +				+ +	back
	tense	0 0 0	0 0 0	0 0	0 0	0	0 0			0 (0 0	0 0	0 -					- 0	0	0 0	0 t	ense		0	0 -	0	0 0		٠.	- 0	- 0	0 -			_ +	- 4		+ -	+ -	- +	+ -	. + -	- +	tense
p	haryngeal					-											-	- +	+		- p	har		-		-				_				-	- +	+ +	+	+ +	+ +	+ +	+ +	- + +	+ +	phar
	ATR	0 0 0	0 0 0	0 0	0 0	0	0 0	0 0	0 0	0 (0 0	0 0	0 0	0 (0 0	0 (0	0 -	-	0 0	0 4	ATR	0 0	0	0 0	0	0 0	0 0	0 (0 0	0 0	0 0	0 (0	0 +	- 4		+ -	+ -		+ -	. + -		ATR
la Se	voice		- + -	+ -	+ -	+	- +	- +	- +		F -	+ -	+ -	- +	- +	- +		+ -	-	- +	-	voi	- +		+ -		+ +	+ +	+ +	+ +	+ +	+ +	+ +	+ -	+ +	+ +	+ -	+ +	+ +	+ +	+ +	- + +	+ +	voi
Laryngeal features	SG	- + -		- +		-											-		-	+ +	-	SG		- 1		-								-	- -		_	[SG
Lar	CG	+				_					-						-		-		+	CG		- 1		-	-			-				-	- -		_							CG
	cont		+	+ +	+ +	+	+ +		+ +		+	+ +	+ -		+ +		+	+ +	+	+ +	- (cont	± ±	± :	± ±	± .				+	+ +	+ +	+ +	+ +	+ +	+ +	+	+ +	+ +	+ +	+ +	- + +	+ +	cont
16 36	strident		+	- + -		-					+	+ -					-		-		- s	trid	+ +	+	+ -	+				-				-	- -		_	/						strid
Manner	lateral			- +	+ -	_					-						-		-		-	lat		- 1		-				+	+ -			-	- -		_	[lat
Me	del rel					_				I	_						-		-		- d	l rel	+ +	+	+ +	+				_			- -	-	- -		_	[d rel
	nasal					-				I	_						-		-		- n	asal		- [-	+ +	+ +	+ +					-	- -		_	[nasal
	_										_		_		_			_			!_		_							_														н

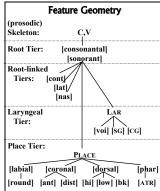
Place and Manner of Articulation	Labial	Labiodental	Dental	Alveolar	Retroflex	Postalveolar	Palatal	Velar	Uvular	Pharyngeal	Glottal
Plosive	p b			t d	ţd		Сј	k g	q G		?
Nasal	m	ŋ		n	η		ŋ	ŋ	N		
Trill	В			r					R		
Tap/Flap				ſ	τ						
Fricative	φβ	f v	θð	s z	ş z		çj	хү	Χк	ħΥ	h h
Lateral Fricative				łђ		∫ 3					
Approximant		υ		Ţ	Ł		j	щ			
Lateral Approximant				1	l		λ	L			
labial	+	+	-	-	-	-	-	-	-	-	-
coronal	-	-	+	+	+	+	+	-	-	-	-
dorsal	-	-	-	-	-	+	+	+	+	-	-
pharyngeal	-	-	-	-	-	-	-	-	-	+	-

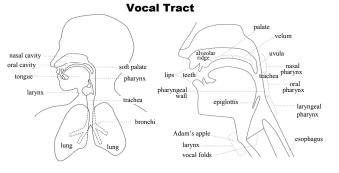
SONORITY SCALE (varies somewhat across language									
1 vowels	2 glides	3 liquids	5 fricatives	6 stops & affricates					
+syllabic	+syllabic – syllabic								
- consc	onantal		+ consonantal						
+	-approximant		approximant						
	+ sono	orant		- son	orant				
	+	- continuant	[-cont] [± cont] - contin						

NOTES • though nasals are specified [-cont] due to obstruction of the oral cavity, nasal airflow makes them more sonorous than stops

 $\bullet \text{ the vowel [a] is central (not front, as in some charts) because it can participate in a 3-way color contrast: [æ] vs. [a] vs. [a] \\$ • this feature system is 3-valued with 0 = unspecified (assumed to be obligatory for place features whose mother's value is '-')

Variants	More Sounds
š = ∫	⊙ bilabial click
č = t∫	dental click
y = j	! (post) alveolar click
r = 1	‡ palato-alveolar click
j = 3	alveolar lateral click
c = ts	1 alveolar lateral flap
} = L	fj simultaneous ∫ and x
ž = 3	ų voiced labio-palatal approximate
j = d3	H voiceless epiglottal fricative
$\ddot{u} = y$	§ voiced epiglottal fricative
ö = œ	ç [-voi] alveolo-palatal fricative
a = a	z voiced alveolo-palatal fricative





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	Front [+front -back]	Central [-front -back]	Bac [-front	
High	i • y——	i \u-	—— w •	u [+tense]
[+ high –low]	IY		U	[-tense]
Mid [-high -low]		€ 6		O [+tense]
	8 0	2 3	β — Λ ·) [-tense]
Low	\	æ	\ B	[+tense]
[-high +low]	401010			D [-tense]

DIA	SUPRASEGMENTALS						
	SUPKASEGMENTALS						
voiceless n d	" breathy voice b a	primary stress					
voiced § ţ	creaky voiced b a	secondary stress					
h aspirated th dh	_ linguolabial t d	: long · half long					
more rounded 3	w labialized tw dw	extra short					
less rounded 🤉	^j palatalized t ^j d ^j	minor (foot) group					
advanced u	Y velarized tY dY	major (intonation) group					
retracted e	§ pharyngealized t§ d§	. syllable break					
dental t d	~ nasalized ẽ	TONES AND WORD ACCENTS					
apical t d	ⁿ nasal release d ⁿ	€ extra high rising					
laminal ţ d	¹ lateral release d ¹	é † high ☐ ☐ falling					
centralized ë	no audible release	ē d mid di ni rising					
* md-centralized ě	~ velar or pharyngeal 1	è low] low rising					
syllabic ņ	ATR e RTR e	ề J extra low ⊣ rise fall					
non-syllabic e	, lowered e	↓ downstep / global rise					
rhoticity &	raised e	↑ upstep 🔪 global fall					