

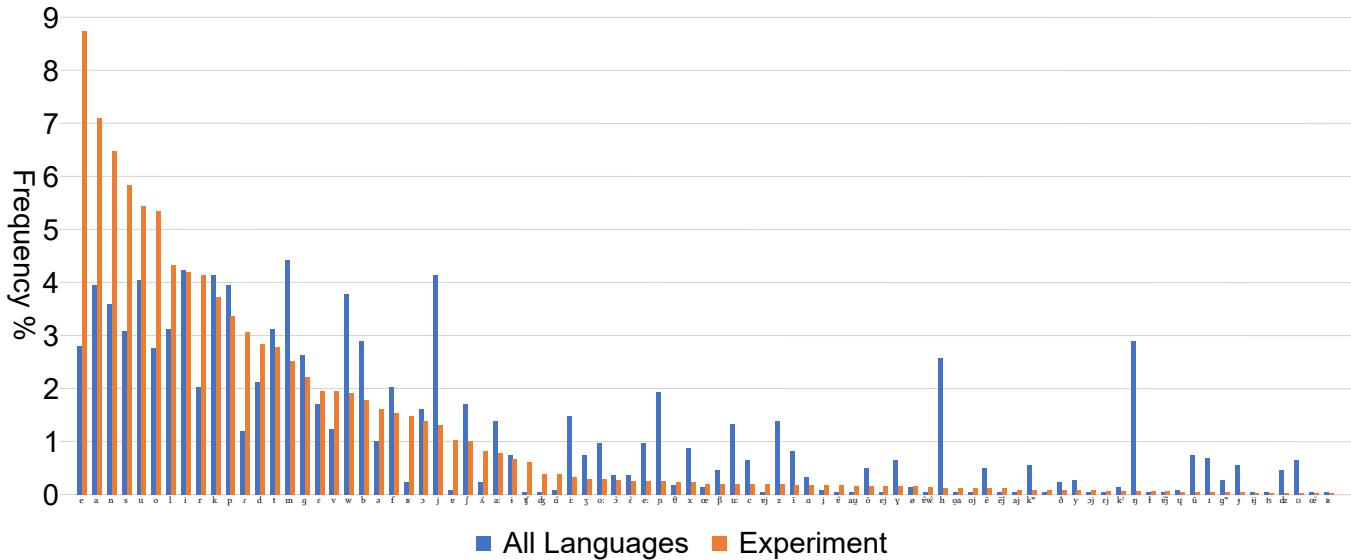
Appendix 1 - Concept Groups

Concept	Type	Leipzig/Jakarta	Swadesh 100	Swadesh 207
0	Ash	Noun	•	•
1	Back	Noun	•	•
2	Big	Adjective	•	•
3	Bird	Noun	•	•
4	Black	Adjective	•	•
5	Blood	Noun	•	•
6	Bone	Noun	•	•
7	Breast	Noun	•	•
8	Child	Noun	•	•
9	Dog	Noun	•	•
10	Ear	Noun	•	•
11	Egg	Noun	•	•
12	Eye	Noun	•	•
13	Far	Adjective	•	•
14	Fire	Noun	•	•
15	Fish	Noun	•	•
16	Foot	Noun	•	•
17	Good	Adjective	•	•
18	Hair	Noun	•	•
19	Hand	Noun	•	•
20	Heavy	Adjective	•	•
21	Horn	Noun	•	•
22	I	Function	•	•
23	In	Function	•	•
24	Knee	Noun	•	•
25	Leaf	Noun	•	•
26	Leg	Noun	•	•
27	Liver	Noun	•	•
28	Long	Adjective	•	•
29	Louse	Noun	•	•
30	Meat	Noun	•	•
31	Mouth	Noun	•	•
32	Name	Noun	•	•
33	Neck	Noun	•	•
34	New	Adjective	•	•
35	Night	Noun	•	•
36	Nose	Noun	•	•
37	Not	Function	•	•
38	Old	Adjective	•	•
39	One	Numbers	•	•
40	Rain	Noun	•	•
41	Red	Adjective	•	•
42	Root	Noun	•	•
43	Rope	Noun	•	•
44	Salt	Noun	•	•
45	Sand	Noun	•	•
46	Skin	Noun	•	•
47	Small	Adjective	•	•
48	Smoke	Noun	•	•
49	Star	Noun	•	•
50	Stone	Noun	•	•
51	Tail	Noun	•	•
52	Thick	Adjective	•	•
53	ToBite	Verb	•	•
54	ToBlow	Verb	•	•
55	ToBurn	Verb	•	•
56	ToCome	Verb	•	•
57	ToDrink	Verb	•	•
58	ToEat	Verb	•	•
59	ToFall	Verb	•	•
60	ToGive	Verb	•	•

Appendix 1 - Concept Groups

61	ToHear	Verb	.	.	.
62	ToHit	Verb	.		.
63	ToKnow	Verb	.	.	.
64	ToLaugh	Verb	.		.
65	ToSay	Verb	.	.	.
66	ToSee	Verb	.	.	.
67	ToStand	Verb	.	.	.
68	ToSuck	Verb	.		.
69	ToTie	Verb	.		.
70	Tongue	Noun	.	.	.
71	Tooth	Noun	.	.	.
72	Water	Noun	.	.	.
73	What	Function	.	.	.
74	Who	Function	.	.	.
75	Wide	Adjective	.		.
76	Wind	Noun	.		.
77	Wing	Noun	.		.
78	YouPlural	Function	.	.	.
79	YouSingular	Function	.	.	.

Appendix 2 - Prior Segment Frequencies



Appendix 3 - Prior Frequencies

Appendix 3 - Prior Frequencies

$\text{dz} \rightarrow z$

Leaf.Frondea									
f	r	o	n	dz	-	a			
f	r	u	n	z	-	ə			

$\text{a} \rightarrow \text{ea}$

ToDrink.Primary									
b	w	a	-	-	β	-			
b	-	ea	-	-	-	-			

$\text{a} \rightarrow i$

ToDrink.Primary									
b	w	a	-	-	β	-			
b	-	i	β	e	r	-			

$\text{a} \rightarrow \emptyset$

ToDrink.Primary									
b	w	a	-	-	β	-			
b	-	∅	-	-	β	-			

$\text{dʒ} \rightarrow j$

Leg.Gamba									
dʒ	ã	-	p	-					
j	a	m	b	e					

$\text{a} \rightarrow \text{a:}$

Meat.Primary									
tʃ	a	r	-	-	-				
c	a:	r	-	-	-				

$\text{œ} \rightarrow \text{ea}$

Star.Primary									
-	s	t	-	œ	-	l	-		
-	s	t	-	ea	-	-	-		

$\text{œ} \rightarrow \text{ɔj}$

Leaf.Primary									
f	-	œ	j	-	-				
f	-	ɔj	-	-	-				

$\text{au} \rightarrow \text{a}$

Bird.Aucellus									
-	au	k	-	e	l	l	u	s	
w	a	z	-	o	-	-	-	-	

$\text{œ} \rightarrow \text{ga}$

Leaf.Primary									
f	-	œ	j	-	-				
f	-	ga	-	j	e				

$\text{œ} \rightarrow \text{o:}$

Egg.Primary									
-	œ	f	-	-	-				
-	o:	w	u	m	-				

$\text{dʒ} \rightarrow \text{g}^w$

Blood.Primary									
s	i	n	dʒ	-	e	-	-	-	
s	a	n	g ^w	-	i	n	e	m	

Appendix 3 - Prior Frequencies

$\text{œ} \rightarrow \text{i}$:

Liver.Primary									
f	-	œ	-	-	t	-	-	-	-
f	-	i:	k	a:	t	u	m		

$\text{œ} \rightarrow \text{e}$:

Star.Primary									
-	s	t	-	œ	-	l	-	-	-
-	s	t	-	e:	l	l	a		

$\text{ej} \rightarrow \text{ə}$

ToBurn.Cremare									
k	-	ej	m	a	r	e			
k	r	ə	m	a	-	-			

$\text{ej} \rightarrow \tilde{\varepsilon}$

Breast.Primary									
s	ej	-	u	-	-	-	-	-	-
s	ɛ̃	-	-	-	-	-	-	-	-

$\text{ej} \rightarrow \emptyset$

Old.Primary									
v	-	ej	-	-	λ	u	-	-	-
v	j	ø	-	-	-	-	-	-	-

$\text{œ} \rightarrow \emptyset$

Fire.Focus									
f	-	œ	-	-	-	-	-	-	-
f	-	ø	-	-	-	-	-	-	-

$dʒ \rightarrow y$

Liver.Primary									
f	-	e	dʒ	ə	-	-	-	-	-
f	-	i	y	ə	ð	u	-	-	-

$dʒ \rightarrow j$

I.Primary									
dʒ	i	-	-	-	-	-	-	-	-
j	-	-	-	-	-	-	-	-	-

$dʒ \rightarrow c$

Hair.Capillus									
dʒ	-	v	ɛ	-	-	-	-	-	-
c	a	v	e	l	-	-	-	-	-

$ɔj \rightarrow ɔ$

Leaf.Primary									
f	-	ɔj	-	-	-	-	-	-	-
f	-	ɔ	λ	λ	a				

$dʒ \rightarrow f$

Rain.Primary									
p	j	ɔ	d	dʒ	-	a			
p	l	ɛ	-	f	-	-			

$qa \rightarrow ɥ$

Rain.Primary									
p	l	qa	-	-	j	e			
p	l	ɥ	-	-	i	-			

Appendix 3 - Prior Frequencies

$\text{qa} \rightarrow \text{y}$

Night.Primary

n	-	qa	p	t	e	-
n	-	y	-	t	-	-

$\text{qa} \rightarrow \text{oj}$

Leaf.Primary

f	-	qa	-	j	e
f	-	oj	-	-	-

$dʒ \rightarrow \text{ʃ}$

Hair.Capillus

dʒ	-	v	ɛ	-	-	-	-
ʃ	ə	v	ø	-	-	-	-

$\text{qa} \rightarrow \text{œ}$

Leaf.Primary

f	-	qa	-	j	e
f	-	œ	j	-	-

$\text{qa} \rightarrow \text{i}$

ToKnow.Cognoscere

k	u	-	n	qa	ʃ	t	e	-	-
k	u	-	p	ɔ	i	s	-	e	r

$\text{qa} \rightarrow \emptyset$

Tail.Primary

c	qa	d	ə
k	ø	-	-

$dz \rightarrow d$

Leaf.Frondea

f	r	o	n	dz	-	a
f	r	o	n	d	e	a

$\text{qa} \rightarrow \text{o}$:

ToKnow.Cognoscere

k	u	-	n	qa	ʃ	t	e	-	-
k	o	g	n	ɔ:	s	k	e	r	e

$oj \rightarrow \text{ɔj}$

YouPlural.Primary

v	oj	-	-
v	ɔj	s	-

$oj \rightarrow a$

Skin.Primary

k	-	oj	i	-	n	-	-
k	w	a	-	-	-	n	-

$dʒ \rightarrow \text{f}$

Red.Rubeus

r	u	-	dʒ	e	-	-
r	ɔ	-	f	-	-	-

$ej \rightarrow \text{ɛj}$

Ear.Primary

ɔ	b	ej	-	-	-	-	-
ɔ	r	ɛj	-	-	-	-	-

Appendix 3 - Prior Frequencies

$\text{ej} \rightarrow \text{\textcircled{e}}$

ToBurn.Cremare						
k	-	ej	m	a	\textcircled{e}	e
k	r	\textcircled{e}	m	a	-	-

$\text{ej} \rightarrow \tilde{\epsilon}$

Breast.Primary						
s	ej	-	u	-	-	-
s	\tilde{\epsilon}	-	-	-	-	-

$\text{\textcircled{z}} \rightarrow \text{i}$

ToBurn.Incendere						
\textcircled{i}	n	\textcircled{f}	i	n	d	\textcircled{z}
\textcircled{i}	-	s	e	n	\textcircled{d}\textcircled{z}	i

$\text{\textcircled{o}} \rightarrow \text{\textcircled{oe}}$

Leaf.Primary						
f	-	\textcircled{oj}	-	-	-	-
f	-	\textcircled{oe}	j	-	-	-

$\text{i} \rightarrow \text{m}$

Rope.Restis						
\textcircled{v}	-	e	\textcircled{f}	t	-	\textcircled{i}
r	e	s	t	-	e	m

$\text{i} \rightarrow \text{qa}$

ToKnow.Cognoscere						
k	u	-	\textcircled{p}	\textcircled{i}	s	-
k	u	-	n	\textcircled{qa}	\textcircled{f}	t

$\tilde{\text{ej}} \rightarrow \text{\textcircled{e}}$

In.In	
\tilde{\text{ej}}	-
\textcircled{e}	n

$\text{\textcircled{z}} \rightarrow \text{\textcircled{f}}$

Red.Rubeus						
\textcircled{v}	u	-	\textcircled{z}	-	-	-
r	\textcircled{o}	-	\textcircled{f}	-	-	-

$\tilde{\text{ej}} \rightarrow \text{\textcircled{a}}$

In.In	
\tilde{\text{ej}}	-
\textcircled{a}	-

$\tilde{\text{ej}} \rightarrow \text{\textcircled{e}}$

In.In	
\tilde{\text{ej}}	-
\textcircled{e}	n

$\tilde{\text{ej}} \rightarrow \text{i}$

In.In	
\tilde{\text{ej}}	-
\textcircled{i}	n

$\tilde{\text{ej}} \rightarrow \text{\textcircled{e}}$

In.In	
-------	--

Appendix 3 - Prior Frequencies

$\tilde{e}j \rightarrow \tilde{a}$

In.In	
$\tilde{e}j$	-
\tilde{a}	-

$\tilde{e}j \rightarrow i$

In.In	
$\tilde{e}j$	-
i	n

$\tilde{e}j \rightarrow \varepsilon$

In.In	
$\tilde{e}j$	-
ε	n

$\theta \rightarrow h$

ToKnow.Cognoscere									
k	o	-	n	o	θ	-	e	r	-
k	i	-	n	ɔ	h	-	-	-	-

$\theta \rightarrow ts$

ToStand.Altiare					
a	l	θ	a	r	-
a	l	ts	a	r	e

$x \rightarrow l$

Leaf.Primary					
-	-	o	x	-	a
f	-	o	l	i	a

$\tilde{\varepsilon} \rightarrow ej$

Breast.Primary					
s	$\tilde{\varepsilon}$	-	-	-	-
s	ej	-	u	-	-

$\tilde{\varepsilon} \rightarrow ej$

Breast.Primary					
s	$\tilde{\varepsilon}$	-	-	-	-
s	ej	-	u	-	-

$x \rightarrow t$

Old.Primary									
b	j	e	x	o	-	-	-	-	-
w	-	e	t	u	l	u	s		

$\tilde{\varepsilon} \rightarrow u$

Far.Primary									
l	w	$\tilde{\varepsilon}$	-	t	$\tilde{\varepsilon}$	-	-	-	-
λ	-	u	n	t	a	-	-	-	-

$\theta \rightarrow t$

Leg.Petiolus									
p	e	-	θ	i	o	l	o	-	-
p	e	-	t	i	o	l	u	s	

$\tilde{o} \rightarrow u:$

One.Primary					
\tilde{o}	-	-	-	-	-
u:	n	u	s		

Appendix 3 - Prior Frequencies

$\tilde{\text{o}} \rightarrow \tilde{\text{o}}$

One.Primary				
$\tilde{\text{o}}$	-	-	-	-
$\tilde{\text{o}}$	-	-	-	-

$\text{ə} \rightarrow \text{i:}$

Root.Radicina							
r	ə	d	ə	tʃ	i	n	ə
r	a:	d	i:	k	i:	n	a

$\text{i} \rightarrow \text{a}$

ToDrink.Primary							
b	-	i	β	e	r	-	-
b	w	a	-	-	v	-	-

$\text{i} \rightarrow \tilde{\text{e}}$

In.In			
i	n		
$\tilde{\text{e}}$	j	-	

$\text{i} \rightarrow \tilde{\text{e}}$

In.In			
i	n		
$\tilde{\text{e}}$	j	-	

$\text{z} \rightarrow \text{w}$

Rain.Primary							
p	l	u	-	z	-	ə	-
p	l	u	-	w	i	a	-

$\text{i} \rightarrow \tilde{\text{o}}$

Blood.Primary							
s	i	n	dʒ	-	e	-	-
s	ɔ	-	g	-	-	-	-

$\text{i} \rightarrow \emptyset$

ToDrink.Primary							
b	-	i	β	e	r	-	-
b	-	ø	-	-	v	-	-

$\text{i} \rightarrow \text{o:}$

ToKnow.Cognoscere							
k	u	-	n	i	s	-	e
k	o	g	n	o:	s	k	e

$\text{i} \rightarrow \text{i:}$

ToLaugh.Primary							
r	i	-	d	e	-	-	-
r	i:	-	d	e:	r	e	-

$\text{i} \rightarrow \text{e:}$

Hair.Primary							
p	-	i	l	u	-	-	-
p	-	e:	l	-	-	-	-

$\text{o} \rightarrow \text{oj}$

Leaf.Primary							
f	-	ɔ	ʌ	ʌ	a	-	-
f	-	ɔj	-	-	-	-	-

Appendix 3 - Prior Frequencies

$\theta \rightarrow \kappa$

Black.Primary

n	ɛ	y	f	θ	-	-
n	w	a	-	κ	-	-

$\theta \rightarrow r$

Black.Primary

n	ɛ	y	f	θ	-	-
n	-	i	g	r	u	m

$\theta \rightarrow ej$

ToBurn.Cremare

k	r	θ	m	a	-	-
k	-	ej	m	a	κ	e

$\theta \rightarrow ej$

ToBurn.Cremare

k	r	θ	m	a	-	-
k	-	ej	m	a	r	e

$\theta \rightarrow \tilde{e}$

In.In

θ	n
\tilde{e}	-

$\theta \rightarrow \tilde{e}j$

In.In

θ	n
$\tilde{e}j$	-

$\mathfrak{z} \rightarrow f$

Rain.Primary

p	l	u	-	\mathfrak{z}	-	θ
p	l	ε	-	f	-	-

$i \rightarrow \xi a$

ToDrink.Primary

b	-	\mathfrak{i}	β	e	r	-
b	-	ξa	-	-	-	-

$\tilde{\mathfrak{s}} \rightarrow i$

Blood.Primary

s	$\tilde{\mathfrak{s}}$	-	g	-	-	-	-
s	\mathfrak{i}	n	d \mathfrak{g}	-	e	-	-

$\circ j \rightarrow oj$

YouPlural.Primary

v	$\circ j$	s	-
v	o j	-	-

$\circ j \rightarrow j$

ToTie.Primary

l	$\circ j$	i	-	-	-
l	j	-	e	-	-

$\kappa \rightarrow a$

ToSuck.Primary

f	u	-	f	a	κ	-	-
s	u	k	k	j	a	r	e

Appendix 3 - Prior Frequencies

k → *a*:

ToSuck.Primary						
f	u	-	f	a	k	-
c	u	-	c	-	a:	-

k → *g^w*

Blood.Primary						
s	a	n	k	-	-	-
s	a	n	g^w	-	i	n e m

k → *j*

Leg.Gamba				
k	a	m	b	ə
j	a	m	b	e

k → *h*

Bird.Aucellus						
-	au	k	-	e	l	l u s
-	u	h	-	ɛ	-	-

k → *ə*

Black.Primary				
n	w	a	-	k
n	ɛ	y	f	ə

k → *R*

Ear.Primary						
ɔ	k	ej	-	-	-	-
ɔ	R	ej	-	-	-	-

p → *c*

Night.Primary					
n	-	qa	p	t	e
n	-	o	c	t	e m

ʃ → *dʒ*

Hair.Capillus						
ʃ	ə	v	ø	-	-	-
dʒ	-	v	ɛ	-	-	-

k → *n*

Knee.Genuculum						
dʒ	-	i	n	ɔ	k	k
dʒ	-	e	n	u	n	k^j

s → *r*

Back.Primary					
d	-	ɔ	s	s	o
d	-	o	r	s	u m

j → *tʃ*

Bird.Aucellus						
-	u	tʃ	j	ɛ	-	l
-	u	t	tʃ	ɛ	l	l o

j → *r*

Mouth.Gula				
g	œ	j	-	
g	u	f	ə	

Appendix 3 - Prior Frequencies

j → i

ToBurn.Incendere										
í	-	s	ẽ	-	d	j	a	r	-	
í	-	s	e	n	dʒ	i	a	r	-	

j → œj

ToTie.Primary

l	j	-	e	-	-					
l	œj	i	-	-	-					

j → o

Eye.Primary

-	ɔ	k	k	-	j	o	-			
-	o	-	x	-	o	-	-			
-	o	-	x	-	o	-	-			

k → l

Old.Primary

v	-	ɛ	k	-	k	j	o			
w	-	e	t	u	l	u	s			

p → y

Water.Primary

a	-	p	-	ə						
aj	-	y	w	ə						

p → k^w

Water.Primary

a	-	p	-	ə						
a	-	k ^w	-	a						

f → i

ToSuck.Primary

ʃ	u	-	ʃ	a	r	-	-			
s	y	-	s	-	i	-	-			

g → n̩

Knee.Genuculum

g	-	e	n	i	-	k	u	l	u	m
j	-	-	n̩	ɔ	-	-	-	-	-	-

t → k^j

Old.Primary

w	-	e	t	u	l	u	s			
v	-	e	k ^j	-	-	-	-			

t → h

Bird.Aucellus

-	u	t	tʃ	ɛ	l	l	o	-		
-	u	h	-	ɛ	-	-	-	-		

t → c

Night.Primary

n	-	ɔ	t	t	e	-				
n	-	o	c	t	e	m				

t → x

Old.Primary

w	-	e	t	u	l	u	s			
b	j	e	x	o	-	-	-			

Appendix 3 - Prior Frequencies

$t \rightarrow \theta$

Leg.Petiolus

p	e	-	t	i	o	l	u	s
p	e	-	θ	i	o	l	o	-

$b \rightarrow n$

Name.Nominem

n	o	m	-	b	r	e	-
n	o:	m	i	n	-	e	m

$t \rightarrow i$

Skin.Primary

k	-	o	t	e	n	n	a
k	-	oj	i	-	n	-	-

$d \rightarrow dz$

Leaf.Frondea

f	r	o	n	d	e	a
f	r	o	n	dz	-	a

$d \rightarrow \mathfrak{z}$

ToEat.Manducare

m	a	n	d	u	k	a:	r	e
m	a	n	\mathfrak{z}	-	-	a:	-	-

$b \rightarrow g^w$

Tongue.Primary

l	i	m	b	-	\mathfrak{a}
l	i	n	g^w	-	a

$f \rightarrow \mathfrak{dʒ}$

Rain.Primary

p	l	ε	-	f	-	-
p	j	ɔ	d	$\mathfrak{dʒ}$	-	a

$f \rightarrow \mathfrak{z}$

Rain.Primary

p	l	ε	-	f	-	-
p	l	u	-	\mathfrak{z}	-	\mathfrak{a}

$r \rightarrow j$

Mouth.Gula

g	u	r	\mathfrak{a}
g	œ	j	-

$r \rightarrow n$

Blood.Primary

s	a	n	g	-	-	r	e	-
s	a	n	g^w	-	i	\mathfrak{n}	e	m

$r \rightarrow a:$

ToSuck.Primary

f	u	-	f	a	r	-	-
c	u	-	c	-	a:	-	-

$r \rightarrow a$

ToSuck.Primary

f	u	-	f	a	r	-	-
s	u	k	k	j	a	r	e

Appendix 3 - Prior Frequencies

w → ʒ

Rain.Primary

p	l	u	-	w	i	a
p	l	u	-	ʒ	-	ə

ɔj → ɔa

Leaf.Primary

f	-	ɔj	-	-	-	-
f	-	ɔa	-	j	e	

w → dʒ

Rain.Primary

p	l	u	-	w	i	a
p	j	ɔ	d	dʒ	-	a

w → ø

Black.Primary

n	w	a	-	β	-	-
n	ø	-	r	-	-	-

i → ʒ

ToBurn.Incendere

í	-	s	e	n	dʒ	i	a	r	-
í	n	tʃ	i	n	d	ʒ	e	-	-

i → j

ToBurn.Incendere

í	-	s	e	n	dʒ	i	a	r	-
í	-	s	ē	-	d	j	a	r	-

dʒ → i

Skin.Primary

k	-	o	dʒ	i	-	-	ə
k	-	oj	i	-	n	-	-

ɛj → ej

Ear.Primary

ɔ	R	ɛj	-	-	-	-	-
ɔ	z	ej	-	-	-	-	-

ɛj → o

ToSee.Primary

v	-	ɛj	-	-	-	-	-
v	j	o	d	i	-	-	-

ɛj → a

ToSee.Primary

v	-	ɛj	-	-	-	-	-
v	w	a	-	-	β	-	-

dʒ → w

Rain.Primary

p	j	ɔ	d	dʒ	-	a
p	l	u	-	w	i	a

tʃ → ts

ToStand.Altiare

a	l	tʃ	a:	-	-
a	l	ts	a	r	e

Appendix 3 - Prior Frequencies

$\varepsilon j \rightarrow e:$

Ear.Primary									
ɔ	r	ɛj	-	-	-	-	-	-	-
o	r	e:	-	-	-	l	e		

$y \rightarrow u:$

You.Singular.Primary

t	y								
t	u:								

$aj \rightarrow \varepsilon$

Water.Primary

aj	-	Y	w	ə					
ɛ	-	-	w	-					

$\xi a \rightarrow a$

ToDrink.Primary

b	-	ɛa	-	-	-	-			
b	w	a	-	-	v	-			

$\xi a \rightarrow \oe$

Star.Primary

-	s	t	-	ɛa	-	-	-	-	
-	s	t	-	œ	-	l	-		

$\xi a \rightarrow i$

ToDrink.Primary

b	-	ɛa	-	-	-	-			
b	-	i	β	e	r	-			

$\xi a \rightarrow \emptyset$

ToDrink.Primary

b	-	ɛa	-	-	-	-			
b	-	ø	-	-	v	-			

$\xi a \rightarrow a$

Star.Primary

-	s	t	-	ɛa	-	-	-	-	
e	-	t	w	a	-	l	-		

$y \rightarrow \oe$

Night.Primary

n	-	y	-	t	-	-	-	-	
n	-	œa	p	t	e	-			

$n \rightarrow k$

Knee.Genuculum

dʒ	-	e	n	u	n	k ^j	-	-	-
dʒ	-	i	n	ɔ	k	k	-	j	o

$n \rightarrow f$

Blood.Primary

s	a	n	g ^w	-	i	n	e	m	
s	a	n	g	-	-	f	e	-	

$n \rightarrow b$

Name.Nominem

n	o:	m	i	n	-	e	m		
n	o	m	-	b	f	e	-		

Appendix 3 - Prior Frequencies

$w \rightarrow \varepsilon$

Black.Primary

n	w	a	-	v	-	-
n	ɛ	y	f	ə	-	-

$\tfrac{f}{f} \rightarrow j$

Bird.Aucellus

-	u	t	$\tfrac{f}{f}$	ɛ	l	l	o	-
-	u	$\tfrac{f}{f}$	j	ɛ	-	l	-	-

$\tfrac{f}{f} \rightarrow d_f$

Red.Rubeus

r	ɔ	-	$\tfrac{f}{f}$	-	-	-	-
r	u	-	d_f	e	-	-	-

$r \rightarrow s$

Back.Primary

d	-	o	r	s	u	m
d	-	ɔ	s	s	o	-

$r \rightarrow w$

Salt.Primary

s	a	r	e	-
s	a	w	-	-

$r \rightarrow ə$

Black.Primary

n	-	i	g	r	u	m
n	ɛ	y	f	ə	-	-

$\tfrac{f}{f} \rightarrow ʒ$

Red.Rubeus

r	ɔ	-	$\tfrac{f}{f}$	-	-	-
ʁ	u	-	ʒ	-	-	-

$r \rightarrow i$

Black.Primary

n	-	i	g	r	u	m
n	e	-	r	i	-	-

$l \rightarrow x$

Leaf.Primary

f	-	o	l	i	a
-	-	o	x	-	a

$l \rightarrow k$

Old.Primary

w	-	e	t	u	l	u	s
v	-	ɛ	k	-	k	j	o

$l \rightarrow o$

Eye.Primary

-	o	-	k	u	l	u	s
-	o	-	x	-	o	-	-

$\eta \rightarrow m$

Tongue.Primary

λ	ɛ	η	g	w	ə
l	i	m	b	-	ə

Appendix 3 - Prior Frequencies

$\emptyset \rightarrow h$

Bird.Aucellus

-	u	ø	j	ɛ	-	l	-	-
-	u	h	-	ɛ	-	-	-	-

p → g

Knee.Geneculum

p	-	-	p	ɔ	-	-	-	-
g	-	e	n	i	-	k	u	l

m → n

Tongue.Primary

l	i	m	b	-	ə
λ	ɛ	ŋ	g	w	ə

m → i

Rope.Restis

r	e	s	t	-	e	m
β	-	ɛ	ʃ	t	-	i

m → i

Rope.Restis

r	e	s	t	-	e	m
β	-	ɛ	ʃ	ø	-	i

w → r

Salt.Primary

s	a	w	-	-
s	a	r	e	-

ɔ → œ

One.Primary

ɔ	-	-	-	-
œ	-	-	-	-

ɔ → ɥ

Rain.Primary

p	j	ɔ	d	ðʒ	-	a
p	l	ɥ	-	-	i	-

z → i

ToHear.Primary

au	-	z	i	-	-
ɔj	-	i	-	-	-

ɣ → kʷ

Water.Primary

aj	-	Y	w	ə
a	-	kʷ	-	a

h → k

Bird.Aucellus

-	u	h	-	ɛ	-	-	-	-
-	au	k	-	e	l	l	u	s

h → t

Bird.Aucellus

-	u	h	-	ɛ	-	-	-	-
-	u	t	ø	ɛ	l	l	o	-

Appendix 3 - Prior Frequencies

$h \rightarrow \emptyset$

Bird.Aucellus

-	u	h	-	ɛ	-	-	-	-
-	u	f	j	ɛ	-	l	-	-

$u \rightarrow \emptyset$

Tail.Primary

k	u	-	a
k	ø	-	-

$a: \rightarrow \emptyset$

ToBite.Morsicare

m	o	r	s	e	a:	-	-	-
m	u	-	s	ə	y	a	-	-

$y \rightarrow \emptyset$

Liver.Primary

f	-	i	y	e	ð	u	-
f	-	e	dʒ	ə	-	-	-

$a: \rightarrow \emptyset$

ToSuck.Primary

c	u	-	c	-	a:	-	-	-
ʃ	u	-	ʃ	a	ʊ	-	-	-

$h \rightarrow \emptyset$

ToKnow.Cognoscere

k	i	-	n	ɔ	h	-	-	-
k	o	-	n	o	θ	-	e	r

$a: \rightarrow \emptyset$

Meat.Primary

c	a:	r	-	-	-	-
f	a	r	-	-	-	-

$h \rightarrow z$

Bird.Aucellus

-	u	h	-	ɛ	-	-	-	-
w	a	z	-	o	-	-	-	-

$k^w \rightarrow p$

Water.Primary

a	-	k^w	-	a
a	-	p	-	ə

$a \rightarrow \emptyset$

ToSuck.Primary

s	u	k	k	j	a	r	e
ʃ	u	-	ʃ	a	ʊ	-	-

$k^w \rightarrow y$

Water.Primary

a	-	k^w	-	a
aj	-	y	w	ə

$a: \rightarrow r$

ToSuck.Primary

c	u	-	c	-	a:	-	-
ʃ	u	-	ʃ	a	f	-	-

Appendix 3 - Prior Frequencies

a → e

ToSuck.Primary								
s	u	k	k	j	a	r	e	
ʃ	u	-	f	a	f	-	-	

Y → p

Water.Primary								
aj	-	Y	w	ə				
a	-	p	-	ə				

u: → o:

Egg.Primary								
-	u:	f	-	-				
-	o:	w	u	m				

j → dʒ

I.Primary								
j	-	-	-	o				
dʒ	i	-	-					

o: → ɔa

ToKnow.Cognoscere								
k	o	g	n	o:	s	k	e	r
k	u	-	n	qa	ʃ	t	e	-

o: → œ

Egg.Primary								
-	o:	w	u	m				
-	œ	f	-	-				

o: → i

ToKnow.Cognoscere								
k	o	g	n	o:	s	k	e	r
k	u	-	n	i	s	-	e	r

o: → u:

Egg.Primary								
-	o:	w	u	m				
-	u:	f	-	-				

o → ɥ

Rain.Primary								
p	l	o	-	-	j	e		
p	l	ɥ	-	-	i	-		

u: → i

YouSingular.Primary								
t	u:							
t	i							

o → j

Eye.Primary								
-	o	-	x	-	o	-	-	
-	ɔ	k	k	-	j	o	-	

o → εj

ToSee.Primary								
v	j	o	d	i	-	-	-	
v	-	ɛj	-	-	-	-	-	

Appendix 3 - Prior Frequencies

u: → y

You.Singular.Primary									
t	u:	-	s	ə	Y	a	-	-	-
t	y								

Y → a:

ToBite.Morsicare									
m	u	-	s	ə	Y	a	-	-	-
m	o	r	s	e	a:	-	-	-	-

u: → ə̃

One.Primary				
u:	n	u	s	
ə̃	-	-	-	

u: → ɔ̃

One.Primary				
u:	n	u	s	
ɔ̃	-	-	-	

u: → ø

Fire.Focus				
f	-	u:	k	-
f	-	ø	-	-

o → 1

Eye.Primary							
-	o	-	x	-	o	-	-
-	o	-	k	u	l	u	s

ɛ → ẽj

In.In	
ɛ	n
ẽj	-

a → εj

ToSee.Primary						
v	w	a	-	-	β	-
v	-	ɛj	-	-	-	-

a → oj

Skin.Primary						
k	w	a	-	-	-	n
k	-	oj	i	-	n	-

gʷ → b

Tongue.Primary				
l	i	n	gʷ	-
l	i	m	b	ə

gʷ → dʒ

Blood.Primary						
s	a	n	gʷ	-	i	n
s	i	n	dʒ	-	e	-

ɥ → o

Rain.Primary					
p	l	ɥ	-	-	i
p	l	o	-	-	j e

Appendix 3 - Prior Frequencies

i → u:

You.Singular.Primary						
t	i					
t	u:					

ɥ → ε

Rain.Primary						
p	l	ɥ	-	-	i	-
p	l	ɛ	-	f	-	-

e: → εj

Ear.Primary						
o	r	e:	-	-	l	e
ɔ	R	ɛj	-	-	-	-

gʷ → k

Blood.Primary						
s	a	n	gʷ	-	i	n
s	a	n	k	-	-	-

e: → œ

Star.Primary						
-	s	t	-	e:	l	l
-	s	t	-	œ	-	l

e: → ø

ToKnow.Sapere						
s	a	v	-	e:	-	-
s	a	v	-	ø	r	-

ɥ → ɔ

Rain.Primary						
p	l	ɥ	-	-	i	-
p	j	ɔ	d	ðʒ	-	a

ɥ → ɔa

Rain.Primary						
p	l	ɥ	-	-	i	-
p	l	øa	-	-	j	e

r → ɹ

Ear.Primary						
ɔ	r	ɛj	-	-	-	-
ɔ	ɹ	ɛj	-	-	-	-

ts → tʃ

ToStand.Altiare						
a	l	ts	a	r	e	
a	l	tʃ	a:	-	-	

ts → θ

ToStand.Altiare						
a	l	ts	a	r	e	
a	l	θ	a	r	-	

e: → i

Hair.Primary						
p	-	e:	l	-	-	
p	-	i	l	u	-	

Appendix 3 - Prior Frequencies

a → ea

Star.Primary									
e	-	t	w	a	-	l	-		
-	s	t	-	ea	-	-	-		

i → m

Rope.Restis									
r	-	ɛ	f	tʃ	-	i	-		
e	s	t	-	e	m	-			

i → r

ToSuck.Primary									
s	y	-	s	-	i	-	-	-	-
ʃ	u	-	ʃ	a	r	-	-	-	-

a → au

Bird.Aucellus									
w	a	z	-	o	-	-	-	-	-
-	au	k	-	e	l	l	u	s	

k^j → t

Old.Primary									
v	-	e	k ^j	-	-	-	-	-	-
w	-	e	t	u	l	u	s		

a → ø

ToKnow.Sapere									
s	a	v	w	a	ø	-			
s	a	v	-	ø	r	-			

a → i:

Liver.Primary									
f	w	a	-	-	-	-	-	-	-
f	-	i:	k	a:	t	u	m		

ɔ → k

Leg.Gamba									
f	a	m	b	e	-	-	-	-	-
k	a	m	b	ə	-	-	-	-	-

i: → œ

Liver.Primary									
f	-	i:	k	a:	t	u	m		
f	-	œ	-	-	t	-	-	-	-

i: → r

Black.Primary									
n	e	-	r	i	-	-	-	-	-
n	-	i	g	r	u	m			

i: → i

ToLaugh.Primary									
r	i:	-	d	e:	r	e	-	-	-
f	i	-	d	e	-	-	-	-	-

i: → a

Liver.Primary									
f	-	i:	k	a:	t	u	m		
f	w	a	-	-	-	-	-	-	-

Appendix 3 - Prior Frequencies

$\mathfrak{f} \rightarrow d$

ToEat.Manducare									
m	a	n	f	-	-	a:	-	-	-
m	a	n	d	u	k	a:	r	e	

i → z

ToHear.Primary									
ɔj	-	i	-	-	-	-	-	-	-
au	-	z	i	-	-	-	-	-	-

i → dʒ

Skin.Primary									
k	-	oj	i	-	n	-	-	-	-
k	-	o	dʒ	i	-	-	-	-	a

i → t

Skin.Primary									
k	-	oj	i	-	n	-	-	-	-
k	-	o	t	e	n	n	n	a	

$\mathfrak{f} \rightarrow \mathfrak{dʒ}$

Leg.Gamba									
f	a	m	b	e	-	-	-	-	-
dʒ	ã	-	p	-	-	-	-	-	-

i: → ə

Root.Radicina									
r	a:	d	i:	k	i:	n	a	-	-
r	ə	d	ə	ʃ	i	n	ə	-	-

ɛ → ēj

In.In									
ɛ	-	n	-	-	-	-	-	-	-
ēj	-	-	-	-	-	-	-	-	-

u → ẽ

Far.Primary									
λ	-	u	n	t	a	-	-	-	-
l	w	ẽ	-	t	ẽ	-	-	-	-

ɛ → ɿ

Rain.Primary									
p	l	ɛ	-	f	-	-	-	-	-
p	l	ɿ	-	-	i	-	-	-	-

c → p

Night.Primary									
n	-	o	c	t	e	m	-	-	-
n	-	qa	p	t	e	-	-	-	-

ø → i

ToDrink.Primary									
b	-	ø	-	-	β	-	-	-	-
b	-	i	β	e	r	-	-	-	-

ø → ej

Old.Primary									
v	j	ø	-	-	-	-	-	-	-
v	-	ej	-	-	λ	u	-	-	-

Appendix 3 - Prior Frequencies

$\varepsilon \rightarrow w$

Black.Primary

n	ε	y	f	ə	-	-
n	w	a	-	ʊ	-	-

$\tilde{a} \rightarrow \tilde{e}\tilde{j}$

In.In

\tilde{a}	-
$\tilde{e}\tilde{j}$	-

$\emptyset \rightarrow u$

Tail.Primary

k	\emptyset	-	-
k	u	-	a

$\tilde{a} \rightarrow \tilde{e}\tilde{j}$

In.In

\tilde{a}	-
$\tilde{e}\tilde{j}$	-

c → t

Night.Primary

n	-	o	c	t	e	m
n	-	ɔ	t	t	e	-

$\emptyset \rightarrow a$

ToKnow.Sapere

s	a	v	-	\emptyset	r	-
s	a	v	w	a	ʊ	-

$\tilde{o} \rightarrow u:$

One.Primary

\tilde{o}	-	-	-	-
u:	n	u	s	

$\emptyset \rightarrow e:$

ToKnow.Sapere

s	a	v	-	\emptyset	r	-
s	a	v	-	e:	-	-

$\varepsilon \rightarrow aj$

Water.Primary

ε	-	-	w	-
aj	-	y	w	ə

$\tilde{o} \rightarrow \tilde{a}$

Blood.Primary

s	\tilde{o}	-	g	-	-	-	-
s	\tilde{a}	-	-	-	-	-	-

$\emptyset \rightarrow \infty$

Fire.Focus

f	-	\emptyset	-	-	-
f	-	œ	-	-	-

$\emptyset \rightarrow \varnothing a$

Tail.Primary

k	\emptyset	-	-
c	oa	d	ə

Appendix 3 - Prior Frequencies

$z \rightarrow dz$

Leaf.Frondea

f	r	u	n	z	-	ə
f	r	o	n	dz	-	a

$\tilde{a} \rightarrow \tilde{o}$

Blood.Primary

s	~	~	-	-	-	-	-	-
s	~	~	g	-	-	-	-	-

$\emptyset \rightarrow w$

Black.Primary

n	ø	-	r	-	-	-
n	w	a	-	v	-	-

$c \rightarrow dʒ$

Hair.Capillus

c	a	v	e	l	-	-	-
dʒ	-	v	ɛ	-	-	-	-

$\emptyset \rightarrow u:$

Fire.Focus

f	-	ø	-	-	-
f	-	u:	k	-	-

$\emptyset \rightarrow əa$

ToDrink.Primary

b	-	ø	-	-	v	-
b	-	əa	-	-	-	-

$\emptyset \rightarrow a$

ToDrink.Primary

b	-	ø	-	-	v	-
b	w	a	-	-	v	-

$z \rightarrow h$

Bird.Aucellus

w	a	z	-	o	-	-	-	-
-	u	h	-	ɛ	-	-	-	-

$j \rightarrow w$

ToSee.Primary

v	j	o	d	i	-	-
v	w	a	-	-	v	-

New.Novella

n	u	j	-	-	-	a
n	o	w	e	l	l	a

$i \rightarrow l$

Louse.Primary

p	-	e	d	o:	-	-	l	i	-	-
p	-	e:	d	u	-	-	v	-	-	-

Eye.Primary

v	o	-	-	1	i	-	-
v	o	-	-	k	u	l	u

$\tilde{e} \rightarrow i$

Blood.Primary

s	~	g	-	i	-	-	-
s	~	n	dʒ	-	e	-	-

Blood.Primary

s	~	g	-	i	-	-	-
s	~	n	dʒ	-	e	-	-

$j \rightarrow j$

I.Primary

j	-	-	o	j	e	-	w
j	-	-	o	j	-	-	o

I.Primary

Appendix 3 - Prior Frequencies

$j \rightarrow \beta$

New.Novella	New.Novella
n u j - - - a	n u j - - - a
n o β i - j a	n u β e - λ a

$ā \rightarrow ē$

ToEat.Manducare	In.In
m ā - ʒ - - e - -	ā -
m ē n ʒ - - a - -	ē n

$j \rightarrow k^j$

Eye.Primary	Eye.Primary
- œ - j - - - -	- u - j - - - -
- o - k ^j - - - -	- o - k ^j - - - -

$s \rightarrow e$

Rope.Restis	Rope.Restis
r e s t - e m	r e s t - e m

$s \rightarrow i$

Rope.Restis	YouPlural.Primary
r e s t - e m	v ōj s -
r - i s t r a	v o i -

$s \rightarrow ε$

Rope.Restis	Rope.Restis
r e s t - e m	r e s t - e m
r - ε s t - a	β - ε ſ t f - i

$ẽ \rightarrow ɔ̃$

Blood.Primary	Blood.Primary
s ẽ - g - i - - -	s ẽ - g - i - - -
s ɔ̃ - g - - - - -	s ɔ̃ - g - - - - -

$j \rightarrow dʒ$

I.Primary	I.Primary
j - - o	j e - w
dʒ i - -	dʒ i - -

$λ \rightarrow o$

Eye.Primary	Eye.Primary
- o - - - λ u -	- o - - - λ u -
- o - x - o - -	- o - x - o - -

$i \rightarrow v$

ToHear.Primary	ToHear.Primary
ɔj - i - - -	ɔj - i - - -
o w v i β -	o w v i f -

$j \rightarrow a$

ToSuck.Primary	ToSuck.Primary
s u k k j a r e	s u k k j a r e
f u - ſ a β - -	f u - ſ a r - -

$a \rightarrow œ$

Liver.Primary	Star.Primary
f w a - - - - -	e - t w a - l -
f - œ - - t - - -	s t - œ - l -

Appendix 3 - Prior Frequencies

$l \rightarrow i$

Louse.Primary	Eye.Primary
p - e: d u - k u l u s	- o - k u l u s
p - e d o: - l i - v o - l i -	

$\mathfrak{z} \rightarrow j$

I.Primary	I.Primary
ʒ ə - -	ʒ - - ɔ
j - - o	j - - o

$z \rightarrow \mathfrak{f}$

Ash.Cinisia	Ash.Cinisia
s ī - - z a	s ī - - z a
tʃ e n u ʃ ə	tʃ e n u ʃ ə

$r \rightarrow e$

ToSuck.Sugere	ToSuck.Sugere
s u: - g e r e	s u d ð e r e
s u - ð - e -	s u - ð - e -

$\tilde{e} \rightarrow i$

Wind.Primary	Wind.Primary
v - ē - t u -	v - ē - t u -
v - ī n t - -	v - ī n t - -

$r \rightarrow o$

Black.Primary	Black.Primary
n - i g r u m	n - i g r u m
n e y f o - -	n e - r o - -

$i \rightarrow s$

Rope.Restis	YouPlural.Primary
r - i s t f a	v o i -
r e s t - e m	v ɔj s -

$z \rightarrow v$

ToHear.Primary	ToHear.Primary
au - z i - -	au - z i - -
o w v i b -	o w v i r -

$\tilde{w} \rightarrow ij$

Dog.Primary	Dog.Primary
k - ēw - - -	k - ēw - - -
k - ij n e -	k - ij n e -

$\tilde{w} \rightarrow i$

Hand.Primary	Hand.Primary
m ēw - - -	m ēw - - -
m i n ə -	m i n ə -

$\Lambda \rightarrow t$

Back.Spatula	Back.Spatula
ə s p a ʌ - ʌ ə	ə s p a ʌ - ʌ ə
- s p a t u l a	- s p a t - - e

Appendix 3 - Prior Frequencies

i → ɪ

ToSuck.Primary	Black.Primary
s y - s - i - -	n e - r i - -
ʃ u - ʃ a ɪ - -	n w a - ɪ - -

w → j

ToSee.Primary	New.Novella
v w a - - ɪ -	n o w e l l a
v j o d i - -	n u j - - a

əw̐ → o:

Not.Primary	Not.Primary
n əw̐ -	n əw̐ -
n o: n	n o: n

əw̐ → u

Not.Primary	Not.Primary
n əw̐ -	n əw̐ -
n u -	n u -

r → n

ToSay.Exponere	ToSay.Exponere
e - s p o r - r e	e - s p o r - r e
e k s p o: n e r e	- - s p u n e - -

i → ɪ

ToBurn.Incendere	ToBurn.Incendere
i n ʃ i n d ʒ e - -	i n ʃ i n d ʒ e - -
ɪ - s e n dʒ i a r -	ɪ - s ē - d j a r -

s → dz

Leaf.Frondea	Leaf.Frondea
f r ɔ - s - ə	f r ɔ - s - ə
f r o n d z - a	f r o n d z - a

ʃ → j

Rain.Primary	Rain.Primary
ʃ - u - v - ə	ʃ - u - v - ə
j - u - b j a	j - u - b j a

β → j

New.Novella	New.Novella
n o β i - j a	n u β e - ʌ a
n u j - - a	n u j - - a

d → ʒ

ToEat.Manducare	ToEat.Manducare
m a n d u k a: r e	m a n d u k a: r e
m ɔ - ʒ - - e - -	m ɔ p ʒ - - a - -

e → ɪ

ToSuck.Primary	ToSuck.Sugere
s y - s - e - -	s u - dʒ - e -
ʃ u - ʃ a ɪ - -	s u - g a ɪ - -

Appendix 3 - Prior Frequencies

$\tilde{\varepsilon} \rightarrow \text{o}$

Far.Primary							Far.Primary								
l	w	$\tilde{\varepsilon}$	-	t	$\tilde{\varepsilon}$	-	-	l	w	$\tilde{\varepsilon}$	-	t	$\tilde{\varepsilon}$	-	-
l	-	o	n	t	a	n	o	l	-	o	n	t	a	n	-

e → s

Rope.Restis							Rope.Restis						
r	-	e	f	t	-	i	r	j	e	s	t	-	e
r	e	s	t	-	e	m	r	e	s	t	-	e	m

e → r

ToSuck.Sugere							ToSuck.Sugere						
s	u	-	dʒ	-	e	-	s	u	-	dʒ	-	e	-
s	u:	-	g	e	r	e	s	u	d	dʒ	e	r	e

b → u

ToStand.Levare							ToStand.Levare						
j	e	b	a	r	-	-	λ	ə	b	a	-	-	-
l	-	u	a	-	-	-	l	-	u	a	-	-	-

t → p

Breast.Pectus							Night.Primary						
p	-	ɛ	t	t	o	-	n	-	ɔ	t	t	e	-
p	j	e	p	t	-	-	n	-	ø	a	p	t	e

t → λ

Back.Spatula							Back.Spatula								
-	s	p	a	t	u	l	a	-	s	p	a	t	-	-	e
ə	s	p	a	λ	-	λ	ə	ə	s	p	a	λ	-	λ	ə

d → s

Leaf.Frondea							Leaf.Frondea						
f	r	o	n	d	e	a	f	r	o	n	d	e	a
f	r	ø	-	s	-	a	f	r	ø	-	s	-	a

t → dʒ

Skin.Primary							Big.Grandem							
k	-	o	t	e	n	n	a	g	r	a	n	t	-	-
k	-	o	dʒ	i	-	-	e	g	r	ø	-	dʒ	i	-

t → z

Bird.Aucellus							Foot.Primary								
-	u	t	ɸ	ɛ	l	l	o	-	p	-	i:	-	t	-	-
w	a	z	-	o	-	-	-	p	i	e	-	z	-	-	

e → øa

Leaf.Primary							ToKnow.Cognoscere									
f	w	e	-	-	e	-	k	o	-	p	e	s	-	e	ø	-
f	-	øa	-	j	e	-	k	u	-	n	øa	ʃ	t	e	-	-

ʒ → ə

Blood.Primary							Blood.Primary								
s	ʒ	-	g	-	-	-	s	ʒ	-	g	-	-	-	-	-
s	ə	-	g	-	i	-	s	ə	-	g	-	i	-	-	-

dz → s

Leaf.Frondea							Leaf.Frondea						
f	r	o	n	dz	-	a	f	r	o	n	dz	-	a
f	r	ø	-	s	-	a	f	r	ø	-	s	-	a

Appendix 3 - Prior Frequencies

v → z

ToHear.Primary	ToHear.Primary
o w v i ㅂ -	o w v i ㄹ -
au - z i - -	au - z i - -

g → a:

ToBite.Morsicare	ToBite.Morsicare
m u - s ə g a - -	m u - s ə g a r -
m o r s e a: - - -	m o r s e a: - - -

e → o:

Egg.Primary	ToKnow.Cognoscere
w e b o -	k o - p e s - e ㅂ -
- o: w u m	k o g n o: s k e r e

v → ʒ

Rain.Primary	Rain.Primary
ʃ - u - v - a	ʃ - u - v - a
p l u - ʒ - e	p l u - ʒ - e

v → ɸ

Rain.Primary	Rain.Primary
ʃ - u - v - e	ʃ - u - v - e
p j ɔ d ɸ - a	p j ɔ d ɸ - a

e → m

Rope.Restis	Big.Majjorem
r j e s t - e	m a - - - ㅌ e
r e s t - e m	m aj j o: r e m

e: → u

Louse.Primary	Louse.Primary
p - e: d u - k u l u s	p - e: d u - k u l u s
p - u - - - - - - - -	p j u - - - - - - - -

ɛ → ɪ

Tongue.Primary	Tongue.Primary
l ɛ - - v -	l ɛ - - v -
l i - g w a	l i - g w a

ㅂ → e

ToSuck.Primary	ToSuck.Sugere
ʃ u - ʃ a ㅂ - -	s u - ㄱ a ㅂ -
s y - s - e - -	s u - ɸ - e -

s → ɸ

Red.Primary	Red.Primary
r u s s u s s	r o s s o -
r o ɸ - - - -	r o ɸ - - - -

ʃ → z

Ash.Cinisia	Ash.Cinisia
ɸ e n u ʃ ㅓ	ɸ e n u ʃ ㅓ
s i - - z a	s i - - z a

ㅣ → i

ToBurn.Incendere	ToBurn.Incendere
í - s e n ɸ i a ㄱ -	í - s ㅓ - d j a ㄱ -
i n ɸ i n d ʒ e - -	i n ɸ i n d ʒ e - -

Appendix 3 - Prior Frequencies

$\tilde{i} \rightarrow \emptyset$

ToBurn.Incendere	ToBurn.Incendere
\tilde{i} - s e n dʒ i a r - ə n s e n d - - f ə	\tilde{i} - s ē - d j a r - ə n s e n d - - f ə

i → ɔj

ToTie.Primary	ToTie.Primary
l i g a: r e l ɔj i - - -	λ i y a - - l ɔj i - - -

k → p

Breast.Pectus	Water.Primary
p - e k t u s p j e p t - -	a k k w a a - p - ə

i → qa

Night.Primary	Night.Primary
n q i - - - - n - qa p t e -	n - i - t - - n - qa p t e -

$\tilde{i} \rightarrow \tilde{\varepsilon}$

Tongue.Primary	Tongue.Primary
l i - g w e l ə - v -	l i - g w e l ə - v -

ɛ → o

Black.Primary	Black.Primary
n w a - ɛ - - n e y ɛ o - -	n w a - ɛ - - n e - r o - -

i → a

ToDrink.Primary	Heavy.Primary
b - i b e r e b w a - - ɛ -	g ɛ i j ε f - - g r a - - v - -

i → e

Knee.Genuculum	Knee.Genuculum
- - i n o - x o - - - ɜ w ə - - - - - - -	dʒ - i n ə k k - j o - ɜ w ə - - - - - - -

i → ə

Hair.Capillus	ToDrink.Primary
k a p i l l u s ʃ ə v ə - - - - -	b - i b e r e b - ə - - ɛ -

p → k

Breast.Pectus	Water.Primary
p j e p t - - p - ε t t o -	a - p - ə a k k w a

p → t

Breast.Pectus	Night.Primary
p j e p t - - p - ε t t o -	n - qa p t e - n - ɔ t t e -

$\tilde{\varepsilon} \rightarrow ij$

Dog.Primary	Dog.Primary
f j ə - - - - k - ij n e -	f - ə - - - - k - ij n e -

Appendix 3 - Prior Frequencies

$z \rightarrow t$

Bird.Aucellus	Foot.Primary
w a z - o - - - - u t ſ ε l l o -	p i e - z - - p - i: - t - -

$e: \rightarrow \xi a$

Star.Primary	ToSee.Primary
- s t - e: l l a - s t - ξ a - - -	w - i d e: r e v - e d ξ a - -

$e: \rightarrow ej$

Ear.Primary	Sand.Primary
o r e: - - - l e ɔ ʊ ej - - - - -	h a r e: n a - a r ej - - - e

$\kappa \rightarrow i$

ToSuck.Primary	Black.Primary
ʃ u - ſ a κ - - s y - s - i - -	n w a - κ - - n e - r i - -

$e: \rightarrow a j$

Ear.Primary	Sand.Primary
o r e: - - - l e o ʊ ej - - - - -	h a r e: n a - a f ja - - - a

$e: \rightarrow \vartheta$

Louse.Primary	Hair.Primary
p - e: d u - k u l u s p - ə d u - k - j e -	p - e: l - - - p - ə f - - - -

$s \rightarrow d$

Leaf.Frondea	Leaf.Frondea
f r ō - s - v f r o n d e a	f r ō - s - v f r o n d e a

$m \rightarrow a$

Rope.Restis	Rope.Restis
r e s t - e m r - i s t r a	r e s t - e m r - ε s t - a

$k^j \rightarrow j$

Eye.Primary	Eye.Primary
- o - k ^j - - - - - œ - j - - - -	- o - k ^j - - - - - u - j - - - -

$m \rightarrow e$

Rope.Restis	Big.Majorem
r e s t - e m r j e s t - e	m a j j o: r e m m a - - - r e

$a \rightarrow \vartheta$

Sand.Primary	Sand.Primary
h a r e: n a - a r ej - -	h a r e: n a - ja - - - a

$o \rightarrow v$

Red.Primary	Red.Primary
r o - x o - x o - ſ v -	r o s s o - x o - ſ v -

Appendix 3 - Prior Frequencies

$\text{o} \rightarrow \text{y}$

Night.Primary	Night.Primary
n - o c t e m	n - o - t f e -
n - y - t - -	n - y - t - -

$\text{j} \rightarrow \text{ʒ}$

I.Primary	I.Primary
j - - o	j - - o
ʒ ə - -	ʒ - - o

$\text{o} \rightarrow \text{i}$

ToKnow.Cognoscere	ToKnow.Cognoscere
k o - n o θ - e r -	k o - n o ſ ſ e r e
k u - n i s - e r -	k u - n i s - e r -

$\text{au} \rightarrow \text{oj}$

ToHear.Primary	ToHear.Primary
au - d i: r e	au - z i - -
ɔj - i - - -	ɔj - i - - -

$\text{ej} \rightarrow \text{e:}$

Ear.Primary	Sand.Primary
ɔ ε ej - - - -	- a r ej - e
o r e: - - - l e	h a r e: n a

$\text{o} \rightarrow \text{ə}$

Leg.Perna	Leg.Perna
p - ε r n o	p - ε r n o
p - ε ə n a	p - ε ə n a

$\text{o} \rightarrow \tilde{\varepsilon}$

Far.Primary	Far.Primary
l - o n t a n o	l - o n t a n -
l w ə - t ə - -	l w ə - t ə - -

$\text{y} \rightarrow \text{a}$

Black.Primary	Black.Primary
n e y f o - -	n ε y f ə - -
n w a - ə - -	n w a - ə - -

$\text{o} \rightarrow \text{y}$

Night.Primary	Night.Primary
n - o t t e -	n - o - t - -
n - y - t - - -	n - y - t - - -

$\text{oj} \rightarrow \text{o:}$

YouPlural.Primary	YouPlural.Primary
v oj - -	v oj - -
w o: - s	v o: - -

$\text{oj} \rightarrow \text{əa}$

Night.Primary	Night.Primary
n - oj - t i -	n - oj - t i -
n - qa p t e -	n - qa p t e -

$\text{o} \rightarrow \text{i}$

ToKnow.Cognoscere	ToKnow.Cognoscere
k i - n ɔ h - - -	k o - n ɔ s - i - -
k u - n i s - e r -	k u - n i s - e r -

Appendix 3 - Prior Frequencies

oj → y

Night.Primary		Night.Primary	
n	-	oj	-
n	-	y	-
t	-	t	-
i	-	i	-
-	-	-	-

øa → e

Leaf.Primary		ToKnow.Cognoscere	
f	-	øa	-
f	w	e	-
j	-	j	e
k	u	-	n
o	øa	s	f
p	e	-	t
e	-	s	e
b	-	-	-

øa → i

Night.Primary		Night.Primary	
n	-	øa	p
n	ø	i	p
ø	a	-	t
q	i	-	e
p	-	-	-
t	-	-	-
e	-	-	-
-	-	-	-

u: → ù

One.Primary		One.Primary	
u:	n	u	s
ù	-	-	-
n	u	u	s
ù	-	-	-

j → ñ

I.Primary		I.Primary	
j	-	-	o
j	-	-	o
j	-	-	j
j	e	-	w

ʒ → v

Rain.Primary		Rain.Primary	
p	l	u	-
f	l	u	-
ʒ	ʒ	-	ə
-	-	v	-
u	u	v	a
-	-	-	-

ɛ → s

Rope.Restis		Rope.Restis	
r	-	ɛ	s
r	e	s	t
-	-	t	-
ɛ	s	e	m
ø	t	-	-
e	m	-	-

a → ə

Sand.Primary		Sand.Primary	
h	a	r	e
-	ø	r	e
a	r	e	n
-	e	n	ə
ə	r	e	n
e	n	ə	-

øa → oj

Night.Primary		Night.Primary	
n	-	øa	p
n	-	oj	-
t	-	t	i
e	-	i	-
-	-	-	-

ø → i

Knee.Genuculum		Knee.Genuculum	
ʒ	w	ɛ	-
-	i	n	o
w	a	-	x
-	ø	ø	-
ø	-	-	-
i	n	o	-
n	-	x	-
o	-	-	-

a → o

Leg.Perna		Leg.Perna	
p	-	ɛ	ø
p	-	ø	n
ɛ	n	n	a
r	-	r	n
n	-	n	o

i → ɛ

Blood.Primary		Blood.Primary	
s	i	n	dʒ
s	ɛ	g	-
i	n	dʒ	e
ɛ	g	-	-
n	-	-	-
dʒ	-	-	-
-	-	-	-
-	-	-	-

Appendix 3 - Prior Frequencies

i → ēw̐

Hand.Primary	Hand.Primary
m i n ə -	m i n ə -
m ēw̐ - - -	m ēw̐ - - -

i → ē

Wind.Primary	Wind.Primary
v - ī n t - -	v - ī n t - -
v - ē - t u -	v - ē - t u -

ɛ → œ

Star.Primary	Star.Primary
ə s t - ε - l -	- s t - ε - l e
- s t - œ - l -	- s t - œ - l -

i → ɔ

ToKnow.Cognoscere	ToKnow.Cognoscere
k u - p ī s - e r -	k u - p ī s - e r -
k i - n ɔ h - - - -	k o - n ɔ s - i - -

ɛ → o:

ToKnow.Cognoscere	ToKnow.Cognoscere
k ɔ - n ε - t - ɛ - -	k u - n ε ſ - ə - -
k o g n o: s k e r e	k o g n o: s k e r e

j → ſ

Rain.Primary	Rain.Primary
j - u - b j a	j - u - b j a
ʃ - u - v - ɛ	ʃ - u - v - ɛ

ej → e:

Ear.Primary	Sand.Primary
o r ej - - - ʌ e	- e r ej - ə
o r e: - - - l e	h a r e: n a

o: → ɔj

YouPlural.Primary	YouPlural.Primary
w o: - s	v o: - -
v ɔj s -	v ɔj s -

o: → oj

YouPlural.Primary	YouPlural.Primary
w o: - s	v o: - -
v oj - -	v oj - -

i → o

ToKnow.Cognoscere	ToKnow.Cognoscere
k u - p ī s - e r -	k u - p ī s - e r -
k o - n o θ - e r -	k o - n o ſ ſ e r e

ej → εj

Ear.Primary	Red.Vermiculus
o r ej - - - ʌ a	v ī r m ej - - ʌ u -
ɔ R ej - - - - - -	v ε ɪ m ej - - - - -

Appendix 3 - Prior Frequencies

o: → əw̐

Not.Primary	Not.Primary
n o: n	n o: n
n əw̐ -	n əw̐ -

œ → a

Liver.Primary	Star.Primary
f - œ - - t - -	- s t - œ - l -
f w a - - - -	e - t w a - l -

o: → ε

ToKnow.Cognoscere	ToKnow.Cognoscere
k o g n o: s k e r e	k o g n o: s k e r e
k ɔ - n ε - t - ㅂ -	k u - n ε ʃ - ə -

œ → ε

Star.Primary	Star.Primary
- s t - œ - l -	- s t - œ - l -
ə s t - ε - l -	- s t - ε - l - e

o: → e

Egg.Primary	ToKnow.Cognoscere
- o: w u m	k o g n o: s k e r e
w e b o -	k o - n e s - e ㅂ -

ə → ɑ

Sand.Primary	Sand.Primary
- a f ej - ə	- ə f ej - ə
h a r e: n ə	h a r e: n ə

o → ʌ

Eye.Primary	Eye.Primary
- o - x - o - -	- o - x - o - -
- o - - - ʌ u -	- o - - - ʌ u -

o → ㅂ

Black.Primary	Black.Primary
n e y f o - -	n e - r o - -
n w a - ㅂ - -	n w a - ㅂ - -

ə → i

ToDrink.Primary	Heavy.Primary
b w a - - ㅂ -	g r a - - v - -
b - i b e r e	g ㅂ i j ε f - -

o → r

Black.Primary	Black.Primary
n e y f o - -	n e - r o - -
n - i g r u m	n - i g r u m

ə → ə

Sand.Primary	Sand.Primary
- ə f e n ə	- a r i n ə
h a r e: n ə	h a r e: n ə

ʒ → d

ToEat.Manducare	ToEat.Manducare
m ā - ʒ - - e - -	m ə j ʒ - - a - -
m a n d u k a: r e	m a n d u k a: r e

Appendix 3 - Prior Frequencies

$u \rightarrow b$

ToStand.Levare	ToStand.Levare
l - u a - -	l - u a - -
j e b a r -	ʌ ə b a - -

$dʒ \rightarrow j$

I.Primary	I.Primary
dʒ i - -	dʒ i - -
j - - o	j e - w

$œ̃ \rightarrow ū$

One.Primary	One.Primary
œ̃ - - -	œ̃ - - -
ū - - -	ū - - -

$\emptyset \rightarrow i$

Hair.Capillus	ToDrink.Primary
ʃ ə v ø - - -	b - ø - - -
k a p i l l u s	b - i b e r e

$y \rightarrow o$

Night.Primary	Night.Primary
n - y - t - -	n - y - t - -
n - o c t e m	n - o - ʃ e -

$y \rightarrow ɔ$

Night.Primary	Night.Primary
n - y - t - -	n - y - t - -
n - ɔ t t e -	n - ɔ - t - -

$y \rightarrow oj$

Night.Primary	Night.Primary
n - y - t - -	n - y - t - -
n - oj - t i -	n - oj - t i -

$ū \rightarrow œ̃$

One.Primary	One.Primary
ū - - -	ū - - -
œ̃ - - -	œ̃ - - -

$a \rightarrow y$

Black.Primary	Black.Primary
n w a - ə - -	n w a - ə - -
n e y r o - -	n ε y r ə - -

$ɛj \rightarrow ej$

Ear.Primary	Red.Vermiculus
ɔ R ej - - - -	v ε ə m ej - - - -
o r ej - - - -	v i r m ej - - - -

$ū \rightarrow ɔ$

One.Primary	One.Primary
ū - - -	ū - - -
ɔ - - -	ɔ - - -

$ū \rightarrow u:$

One.Primary	One.Primary
ū - - -	ū - - -
u: n u s	u: n u s

Appendix 3 - Prior Frequencies

a → j

ToSuck.Primary	ToSuck.Primary
f u - f a ɔ - - s u k k j a r e	f u - f a r - - s u k k j a r e

a → m

Rope.Restis	Rope.Restis
r - i s t r a r e s t - e m	r - ε s t - a r e s t - e m

v → o

Red.Primary	Red.Primary
β o - f v - r o - x o -	β o - f v - r o s s o -

ij → ɛ

Dog.Primary	Dog.Primary
k - ij n e - ʃ j ɛ - - -	k - ij n e - ʃ - ɛ - - -

ij → əw̴

Dog.Primary	Dog.Primary
k - ij n e - k - əw̴ - - -	k - ij n e - k - əw̴ - - -

n → r

ToSay.Exponere	ToSay.Exponere
e k s p o: n e r e e - s p o r - r e	- - s p u n e - - e - s p o r - r e

ə → e:

Louse.Primary	Hair.Primary
p - ə d u - k - j e - p - e: d u - k u l u s	p - ə f - - - p - e: l - - -

dʒ → s

Red.Primary	Red.Primary
r o dʒ - - - r u s s u s	r o dʒ - - - r o s s o -

v → i

ToHear.Primary	ToHear.Primary
o w v i ɔ - ɔj - i - - -	o w v i f - ɔj - i - - -

ɔj → i

ToTie.Primary	ToTie.Primary
l ɔj i - - - l i g a: r e	l ɔj i - - - λ i y a - -

ɔj → o:

YouPlural.Primary	YouPlural.Primary
v ɔj s - w o: - s	v ɔj s - v o: - -

u → e:

Louse.Primary	Louse.Primary
p - u - - - - p - e: d u -	p j u - - - - p - e: d u -

Appendix 3 - Prior Frequencies

$\theta \rightarrow \tilde{\iota}$

ToBurn.Incendere	ToBurn.Incendere
θ n s e n d - - r θ $\tilde{\iota}$ - s e n dʒ i a r -	θ n s e n d - - r θ $\tilde{\iota}$ - s ē d j a r -

$dʒ \rightarrow t$

Skin.Primary	Big.Grandem
k - o dʒ i - - e k - o t e n n a	g r ē - dʒ i - g r a n t - -

$\theta \rightarrow \tilde{a}$

ToEat.Manducare	In.In
m ē p ʒ - - a - - m ā - ʒ - - e - -	ə n ā -

$dʒ \rightarrow v$

Rain.Primary	Rain.Primary
p j ī d dʒ - a ʃ - u - v - e	p j ī d dʒ - a ʃ - u - v - e

a: $\rightarrow g$

ToBite.Morsicare	ToBite.Morsicare
m o r s e a: - - - m u - s ē g a - -	m o r s e a: - - - m u - s ē g a r -

u $\rightarrow \tilde{e}w$

Not.Primary	Not.Primary
n u - n ēw -	n u - n ēw -

ea \rightarrow e:

Star.Primary	ToSee.Primary
- s t - ea - - - - s t - e: l l a	v - e d ea - - w - i d e: r e

ɔ → ʊ

One.Primary	One.Primary
ɔ - - - - au - d i: r e	ɔ - - - - au - z i - -

ɔj \rightarrow au

ToHear.Primary	ToHear.Primary
ɔj - i - - - au - d i: r e	ɔj - i - - - au - z i - -

ʌ → k

Old.Primary	Old.Primary	Old.Primary
v - ej - - Ą u - v - ē k - k j o	v - e - - Ą u - v - ē k - k j o	v - e - - Ą - - v - ē k - k j o

ɸ → c

Dog.Primary	Meat.Primary	ToFall.Primary
f - ē - - - c - a n - -	f ā r - - - c a: r - - -	f ē - - - r - c a d e - -

c → ɸ

Dog.Primary	Meat.Primary	ToFall.Primary
c - a n - - f - ē - - -	c ā r - - - f ā r - - -	c - a d e - - f ē - - - r -

Appendix 3 - Prior Frequencies

$\mathfrak{z} \rightarrow k$

Leg.Gamba	Long.Largum	Long.Largum
z ā - b -	l a ū ȝ - -	l a ū ȝ - -
ȝ a m b e	ȝ a r k - -	l a r k - -

ȝ → ȝ

Leg.Gamba	ToEat.Manducare	ToEat.Manducare
ȝ a m b e	m a n ȝ - - a: - -	m a n ȝ - - a: - -
ȝ ā - b -	m ā ȝ - - e - -	m ā n ȝ - - a - -

k^j → x

Eye.Primary	Knee.Genuculum	Old.Primary
- o - k ^j - - - -	dʒ - e n u n k ^j - - - -	v - e k ^j - - - -
- o - x - o - -	- i n o - x o - -	b j e x o - - -

ȝ → k^w

Who.Quem	What.Primary	What.Primary
ȝ - i n e	ȝ - e -	ȝ - e -
k ^w - e m -	k ^w - i d	k ^w - i d

h → ʃ

ToKnow.Cognoscere	ToKnow.Cognoscere	ToKnow.Cognoscere
k i - n ɔ h - - - -	k i - n ɔ h - - - -	k i - n ɔ h - - - -
k o - n o ʃ s e r e	k u - n ε ʃ - ə - -	k u - n ɔ a ʃ t e - -

ʃ → h

ToKnow.Cognoscere	ToKnow.Cognoscere	ToKnow.Cognoscere
k o - n o ʃ s e r e	k u - n ε ʃ - ə - -	k u - n ɔ a ʃ t e - -
k i - n ɔ h - - - -	k i - n ɔ h - - - -	k i - n ɔ h - - - -

z → ȝ

Bird.Auccellus	ToSay.Primary	ToSay.Primary
w a z - o - - - -	d i z e f -	d i ȝ e f -
- u ȝ j ε - l - -	z i ȝ e - -	z i ȝ e - -

ȝ → u

Louse.Primary	Louse.Primary	Louse.Primary
p - i - o - - ȝ u - -	p - i - o - - ȝ u - -	p - o - - - - ȝ - - -
p - e: d u - k u l u s	p - e: d u - k u l u s	p - e: d u - k u l u s

ȝ → i

Leaf.Primary	Eye.Primary	Eye.Primary
f - ɔ ȝ ȝ a	- o - - - ȝ u -	- o - - - ȝ u -
f - o 1 i a	v o - - 1 i - -	v o - - 1 i - -

ȝ → ȝ

Leg.Gamba	ToEat.Manducare	ToEat.Manducare
ȝ ā - b -	m ā - ȝ - - e - -	m ā p ȝ - - a - -
ȝ a m b e	m a n ȝ - - a: - -	m a n ȝ - - a: - -

dʒ → n

Knee.Genuculum	Knee.Genuculum	Knee.Genuculum
dʒ - i n ɔ k k - j o - -	dʒ - e n o - - - - l i -	dʒ - e n u n k ^j - - - -
p - n ɔ - - - - - - - -	n ɔ - - - - - - - -	n ɔ - - - - - - - -

k^w → ȝ

Who.Quem	What.Primary	What.Primary
k ^w - e m -	k ^w - i d	ȝ - e -
ȝ - i n e	ȝ - e -	ȝ - e -

Appendix 3 - Prior Frequencies

$\kappa \rightarrow u$

Black.Primary	Black.Primary	Black.Primary
n w a - κ - -	n w a - κ - -	n w a - κ - -
n e g r u - -	n e g r u - -	n e g r u - -

$\jmath \rightarrow g$

Leg.Gamba	Leg.Gamba	Leg.Gamba
ʃ a m b e	ʃ a m b e	ʃ a m b e
g a m b a	g a m b a	g a m b a

$x \rightarrow k^j$

Eye.Primary	Knee.Genuculum	Old.Primary
- o - x - o - -	- i n o - x o - - -	b j e x o - - - -
- o - k^j - - - -	dʒ e n u n k ^j - - - -	v e k ^j - - - -

$y \rightarrow i$

ToTie.Primary	Black.Primary	Black.Primary
λ i y a - -	n e y r o - -	n ε y r ə - -
l ɔj i - - - -	n - i g r u m	n - i g r u m

$z \rightarrow k$

Bird.Auccellus	ToSay.Primary	ToSay.Primary
w a z - o - - - -	d i z e r -	d i z e r -
- au k - e l l u s	d i: k e r e	d i: k e r e

$v \rightarrow j$

New.Novella	New.Novella	New.Novella
n u v ε - 1 -	n o v ε 1 1 a	n ɔ v ε - 1 -
n u j - - - a	n u j - - - a	n u j - - - a

$x \rightarrow j$

Leaf.Primary	Eye.Primary	Eye.Primary
- o x - a	- o - x - o - -	- o - x - o - -
f - œ j - -	- œ - j - - -	- u - j - - -

$ʃ \rightarrow z$

Bird.Auccellus	ToSay.Primary	ToSay.Primary
- u ʃ j ε - 1 - -	z i ʃ e - -	z i ʃ e - -
w a z - o - - - -	d i z e r -	d i z e r -

$λ \rightarrow d$

Back.Spatula	Back.Spatula	Back.Spatula
ə s p a λ - λ ə	ə s p a λ - λ ə	ə s p a λ - λ ə
e s p a l - d a	i ſ p a d w - a	i ſ p a d w - a

qa → ε

Rain.Primary	ToKnow.Cognoscere	ToKnow.Cognoscere
p l q a - - j e	k u - n q a ſ t e - -	k u - n q a ſ t e - -
p l ε - f - -	k o - n ε - t - b -	k u - n ε ſ - - -

e → u:

Egg.Primary	Fire.Focus	New.Primary
w e b o -	f w e g o -	n w e b o -
- u: f - -	f - u: k - -	p - u: f - -

εj → ε

Ear.Primary	ToSee.Primary	Red.Vermiculus
ɔ r εj - - - -	v - εj - - - -	v ε κ m εj - - - -
u r ε - - - -	b - ε w - r ə	b ə r m ε - - λ -

Appendix 3 - Prior Frequencies

$\varepsilon j \rightarrow i$

Ear.Primary	ToSee.Primary	Red.Vermiculus
ɔ r ej - - - - -	v - εj - - - -	v ε ɛ m εj - - - -
aʊ r i - k u l a	w - i d e: r e	v e r m i k u l u s

y → i

Night.Primary	Night.Primary	YouSingular.Primary
n - y - t - -	n - y - t - -	t y
n ɥ i - - - -	n i - t - -	t i

ea → ε

Star.Primary	Star.Primary	ToDrink.Primary
- s t - εa - - -	- s t - εa - - -	b - εa - - - -
ə s t - ε - l -	- s t - ε - l e	b - ε w - f ə

qa → aʊ

Tail.Primary	Tail.Primary	Tail.Primary
c q a d ə	c q a d ə	c q a d ə
k aʊ d a	k aʊ d e	k aʊ d e

a → ɔ

Black.Primary	Black.Primary	Black.Primary
n w a - ɔ - -	n w a - ɔ - -	n w a - ɔ - -
n e g ɔ u - -	n e g ɔ u - -	n e g ɔ u - -

au → ɔa

Tail.Primary	Tail.Primary	Tail.Primary
k aʊ d a	k aʊ d e	k aʊ d e
c ɔ a d ə	c ɔ a d ə	c ɔ a d ə

au → ø

Tail.Primary	Tail.Primary	Tail.Primary
k aʊ d a	k aʊ d e	k aʊ d e
k ø - -	k ø - -	k ø - -

œ → u:

Egg.Primary	Fire.Focus	New.Primary
- œ f - -	f - œ - -	n - œ f - -
- u: f - -	f - u: k - -	p - u: f - -

a: → ə

Root.Radicina	Liver.Primary	Liver.Primary
r a: d i: k i: n a	f - i: k a: t u m	f - i - a: t - -
r ə d ə f i n ə	f - e ð ə - - -	f - e ð ə - - -

i → ɛ̂

Hand.Primary	Hand.Primary	Wind.Primary
m i n ə -	m i n ə -	v - i n t - -
m ɛ - - -	m ɛ - - -	v - ɛ - - -

u → ɔ

Red.Primary	Red.Primary	Red.Primary
r u s s u s	ɹ o - ſ u -	r o - ſ u -
ɹ o - ſ ɔ -	ɹ o - ſ ɔ -	ɹ o - ſ ɔ -

ɔ → a

Horn.Cornua	ToBite.Primary	ToBite.Primary
k - ɔ ɔ n - -	m - ɔ ɔ d - -	m - ɔ r d e r e
k w a r - - -	m w a r d i - -	m w a r d i - -

Appendix 3 - Prior Frequencies

$\theta \rightarrow a:$

Root.Radicina	Liver.Primary	Liver.Primary
r θ d θ ŋ i n θ	f - e ðʒ θ - - -	f - e ðʒ θ - - -
r a: d i: k i: n a	f - i: k a: t u m	f - i a: t - - -

$\tilde{e}j \rightarrow \tilde{e}j$

Who.Quem	Not.Nec	In.In
k - $\tilde{e}j$ - -	n $\tilde{e}j$ - $\tilde{e}j$ -	
k - $\tilde{e}j$ - -	n $\tilde{e}j$ - $\tilde{e}j$ -	

$\tilde{e}j \rightarrow \tilde{e}j$

Who.Quem	Not.Nec	In.In
k - $\tilde{e}j$ - -	n $\tilde{e}j$ - $\tilde{e}j$ -	
k - $\tilde{e}j$ - -	n $\tilde{e}j$ - $\tilde{e}j$ -	

$u \rightarrow r$

Black.Primary	Black.Primary	Black.Primary
n e g r u - -	n e g r u - -	n e g r u - -
n - i g r u m	n - i g r u m	n - i g r u m

$\varepsilon \rightarrow j$

Skin.Pellis	Skin.Pellis	Skin.Pellis
p ε - - - -	p ε - - - -	p ε - - - -
p j e - 1 -	p j ε - 1 -	p j e - 1 e -

$\varepsilon \rightarrow ej$

Ear.Primary	ToSee.Primary	Red.Vermiculus
u r ε - - - -	b - ε w - r θ	b θ r m ε - - -
ɔ r $\tilde{e}j$ - - - -	v - $\tilde{e}j$ - - - -	v ε w m $\tilde{e}j$ - - - -

$\varepsilon \rightarrow ea$

Star.Primary	Star.Primary	ToDrink.Primary
ə s t - ε l -	- s t - ε l e	b - ε w - r θ
- s t - ea - - -	- s t - ea - - -	b - ea - - - -

$\varepsilon \rightarrow oa$

Rain.Primary	ToKnow.Cognoscere	ToKnow.Cognoscere
p l ε - f -	k o - n ε - t - ㅂ -	k u - n ε ʃ - ə -
p l oa - - j e	k u - n oa ʃ t e - -	k u - n oa ʃ t e - -

$o: \rightarrow w$

I.Primary	I.Primary	I.Primary
- e g o:	- e g o:	- e g o:
- e - w	- e - w	j e - w

$o \rightarrow aj$

Water.Primary	Sand.Sabulum	Sand.Sabulum
o - - - -	s o - - r ə -	s o - - r ə -
aj - յ w ə	s aj β - r u -	s aj β - r u -

$a \rightarrow o$

Horn.Cornua	ToBite.Primary	ToBite.Primary
k w a r - - -	m w a r d i - -	m w a r d i - -
k - օ բ n - -	m - օ բ d - բ	m - օ ր d e r e

$o \rightarrow e:$

Louse.Primary	Louse.Primary	New.Novellus
p j o - - -	p - o - - -	n u v o - - -
p - e: d u - k u l u s	p - e: d u - k u l u s	n օ v e: - - -

Appendix 3 - Prior Frequencies

u: → œ

Egg.Primary	Fire.Focus	New.Primary
- u: f - -	f - u: k - -	j - u: f - -
- œ f - -	f - œ - -	n - œ f - -

u: → e

Egg.Primary	Fire.Focus	New.Primary
w e b o -	f - w e g o -	n w e b o -

u → ʌ

Louse.Primary	Louse.Primary	Louse.Primary
p - e d u - k u l u s	p - e d u - k u l u s	p - e d u - k u l u s
p - i o - - ʌ u - -	p - i o - - ʌ u - -	p - o - - - - ʌ - - -

g → ʃ

Leg.Gamba	Leg.Gamba	Leg.Gamba
g a m b a	g a m b a	g a m b ə
ʃ a m b e	ʃ a m b e	ʃ a m b e

u → ʊ

Black.Primary	Black.Primary	Black.Primary
n e g f u - -	n e g f u - -	n e g f u - -
n w a - ʊ - -	n w a - ʊ - -	n w a - ʊ - -

u → w

Knee.Geneculum	Back.Spatula	Back.Spatula
ʒ u e - - - - -	ʒ u e - - - - -	i s p a t u l a
ʒ w ə - - - - -	ʒ u e - - - - -	i s p a d w ə

ɛ → i

Hand.Primary	Hand.Primary	Wind.Primary
m ɛ - - - -	m ɛ - - - -	v - ɛ - - - -
m i n ə - -	m i n ə - -	v - i n t - - -

ɔ → u

Red.Primary	Red.Primary	Red.Primary
z o - f ɔ -	z o - f ɔ -	z o - f ɔ -
r u s s u s	z o - f u -	f o - f u -

aj → o

Water.Primary	Sand.Sabulum	Sand.Sabulum
aj - y w ə	s aj β - r u -	s aj β - r u -
o - - - -	s o - - r ə -	s o - - r ə -

a → e:

Hair.Primary	Star.Primary	ToKnow.Sapere
p w a l - -	e - t w a l - l -	s a v w a ə - -
p - e: l - -	- s t - e: l l a	s a v - e: - -

g → r

Black.Primary	Black.Primary	Black.Primary
n - i g r u m	n - i g r u m	n - i g r u m
n e - r o - -	n ø - r - -	n e - r i - -

g → a

Black.Primary	Black.Primary	Black.Primary
n e g f u - -	n e g f u - -	n e g f u - -
n w a - ʊ - -	n w a - ʊ - -	n w a - ʊ - -

Appendix 3 - Prior Frequencies

$d \rightarrow \lambda$

Back.Spatula	Back.Spatula	Back.Spatula
e s p a l - d a	i ſ p a d w - e	i ſ p a d w - e
ə s p a λ - λ ə	ə s p a λ - λ ə	ə s p a λ - λ ə

$t \rightarrow w$

Star.Primary	Star.Primary	Star.Primary
e s t r e - j a	i s t r e - l e	i ſ t r e - l e
e - t w a - l -	e - t w a - l -	e - t w a - l -

$e: \rightarrow a$

Hair.Primary	Star.Primary	ToKnow.Sapere
p - e: l - -	- s t - e: l l a	s a v - e: - -
p w a 1 - -	e - t w a - l -	s a v w a v -

$e: \rightarrow o$

Louse.Primary	Louse.Primary	New.Novellus
p - e: d u - k u l u s	p - e: d u - k u l u s	n o v e: - - - -
p j o - - - x - - o	p - o - - - - λ - -	n u v o - - - -

$k \rightarrow z$

Bird.Aucellus	ToSay.Primary	ToSay.Primary
- a u k - e l l u s	d i: k e r e	d i: k e r e
w a z - o - - -	d i z e r -	d i z e r -

$k \rightarrow ʒ$

Leg.Gamba	Long.Largum	Long.Largum
k a m b ə	λ a r k - -	l a r k - -
ʒ ə b - b -	l a ʒ ʒ - -	l a ʒ ʒ - -

$k \rightarrow λ$

Old.Primary	Old.Primary	Old.Primary
v - ε k - k j o	v - ε k - k j o	v - ε k - k j o
v - ej - - λ u -	v - e - - λ u -	v - e - - λ u -

$n \rightarrow dʒ$

Knee.Geneculum	Knee.Geneculum	Knee.Geneculum
j - - n ɔ - - - -	j - - n ɔ - - - -	j - - n ɔ - - - -
dʒ - i n ɔ k k - j o -	dʒ - e n o - - - -	dʒ - e n u n k - -

$i \rightarrow y$

Night.Primary	Night.Primary	YouSingular.Primary
n ɥ i - - - -	n - i - t - -	t i
n - y - t - -	n - y - t - -	t y

$j \rightarrow x$

Leaf.Primary	Eye.Primary	Eye.Primary
f - œ j - -	- œ - j - - -	- u - j - - -
- o x - a	- o - x - o - -	- o - x - o - -

$j \rightarrow v$

New.Novella	New.Novella	New.Novella
n u j - - - a	n u j - - - a	n u j - - - a
n u v ε - l -	n o v ε l l a	n o v ε - l -

$i \rightarrow εj$

Ear.Primary	ToSee.Primary	Red.Vermiculus
a u r i - k u l a	w - i d e: r e	v e r m i k u l u s
ɔ r εj - - - -	v - εj - - - -	v ε ʒ m εj - - -

Appendix 3 - Prior Frequencies

$\emptyset \rightarrow \text{au}$

Tail.Primary	Tail.Primary	Tail.Primary
k ø - -	k ø - -	k ø - -
k au d a	k au d a	k au d a

$r \rightarrow g$

Black.Primary	Black.Primary	Black.Primary
n e - r o - -	n ø - r - - -	n e - r i - -
n - i g r u m	n - i g r u m	n - i g r u m

$j \rightarrow \varepsilon$

Skin.Pellis	Skin.Pellis	Skin.Pellis
p j e - l - -	p j ε - l - -	p j e - l e - -
p ε - - - - -	p ε - - - - -	p ε - - - - -

$w \rightarrow f$

Star.Primary	Star.Primary	Star.Primary
e - t w a - l -	e - t w a - l -	e - t w a - l -
e s t r e - j a	i s t r e - l e	i s t r e - l e

$i \rightarrow y$

ToTie.Primary	Black.Primary	Black.Primary
l øj i - - -	n - i g r u m	n - i g r u m
λ i y a - - -	n e y r o - -	n ε y r θ - -

$w \rightarrow o:$

I.Primary	I.Primary	I.Primary
- e - w	- e - w	j e - w
- e g o:	- e g o:	- e g o:

$i \rightarrow λ$

Leaf.Primary	Eye.Primary	Eye.Primary
f - o l i a	v o - - l i -	v o - - l i -
f - o λ λ a	- o - - λ u -	- o - - λ u -

$w \rightarrow u$

Knee.Genuculum	Back.Spatula	Back.Spatula
ʒ w e - - - - -	λ u -	i f p a d w - e
ʒ u e - - - - -	λ u -	- s p a t u l a

$r \rightarrow u$

Black.Primary	Black.Primary	Black.Primary
n - i g r u m	n - i g r u m	n - i g r u m
n e g r u - -	n e g r u - -	n e g r u - -

$e \rightarrow r$

Rope.Restis	ToSuck.Primary	ToSuck.Sugere	Big.Majjorem
r e s t - e m	s y - s - e - -	s u - dʒ - e -	m a j j o: r e m
r i s t r a	ʃ u - ʃ a r - -	s u - g a r -	m a - - - r e

$o \rightarrow ēj$

Child.Ninnus	Child.Ninnus	Child.Ninnus	Child.Ninnus
n i p o	n i p o	n i n o	n i n o
n e n ēj			

$ɛ \rightarrow a$

Meat.Primary	ToDrink.Primary	Heavy.Primary	Heavy.Primary
ʃ ε z - - - -	b - ε w - r ə	g r ε - - v e -	g r ε - - v i -
ʃ a r - - - -	b w a - - ə -	g r a - - v - -	g r a - - v - -

Appendix 3 - Prior Frequencies

$\varepsilon \rightarrow a:$

Root.Primary	Root.Radicina	Meat.Primary	Salt.Primary
ə r ε l - - - - -	r ε - - s ε n -	f ε β - - -	s ε l - - -

$r \rightarrow ε$

Ear.Primary	Ear.Primary	Ear.Primary	Ear.Primary
ɔ R ej - - - - -	ɔ R ej - - - - -	ɛ R εj - - - - -	ɛ R εj - - - - -

$e \rightarrow ɔ$

Long.Longum	Long.Longum	Good.Primary	Good.Primary
l w e n g o -	l w e n g o -	b w e n o -	b w e n o -

$e \rightarrow ɔ̃$

Long.Longum	Long.Longum	Good.Primary	Good.Primary
l w e n g o -	l w e n g o -	b w e n o -	b w e n o -

$e \rightarrow ɔj$

Leaf.Primary	ToTie.Primary	ToTie.Primary	ToTie.Primary
f w e - - e	l e g a r e	l e - a: - -	l e g a - -

$a: \rightarrow ε$

Root.Primary	Root.Radicina	Meat.Primary	Salt.Primary
- r a: d - i: k e m	r a: d i: k i: n a	c a: r - - -	s a: l - - -

$ø \rightarrow o$

Tail.Primary	Tail.Primary	Fire.Focus	Fire.Focus
k ø - -	k ø - -	f - ø - - -	f - ø - - -

$i \rightarrow d$

Skin.Primary	ToHear.Primary	ToHear.Primary	ToHear.Primary
k - oj i - n - -	oj - i - - -	oj - i - - -	oj - i - - -

$a \rightarrow ej$

Breast.Primary	Stone.Primary	Stone.Primary	Stone.Primary
s a n - -	s a k s u m	s a s s s o -	s a - s - -

$i \rightarrow a:$

ToEat.Manducare	ToEat.Manducare	ToSuck.Primary	ToStand.Altiare
m a n - - - i - -	m a n - - - i - -	s y - s i - -	o - s i - - -

$a \rightarrow ej$

Breast.Primary	Stone.Primary	Stone.Primary	Stone.Primary
s a n - -	s a k s u m	s a s s s o -	s a - s - -

$u \rightarrow l$

Louse.Primary	Louse.Primary	Louse.Primary	Eye.Primary
p - e d u - k u l u s	p - i - o - - λ u - -	p - i - o - - λ u - -	- o - k u l u s

Appendix 3 - Prior Frequencies

i → i

Nose.Nares	Nose.Nares	Nose.Nares	Nose.Nares
n a r i θ -	n a r i f e	n a r i s -	n e r i f -
n a: r i s -			

i → oj

Night.Primary	Night.Primary	Night.Primary	Night.Primary
n q i - - - -	n q i - - - -	n - i - t - -	n - i - t - -
n - oj - t i -			

a: → i

ToEat.Manducare	ToEat.Manducare	ToSuck.Primary	ToStand.Altiare
m a n d u k a: r e	m a n j - - a: - -	c u - c - a: - -	a l f a: - -
m a n - - i - -	m a n - - i - -	s y - s - i - -	o - s i - -

a: → k

ToBite.Morsicare	ToBite.Morsicare	ToBite.Morsicare	ToBite.Morsicare
m o r s e a: - - -	m o r s e a: - - -	m o r s e a: - - -	m o r s e a: - - -
m o r s i k a: r e	m o - s - k a: r -	m o r s i k a: r e	m u r s e k a - - -

kʷ → g

Water.Primary	Water.Primary	Water.Primary	Water.Primary
a - kʷ - a			
a - g w a	a - g w e	a - g w e	a - g - e

r → r

Ear.Primary	Ear.Primary	Ear.Primary	Ear.Primary
ɔ R ej - - - -	ɔ R ej - - - -	ɔ R ej - - - -	ɔ R ej - - - -
au r i - k u l a	o r e k k - j a	o r e: - - -	u r e - k - - e

i → ɛa

ToDrink.Primary	ToSee.Primary	ToFall.Primary	ToFall.Primary
b - i b e r e	v j o d i - -	k - e - i f -	k - e - i f -
b - ɛa - - - -	v - e d ɛa - -	k - ə d ɛa - -	k - ə d ɛa - -

ẽ → ã

Tooth.Primary	Tooth.Primary	Wind.Primary	Wind.Primary
d - ẽ - f i -	d - ẽ - t i -	v - ẽ - t u -	v - ẽ - t u -
d - ã - - - -	d - ã - - - -	v - ã - - - -	v - ã - - - -

ã → ẽ

Tooth.Primary	Wind.Primary	Ash.Primary	Tongue.Primary
d - ã - - - -	v - ã - - - -	s ã - - d ㅂ -	l ã - 9 - -
d - ẽ - - - -	v - ẽ - - - -	s ẽ - - t - -	l ẽ - - v -

ɛa → i

ToDrink.Primary	ToSee.Primary	ToFall.Primary	ToFall.Primary
b - ɛa - - - -	v - e d ɛa - -	k - ə d ɛa - -	k - ə d ɛa - -
b - i b e r e	v j o d i - -	k - e - i f -	k - e - i f -

i → i

Nose.Nares	Nose.Nares	Nose.Nares	Nose.Nares
n a: r i s -			
n a: r i θ -	n a: r i f e	n a: r i s -	n e r i f -

j → ʒ

Knee.Genuculum	Knee.Genuculum	Knee.Genuculum	Knee.Genuculum
j - - j ɔ - - - -	j - - j ɔ - - - -	j - - j ɔ - - - -	j - - j ɔ - - - -
ʒ - ə n u - - - -	ʒ u e - - - -	ʒ u - - - -	ʒ w a - - - -

Appendix 3 - Prior Frequencies

$l \rightarrow u$

Louse.Primary	Louse.Primary	Louse.Primary	Eye.Primary
p - e: d u - k u l u s	p - e: d u - k u l u s	p - e d o: - l i -	v o - - l i -
p - i - o - - λ u -	p - i - o - - λ u -	p - e: d u - k u l u s	- o - k u l u s

$l \rightarrow t$

Back.Spatula	Back.Spatula	Back.Spatula	Back.Spatula
e s p a l - d a	e s p a l - d a	- s p a l - l a	- s p a l - l a
- s p a t u l a	- s p a t - - e	- s p a t u l a	- s p a t - - e

$r \rightarrow R$

Ear.Primary	Ear.Primary	Ear.Primary	Ear.Primary
a u r i - k u l a	o r e k k - j a	o r e: - - - l e	u r e - k - - e
ɔ R ej - - - - -	ɔ R ej - - - - -	ɔ R ej - - - - -	ɔ R ej - - - - -

$λ \rightarrow x$

Leaf.Primary	Leaf.Primary	Leaf.Primary	Leaf.Primary
f - o λ λ a	f - o λ - e	f - o λ - e	f - u λ - e
- o x - a	- o x - a	- o x - a	- o x - a

$j \rightarrow k$

Eye.Primary	Eye.Primary	Eye.Primary	Eye.Primary
- œ - j - - -	- œ - j - - -	- u - j - - -	- u - j - - -
- o - k u l u s	- o k k - j o -	- o - k u l u s	- o k k - j o -

$s \rightarrow t$

Bird.Aucellus	Rope.Restis	Rope.Restis	Rope.Restis
- u s - e - λ - -	r - i s t r a	r - ε s t - a	r j e s t - e
- u t f ε l l o -	r e s t - e m	r e s t - e m	r e s t - e m

$ɔj \rightarrow e$

Leaf.Primary	ToTie.Primary	ToTie.Primary	ToTie.Primary
f - oj - - - e	l oj i - - -	l oj i - - -	l oj i - - -
f w e - - - e	l e g a r e	l e - a: - -	l e g a - -

$k \rightarrow a:$

ToBite.Morsicare	ToBite.Morsicare	ToBite.Morsicare	ToBite.Morsicare
m o r s i k a: r e	m o - s - k a r -	m o r s i k a r e	m u r s e k a - -
m o r s e a: - - -	m o r s e a: - - -	m o r s e a: - - -	m o r s e a: - - -

$k \rightarrow θ$

Root.Primary	Leg.Petiolus	ToSay.Primary	ToBurn.Incendere
- r a: d - i: k e m	p ε - k - o l -	d i: k e r e	i n k e n d - e r e
- r a - - i θ - -	p e - θ i o l o -	d e θ i r -	e n θ e n d - e r -

$p \rightarrow g$

Water.Primary	Water.Primary	Water.Primary	Water.Primary
a - p - θ	a - p - θ	a - p - θ	a - p - θ
a - g w a	a - g w e	a - g w e	a - g - e

$p \rightarrow β$

Hair.Capillus	Hair.Capillus	ToKnow.Sapere	ToKnow.Sapere
k a p i l l u s	k a p e l l o -	s a p - e r e	s a p - e r e
k e β e l u -	k e β e l u -	s a β - ε	s a β - ε - -

$r \rightarrow e$

Rope.Restis	ToSuck.Primary	ToSuck.Sugere	Big.Majjorem
r - i s t r a	f u - f a r - -	s u - g a r -	m a - - - r e
r e s t - e m	s y - s - e - -	s u - dʒ - e	m a j o: r e m

Appendix 3 - Prior Frequencies

$f \rightarrow R$

Ear.Primary	Ear.Primary	Ear.Primary	Ear.Primary
o g e - x - - a	o g e - - - A a	o g ej - - - A a	u f ε - - - A ε
ɔ R ej - - - - -	ɔ R ej - - - - -	ɔ R ej - - - - -	ɔ R ej - - - - -

$d \rightarrow i$

Skin.Primary	ToHear.Primary	ToHear.Primary	ToHear.Primary
k - o d i - - e	a <u>u</u> - d i: r e	u - d i r e	u l d i: - -
k - oj i - n - -	ɔj - i - - -	ɔj - i - - -	ɔj - i - - -

$t \rightarrow l$

Back.Spatula	Back.Spatula	Back.Spatula	Back.Spatula
- s p a t u l a	- s p a t u l a	- s p a t - - e	- s p a t - - e
e s p a l - d a	- s p a l - l a	e s p a l - d a	- s p a l - l a

$t \rightarrow s$

Bird.Aucellus	Rope.Restis	Rope.Restis	Rope.Restis
- u t tf ε l l o -	r e s t - e m	r e s t - e m	r e s t - e m
- u s - e - A - -	r - i s t f a	r - ε s t - a	r j e s t - e

$g \rightarrow p$

Water.Primary	Water.Primary	Water.Primary	Water.Primary
a - g w a	a - g w e	a - g w e	a - g - e
a - p - θ a	a - p - θ a	a - p - θ a	a - p - θ a

$k \rightarrow j$

Eye.Primary	Eye.Primary	Eye.Primary	Eye.Primary
- o - k u l u s	- o - k u l u s	- o k k - j o -	- o k k - j o -
- œ - j - - - -	- u - j - - - -	- œ - j - - - -	- u - j - - - -

$z \rightarrow θ$

Ash.Cinisia	Ash.Cinisia	ToSay.Primary	ToSay.Primary
s ī - - z e	s ī - - z e	d i z e f -	d i z e f -
θ e n i θ a	θ e n i θ a	d e θ i f -	d e θ i f -

$oj \rightarrow i$

Night.Primary	Night.Primary	Night.Primary	Night.Primary
n - oj - t i -			
n q i - - - -	n i - t - -	n q i - - - -	n i - t - -

$a \rightarrow ε$

Meat.Primary	ToDrink.Primary	Heavy.Primary	Heavy.Primary
ſ a r - - - -	b w a - - - -	g r a - - - v - -	g r a - - - v - -
ſ ε z - - - -	b ε w - r a	g r ε - - - v e -	g r ε - - - v i -

$ã \rightarrow ī$

Child.Primary	Child.Primary	Tongue.Primary	Tongue.Primary
ã - f ã - - - -	ã - f ã - - - -	l ã - g - - -	l ã - g - - -
ĩ - f ē - ſ i -	ĩ - f ē - t i -	l ī - g w e	l ī - g w e

$ã \rightarrow ē$

Tooth.Primary	Tooth.Primary	Wind.Primary	Wind.Primary
d - ã - - - -	d - ã - - - -	v - ã - - - -	v - ã - - - -
d - ē - ſ i -	d - ē - t i -	v - ē - t u -	v - ē - t u -

$ã \rightarrow i$

Blood.Primary	Wind.Primary	ToEat.Manducare	In.In
s ã - - - - -	v - ã - - - -	m ã - 3 - - e - -	ã - -
s i n dʒ - e - -	v - ī n t - -	m ī n - - k a - -	i n

Appendix 3 - Prior Frequencies

$\tilde{\sigma} \rightarrow e$

Long.Longum	Long.Longum	Good.Primary	Good.Primary
l - $\tilde{\sigma}$ - - - -	l - $\tilde{\sigma}$ - - - -	b - $\tilde{\sigma}$ - - - -	b - $\tilde{\sigma}$ - - - -
l w e n g o -	l w e n g o -	b w e n o -	b w e n o -

$\tilde{\sigma} \rightarrow \tilde{e}w$

Not.Primary	Not.Primary	Not.Primary	Not.Primary
n $\tilde{\sigma}$ -	n $\tilde{\sigma}$ -	n $\tilde{\sigma}$ -	n $\tilde{\sigma}$ -
n $\tilde{e}w$ -	n $\tilde{e}w$ -	n $\tilde{e}w$ -	n $\tilde{e}w$ -

$\beta \rightarrow p$

Hair.Capillus	Hair.Capillus	ToKnow.Sapere	ToKnow.Sapere
k $\tilde{\sigma}$ β e - l u -	k $\tilde{\sigma}$ β e - l u -	s $\tilde{\sigma}$ β - ϵ - -	s $\tilde{\sigma}$ β - ϵ - -
k a p i l l u s	k a p $\tilde{\sigma}$ e l l o -	s a p - e r e	s a p - e r e

$\tilde{\epsilon} \rightarrow \tilde{a}$

Tooth.Primary	Wind.Primary	Ash.Primary	Tongue.Primary
d - $\tilde{\epsilon}$ - - - -	v - $\tilde{\epsilon}$ - - - -	s $\tilde{\epsilon}$ - - t - -	l $\tilde{\epsilon}$ - - v -
d - \tilde{a} - - - -	v - \tilde{a} - - - -	s \tilde{a} - - d \tilde{v} -	l \tilde{a} - g -

$\tilde{\epsilon} \rightarrow \tilde{e}$

Tooth.Primary	Tooth.Primary	Wind.Primary	Wind.Primary
d - $\tilde{\epsilon}$ - - - -	d - $\tilde{\epsilon}$ - - - -	v - $\tilde{\epsilon}$ - - - -	v - $\tilde{\epsilon}$ - - - -
d - \tilde{e} - \tilde{f} i -	d - \tilde{e} - t \tilde{i} -	v - \tilde{e} - t u -	v - \tilde{e} - t u -

$x \rightarrow \Lambda$

Leaf.Primary	Leaf.Primary	Leaf.Primary	Leaf.Primary
- - o x - a	- - o x - a	- - o x - a	- - o x - a
f - \tilde{o} Λ Λ a	f - o Λ - e	f - o Λ - e	f - u Λ - \tilde{e}

ej → a

Breast.Primary	Stone.Primary	Stone.Primary	Stone.Primary
s ej - u -	s ej - \tilde{f} u -	s ej - \tilde{f} u -	s ej - \tilde{f} u -
s a n - -	s a k s u m	s a s s o -	s a - s - -

$\tilde{i} \rightarrow \tilde{a}$

Child.Primary	Child.Primary	Tongue.Primary	Tongue.Primary
\tilde{i} - f \tilde{e} - \tilde{f} i -	\tilde{i} - f \tilde{e} - t \tilde{i} -	l \tilde{i} - g w e	l \tilde{i} - g w e
\tilde{a} - f \tilde{a} - - - -	\tilde{a} - f \tilde{a} - - - -	l \tilde{a} - g -	l \tilde{a} - g - -

$\tilde{e}w \rightarrow \tilde{\sigma}$

Not.Primary	Not.Primary	Not.Primary	Not.Primary
n $\tilde{e}w$ -	n $\tilde{e}w$ -	n $\tilde{e}w$ -	n $\tilde{e}w$ -
n $\tilde{\sigma}$ -	n $\tilde{\sigma}$ -	n $\tilde{\sigma}$ -	n $\tilde{\sigma}$ -

$\theta \rightarrow z$

Ash.Cinisia	Ash.Cinisia	ToSay.Primary	ToSay.Primary
θ e n i θ a	θ e n i θ a	d e θ i r -	d e θ i r -
s \tilde{i} - - z a	s \tilde{i} - - z a	d i z e r -	d i z e r -

$\tilde{e} \rightarrow \tilde{\epsilon}$

Tooth.Primary	Tooth.Primary	Wind.Primary	Wind.Primary
d - \tilde{e} - \tilde{f} i -	d - \tilde{e} - t \tilde{i} -	v - \tilde{e} - t u -	v - \tilde{e} - t u -
d - $\tilde{\epsilon}$ - - - -	d - $\tilde{\epsilon}$ - - - -	v - $\tilde{\epsilon}$ - - - -	v - $\tilde{\epsilon}$ - - - -

Appendix 3 - Prior Frequencies

$\theta \rightarrow k$

Root.Primary	Leg.Petiolus	ToSay.Primary	ToBurn.Incendere
- r a - - i θ - -	p e - θ i o l o -	d e θ i r -	e n θ e n d - e r -
- r a: d - i: k e m	p ε - k - ɔ l - -	d i: k e r e	i n k e n d - e r e

$\tilde{e}j \rightarrow o$

Child.Ninnus	Child.Ninnus	Child.Ninnus	Child.Ninnus
n e n e ēj	n e n ēj	n e n ēj	n e n ēj
n i n o	n i n o	n i n o	n i n o

$\circ \rightarrow \emptyset$

Tail.Primary	Tail.Primary	Fire.Focus	Fire.Focus
k ɔ w -	k ɔ d ε	f w ɔ k o -	f - ɔ k - -
k ø -	k ø -	f - ø -	f - ø - -

$i \rightarrow \tilde{a}$

Blood.Primary	Wind.Primary	ToEat.Manducare	In.In
s i n dg - e - - -	v - ī n t - - -	m ī n - - k a - -	i n
s ā - - - - - - -	v - ā - - - -	m ā - 3 - - e - -	ā -

$ʒ \rightarrow n$

Knee.Genuculum	Knee.Genuculum	Knee.Genuculum	Knee.Genuculum
ʒ - ē n u - - - - -	ʒ u e - - - - -	ʒ w ē - - - - -	ʒ - ē n o - - - -
j - - j n ē - - - -	j - - j n ē - -	j - - j n ē - -	j - - j n ē - -

$ej \rightarrow a$

Breast.Primary	Stone.Primary	Stone.Primary	Stone.Primary
s ej - u -	s ej - ſ u -	s ej - ſ u -	s ej - ſ u -
s a n - -	s a k s u m	s a s s o -	s a - s - -

$\tilde{o} \rightarrow e$

Long.Longum	Long.Longum	Good.Primary	Good.Primary
l - ī ō - g u -	l - ī ō - g u -	b - ō - - - -	b - ō - - - -
l w e n g o -	l w e n g o -	b w e n o -	b w e n o -

$g \rightarrow k^w$

Water.Primary	Water.Primary	Water.Primary	Water.Primary
a - g w a	a - g w e	a - g w e	a - g - e
a - k ^w - a			

Appendix 4 - Symbols

Ψ	Phylogeny
	The (possibly unknown) relationship between entities resulting from an evolutionary tree
τ	Tree topology
	Information on the relationships of the languages
μ	Substitution rate
	the rate at which the language changes
N	Sampled languages
	The number of languages in a sample
v	Expected events
	The expected number of evolutionary events that occurred between two languages
t	Past times
	Times of branch events
\mathbf{A}	Segmental alignment
	Constructed by combining the word segment information for the languages of interest with information on the homology of the segments
\mathbf{S}	Segmental information
	Information on the homology of the segments
\mathbf{s}	Segment
	Linguistic segment
s_i	ith segment
\mathbf{H}	Homology map
	The map describing the alignment of the segments
\mathbf{Q}	Rate Matrix
β	Rate matrix scaling factor
	Scales the rate matrix such that the average rate of segmental substitution is one
\mathbf{P}	Probability
	The probability the process ends in certain state
P	Marginal Likelihood
	The probability of an event occurring
π	Equilibrium distribution
λ	Rate of segment insertion
μ	Rate of segment deletion
n	Word length
	Number of segments in a word
r	Rate parameter
θ	Rate parameters
	Parameters associated with the rate matrix

θ'	Proposal New value proposal
q	Proposal probability Probability of new proposal
u	Random number
R	Acceptance probability Probability of accepting a proposed value
\mathcal{M}	Model Mathematical model for linguistic parameters
BF	Bayes Factor A numerical factor related to the quality of the model fit
X	Unknown
\mathcal{B}	Possible rooted trees
$\mathcal{B}(N)$	Possible rooted trees as a function of the number of languages
f	Function
e	Root of the natural log or Euler number

Appendix 5 - Words containing each segment

ǟj	0250, 0303, 006A, 0303 kēj nēj ēj	84
ẽw̄	0250, 0303, 0077, 0303 kēw̄ kēw̄ mēw̄ mēw̄ nēw̄ nēw̄	41
aū	0061, 0075, 032F aükellus kauđa kauđe kauđe aürikula aüdi:re aüz	29
eā	0065, 032F, 0061 stea bęa vedęa kędęa	74
oā	006F, 032F, 0061 fōaje coadę ploaje nōapte kunoafte	50
ẽj̄	1EBD, 006A, 0303 nenēj̄ nenēj̄ kēj̄ nēj̄ ēj̄	15
aj̄	0061, 006A ajywə sajβru sajβru majjo:rem	76
a:	0061, 02D0 ra:di:kem ra:di:k:i:na ca:r na:sus na:s na:ris a:la fi:ka:tum fia:t sa:l manduka:re manja: morsika:re morsea: cuca: suffla:re sofla: pulsa:re pulsa: stare sta: leva:re leva: alfa: da: dona:re dona: lig:a:re lea: apta:re krema:re flamma:re ustula:re la:tus	52
ej̄	0065, 006A pejji ɔzej̄ seju pejtu sejſu areje kejmaže	21
e:	0065, 02D0 pe:dukulus pe:l ore:le ste:lla hare:na morde:re ri:de:re wide:re save: arde:re növe:	44
ī:	0069, 02D0 ra:di:kem radri:s ra:di:k:i:na pi:t fi:ka:tum ri:de:re aüdi:re uldi: ski:re weni:re vijpi: di:kere di:	53
k̄j̄	006B, 02B2 ok̄j̄ dženunk̄j̄ vek̄j̄	67
k̄w̄	006B, 02B7 akʷa kʷis kʷem kʷid	75
oj̄	006F, 006A kojin nojti nojti voj rojb	57
o:	006F, 02D0 pedo:li o:wum sabulo:nem no:men no:me no:minem ego: wo:s vo: kogno:skere ekspo:nere majjo:rem no:n	47
ū:	0075, 02D0 fu:nem u:f kornu: fu:mus fu:k tu: su:gere ju:f u:nus	55

Appendix 5 - Words containing each segment

Appendix 5 - Words containing each segment

c	0063	42
can ca:r cōadə cavel bōce noctem cuca: cade		
d	0064	45
pedukulus pidōkkjo pedo:li pādukje frondea ra:di:kem radris ra:di:kina rādāfina kodie kādua koda kādua kādu kōde cōadə dentem dā djente dente dē̄ti dē̄ dint dinte pedem pjede dorsum do dōsso dos do dwes do espalda ijspadwe ijspadwe igado figēdu pjōddga pjedra pedre sāds sendrə usted komedere manduka:re morde:re mōdbs mōrdere mōdbs mwardi suddgere ri:de:re ridere ridi ride wide:re vedere vjodi vedē aūdi:re udire uldi: kadere kadere cade kōdea dare dar dare da:z dar dar da: da donare dōne donar donare doa duar duna dine dona: di:kere dir deθir dire dizer dizer di dir di: arde:re aāds arder ardere aādes erder ardi arde inkendere enθender infendere isēdjar ənsendrə infindze grandem grande grande grēdi gurdus gordo lurdus lordo lerdo lerdo kʷid deintus dā dins		
e	0065	5
infantem infante fante nenēj nenēj nen piskem peθ pesse peste awem abe aukellus useλ passerem passere kanem kane kijne pedo:li pādukje fwee fōaje frondea ra:di:kem fu:nem fune funje restem əfti rjeste kotenna pellem pjel pelle peli peλ pjele karnem karne karne sangʷinem sangre sangwe sindje weso webo kwerno pelo pelo pelu kabejo kapello kabelu keβelu cavel orexa orekkja oreλe ore:le ureke ne ne nariſe gole dentem djente dente dinte pedem pje pje pjede piez jambe perna pjerna petiolus peθiolo genikulum zueλu əgenoli əgenunk el el ale kwejo epol espalda spale spate seno seno pektus peθo pjept fegato fedža etwal estreja stella istrelə istrelə stele age ploje plojaje salem sale se sare petra pjedra pedre peθrə pjere arena rena ərenə rēne sabulo:nem sabbjone wentum bjento ben fwego kinerem əfenere əneniθa əfenuθa noctem nofē nootte noapte no:men no:me nume no:minem lengwa 'lēnge ego: ew ew jew usted vose vose voste bibere beber bere bebeλ biβer bevi komedere kome kumer kumer manduka:re māže morde:re mōrdere mōdbs murðer morsika:re morsikare morsea: murseka syse sukkjare su:gere suddgere sudje suffla:re sufle soffjare əfle ri:de:re reir ridere ride wide:re ber vedere vez ver vedē aūdi:re udire skire sapere saber sapere sabεz əsber kognoskere konoθer konoθere konesεz kupiser kungaste pulsa:re puse weni:re benir venire veni sta:re estar stare leva:re lōve jebar levare leva:re leva: ose altsare kadere kaer kadere cade dare dare dona:re dōne donare dine ligare lje legare lea: lega apta:re di:kere deθir dire dizer dizer zi:fe ekspo:nere esporre spune krema:re kemar kejmare kejmare flamma:re flame arde:re arder ardere aādes erder arde inkendere enθender infendere isendjia ənsendrə infindze ustulare grandem grande grande majjorem mare lwengo le epe espeso spesso ijspesu grabe greve grew grew lerdo lerdo nwebo nowellus nuβeλo nowella nuβeλa wetulus bjexo veλu vjeli vjeli vekl bweno vermiculus bermexo veñmeλu rubeus rubeo rubeo rūdje neyρo nero negru neri negru prjeto pretu pretu kʷem kjen əfine ke ke əfe əfe nek ne en deintus		
f	0066	2
infantem əfā infante fante ifē̄fi ifē̄ti efā folia foej foλla foλrə foλrə foj fwee fōaje frondea frōse frōse frunzə fu:nem fune funje oef u:f fi:ka:tum fwa fegato figēdu fīyēdu fedža foet fia:t fikat plef fu:mus fumo fumu fum fum fokum fo fwego fwoko fogu foyu fo:k fo:k fok suffla:re sufle soffjare əfle sofla: sufla flamma:re flame flama grijef noef ju:f		
h	0068	25
pēhō uhe əhe hare:na kinəh		
i	0069	0
infantem infante ifē̄fi nijo nino nini piskem pejli avi pidōkkjo pioλu pioλu pedo:li folia raiθ kais əfis əfasin rādāfina ristrā əfis kodjre kodie kojin pēli kañni sangʷinem sēgi pilus kapillus arikula voli nariθ naris neris dē̄fi dint dinte pi piez petiolus peθiolo pittfōlo pifjor genikulum inoxo əjinakkjo əgenoli ijspadwe ijspadwe sinus si pi pit pwatxin pwetrin igado figēdu fīyēdu fia:t fikat istrelə pluwinia plq̄i pir arinə 'vint kinerem əneniθa əfinise nūj nit nomi no:minem lingʷa lingwa limbə io dži voi ti bibere bevi maji mwardi morsikare morsikare sysi əiñr reir ridere əiñr əiñr riwrə rir ridi wide:re vjodi əiñr oir udire owvir owvir ui əji aūzi sti kinəh koposi vənir benir venire vjiz vir bəni vini vjip: veni osi keir keir dine ligare əiñr lji dir deθir dire dizer dizer di dir zi:fe ardi inkendere infendere infindze grēdi spissus ijspesu ijspesu grawis grijef gravi grevi pittitus pəti pitulus piful nobijo nobija vi vjeli vermiculus nigrum neri kʷis ki ki ki kwi əfine kʷid ki ni ni ni in in deintus dins		
j	006A	34
ufjel sjē pjoxo pidōkkjo pju pādukje foej fōaje funje rjeste pjel pjel pjele orekkja oej əkkjo uj gōej djente pje pje pjede pjerna pifjor əjinakkjo pjept jubja pjōddga ploje plojaje pjex pjedra pjete pjatrə sabbjone savjō bjento jo jew sukkjare soffjare vjodi lje isēdjar majjorem ampjø grijef nuja vjø bjexo vjeli rubjo rōbbjo prjeto kjen		

Appendix 5 - Words containing each segment

k 006B 18

piskem aukkellus kanem kan kane kēw kēw ka kijne pe:dukulus pidökkjo pədukjə ra:di:kem ra:di:ki:na kwan kotenna kodjē kodie konnə kojin karnem karne kañni karni karn karne sank kornu: kɔ̄s kwerno kɔ̄rno kɔ̄snu kornu kɔ̄rn korn kornua kɔ̄sn kwen kwar kaya kɔ̄l kola koda kauđe kauđe kua kow kɔ̄de kapillus kabejo kapello kabelu keþelu kæbelə aúrikula orekkja ureke okulus ɔ̄kkjo bukka boka bokka boke boke bokə bok bukə kambə pek̄ol genikulum džinökkjo kollum ku kwejo kollo kolu kolu kɔ̄l ko kwel pektus fi:ka:tum fikat akkwa saksum fokum fwəko fɔ̄k fu:k fok kinerem komedere komer kome kumer manduka:re minka morsika:re moskar morsikare murseka sukkjare sk:i:re kognoskere kɔ̄netrə konoðer konoffere kɔ̄neser kujiser kunesə kinñh kɔ̄nɔsi kungaste kadere kaer kadere keir keir kawrə kadea di:kere ekspo:nere krema:re kemar kejmarə krəma inkendere lunk lark lark krassus kra vekkjo vermiculus ki ki ki kwi kjen kēj kēj kwa ke ke ki ki ke kwe nek

l 006C 30

aukkellus utfjello utfjel pe:dukulus pedo:li folia ørel pellem piel pselle pseli peli pjel pjele kola pilus pwal pelo pelo pelu pilu pel pe:l kapillus kapello kabelu keþelu cavel aúrikula ore:le okulus voli gula gøl gola gøla gøle petiolus peþiolo pitj̄lo pek̄ol genikulum dženoli a:la el ala ala ala el ale kollum kollo kolu kolu kwel spatula epol espalda spalla spal spale ste:lla etwal stella istrelə istrelə østel støl støle pluwia plui pluzə plef ploje ploaje salem sel sal sale sal sal sal sabulum sabulo:nem sabl savalon lingʷa lág lengwa lingwa ligwa ligwe lēv lēnge limba suffla:re sufle sɔ̄fle sofla: sufla uldi: pulsare pulsa: pulsa leva:re løve levare leva:livar leve leva:lua alþar altsare əlsa alþa: ligare lje legare lɔ̄ji lea: lega flammare flame ustula:re longus lɔ̄wengo lungo lōgu lōgu lɔ̄w lunk lung largus lañz largo largo lañgu largu ladž lark larg la:tus le lato latu latu lat amplus ɔ̄pl amplə lurdus lus lordo lerdo lur pitulus pitj̄ul nowellus novello novel nowella nuvel novella nɔ̄vel wetulus lw̄t̄e lontano lontan vermiculus

m 006D 6

infantem piskem awem passerem kanem ra:di:kem fu:nem restem pellem karnem sangʷinem ossum o:wum dentem pedem gamba gamba kambə jambe gambə genikulum manum mē mano mano mēw mēw mē man minə kollum dorsum fi:ka:tum salem saksum sabulum sabulo:nem wentum fu:mus umo fumo fumu fum fum fum fokum kinerem noctem no:men no:me nomi nomi nɔ̄m nume no:minem nombre limbə komedere komer kome kumer manduka:re má:ze mə:ŋ:za manja: minka morde:re mɔ̄kdə morder mɔ̄rdere mɔ̄dər murðer mwardi morsika:re moskar morsikare musəga musəgar musəya morsea: murseka krema:re kemar kejmarə krəma flamma:re flame flama grandem majjo:rem mare amplus amþo amplə vermiculus veñmej bermexo veñmeđu bermel nigrum kʷem

n 006E 1

infantem infante fante nijo nino nenēj nenēj nen nini kanem kan kane can kijne frondea frondza frunzə ra:di:ki:na ñasín resen rðəðfinə fu:nem fune funje kwan kotenna konnə kojin karnem karne kañni karni karn karne sangʷinem sangre sangwe sank sindjē kornu: kwerno kɔ̄rno kɔ̄snu kornu kɔ̄rn korn kornua kɔ̄sn kwen na:sus ne naso nas ne na:s nas narið nariſe naris neris na:ris dentem djente dente dint dinte perna pjerna perno peñne perne perna genikulum ʒənu inoxo džinökkjo ʒənoð dženoli dženunk̄ manum mano man minə sinus seno seno sen san pwat̄zin pwetrin hare:na arena rena ñeren aren rēne arinə sabulo:nem sabbjone savalon wentum bjento vento ben 'vint vint kinerem ſenere ſendrə ðeniða ſinise ſenuð noctem nūj noſte noſti noſti nit nyt noapte no:men nō no:me nomi nomi nɔ̄m nō nō nume no:minem nombre lingʷa lengwa lingwa lēnge manduka:re manja: minka kognoskere kɔ̄netrə konoðer kunesə kinñh kungaste wenire vəniš benir venire bəni vini donare dñne donar donare duna dine dona: ekspo:nere spune inkendere enθender infendere isendrə infindz̄e grande grande gran grant longus lwengo lungo lunk lung antʃo nowus nœf nwebo nwɔ̄vo novu novu nɔ̄w nu now nowellus nuvo noþjø novello nuþjølø nɔ̄ve: novel nowella nuvel noþjø novella nuþjølø nɔ̄vel nuja bonus bweno bwəno bɔ̄n bɔ̄n bun lontano lanta lontan nigrum nwa: neyro nero negru neyrə nør neri negru unus uno uno un ununu kjen ſine no:n nō no non nēw nēw no nō no nu nek ni ni ne nēj nēj ni in en in ən en in deintus dins

o 006F 14

nijo nino wazo utfjello paxaro passero pjoxo pidökkjo piołu piołu roł folia oxa fołe frondea frondza kotenna kodjē kodie konnə po ossum weso ɔ̄sso osu osu os webo wəvo ovu ovu ow kornu: kwerno kɔ̄rno kɔ̄snu kornu kɔ̄rn kornua kola koda pelo pelo kabejo kapello orexa oreļe orejā ore:le okulus o xo ɔ̄kkjo ołu ołu voli ok̄ naso boka bokka boke bokə gola gola gøl perno petiolus peþiolo pitj̄lo pitj̄or inoxo džinökkjo ʒənoð dženoli mano mano kollum kwejo kollo ko dorsum do dɔ̄sso dos do do epol seno seno peþo pøtto igado fegato o ploje sasso sora sabbjone bjento vento umo fumo fokum fwəko fogu foyu fok noctem noſte nomi nomi nombre jo io jo bos voi vo vose voste komedere komer kome mordere morder mɔ̄dər morsika:re moskar morsikare morsea: soffjare sofla: vjodi oir owvíš owvír kognoskere konoðer kuneser kunesə kɔ̄nɔsi ose osi donare donar donare doa dona: esporre longus lwengo lungo ʌōj largo largo lato antʃo amþo graso grasso espeso spesso gordo grossus ḡro grøsso grosu grosu gros lordo lerdo lerdo nowus nwebo nwɔ̄vo novu novu now nowellus nuvo noþjø novello nuþjølø novel nowella noþjø novella bjexo vekkjo bonus bweno bwəno lontano lontan roxo rosso ɔ̄sfo ros roſu bermexo rubjo røbbjo rubeo neyro nero prijeto uno uno no non no no

Appendix 5 - Words containing each segment

p 0070 16
piskem peθ pesse pejſi pejſi pes pes peſte pwasō pehō passerem paxaro passero paseru pasar pasare pe:dukulus pu pjoxo pidokkjo ríołu ríołu poł pju pedo:li pəduukje pellem po pjel pelle peli peli peł pe pjel pjele pilus pwal pelo pelo pelu pilu pel peł par kapillus kapello pedem pje pje pjede pe pe pew pi pit piez dżāp perna pjerna perno ręknę ręmę pernə petiolus peθiolo pitſolo pekəl pitſor spatula epol espadla spalla iſpadwə iſpadwə əspałłə spal spale spate pektus pi peſto peſto pejtu pejtu pit pejt pwatśin pwetřin apə pluwia plu̯i pjəddža pluža plef ploje plqaje petra pjek pjedra pjētra pedre peðre peðrə pir pjere pjatrə noapte sapere sapere pulsare puse puxar puſar puſar pulsa: pulsa aptare ekspōnere esporre spune amplus ąpl ampio ampla ąp spissus epe espeso spesso ispesu iſpesu əspes spe pittitus pəti pəti pitilus pitſul prieto pretu pretu

r 0072 35
passerem passero pasar frondea frondza ra:di:kem raiθ ərel radri:s ra:di:ki:na resen rədəfʃinə restem ristra resta rjeste karnem karne karn ŋar car kornu: körno körn korn kornua kwar aŋrikula orekkja ore:le ureke nariſe na:ris perna perno pernæ piſſor dorsum pwetrin sare petra pjētra pir pjere hare:nq rena aren rene arinə sorə kinerem ſenere ſendrə bibere bere komedere manduka:re morde:re mōrdere mwārdi morsika:re morsikare muſəgar morsea: murseka ſukkjare ſu:gere ſuddjere ſuffla:re ſoffjare ri:de:re reis ride:re riwra rir ridi wide:re vedere audi:re udire ſki:re ſapere ſapere ſavør kogno:skere konoffere pulsa:re weni:re venire ſta:re ſtare leva:re levare altsare kadere kadere kawrə ſter dare dare dar dona:re donare ligare apta:re diſkere dire dir ekspo:nere esporre krema:re kroma flamma:re arde:re ardere ardi inkendere infendere ustula:re ustura grandem grande gran grā grant majjo:rem largus largo lark larg krassus grasso kra gras gras gurdus grossus grōſſo grwes gros grawis greve grav grevi lurdus lordo lur russus roxo ros rōd̄ rōs vermiſulus bōrmel̄ rubeus rubjo rōbbjo rubeo rubeo rūd̄e rōf̄ rojb̄ niqrum nero nōr nerī

S 0073 17
piskem pes pwas̄ aukellus useλ passerem passero paseru pasar pasare pe:dukulus frōse frōse kais radri:s kāsin resen restem ristra resta rjeste sangʷinem sā sangre sangwe sēgi sēgi san̄ sōg sank sindže ossum os weso ɔsso osu osu os wes os pilus kapillus okulus na:sus naso nas na:s nas naris na:ris petiolus dorsum dɔsso dos dwes spatula espalda spalla əspaλλə spal spale spate sinus sē seno seno seju si sen san pektus ste:lla estreja stella istrele əstel stœl stœla salem sel sal sale saw sal sal se:sal sare saksom sasso sejfu sejfu sas sabulum sajþru sajþru sorə sabulo:nem sabl sabbjone savjō savalon fu:rus sād̄r sendr̄ sēt sīz̄ sīz̄ t̄finis̄ wo:s bos vojs bus usted vose vose voste morsika:re moskar morsikare musəga musaḡr̄ musaȳa morsea: murseka syse sukkjare sysi su:gere suddgere sugar suđe suffla:re sulfle soffjare sofla: sufla skir̄ sapere savwa:s saber sapere saberb̄ seber səβ̄e savør save: kogno:skere kopjeser kujiser kopjosi pulsare puse pulsa: pulsa stare estar stare asta sta: sta ose alsa alſar elsa osi ekspo:nere esporre spune isendjar isedjar ensendr̄ ustulare ustura longus largus la:lus amplus krassus graso grasso gras gras spissus espeso spesso ipspesu ipspesu spes spe gurdus grossus grasso grosu grosu gr̄os gr̄wes gros grawis lurdus pittitus pitulus nowus nowellus wetulus bonus russus ros ros vermiculus rubeus u:nus kʷis deintus dins

t 0074 4
infantem infante fante ifēti peste utſello restem ristra resta ſesti rjeste kotenna dentem djente dente dēti dint dinte pi:t petiolus pitſolo spatula spate pektus petto pejtu pejtu pit pet pjept pwat̄in pwetrin fi:katum fegato foet fia:t fikat stella etwal estreja stella istrele ijtrelē əstel ſtœl ſtele ſtea petra pjatra wentum bjento vento vētu 'vint vint ſet noctem nocte nojti nojti nit nyt jnɔt noapte tu: ty tu tu tu tu ti tu tu usted voste ſti kɔnet̄ ſtūgaſte ſtarare et̄ ſtarare iſtar iſtar əsta ſta: ſta apta:re atar etar etar uſtula:re uſtura grant la:tus lato latu lat pittitus p̄eti p̄eti pitulus wetulus lwētē lontano ſunta lontan prjeto pretu pretu deintus

Appendix 5 - Words containing each segment

V	0076	28
avi avi wɔvo ovu ovu fəvø ðvø cavel voli suvə suvə savjɔ̄ savalən vã vento vētu vētu vē 'vint vint lēv vu voi vɔjs voi vo: voj vose vose voste bevi vwaꝝ vedere veꝝ ver vej vjodi vedəa owvíꝝ owwir savwaꝝ savør save: vəniꝝ venire viꝝ vir vini viꝝ: veni leva:re ləve levare levar livar leve leva: greve gravi gravi grav grevi nwɔ̄vo novu novu nuvo novello nove: novel nuvel novella nɔ̄vel vjø vekkjo vejlyu veňu veň vi vjei vek̄ vermiculus vermejlyu vermejlyu		
W	0077	23
pwasɔ̄ awem aw wazo fwee kwan sangwe weso wes o:wum webo wɔvo ɔw ow kwerno kwen kwar kɔw pwal pew ʒwəlyu kwejo kwel dwes ifpadwə ifpadwə pwat̄in pwetrin fwa etwal agwa akkwa agwə agwə ajywə ew pluwia saw wentum fwego fwɔ̄ko lengwa lingwa ligwə ʌŋgwə ew ew jew wo:s bwɑ̄s bəwṛə mwardi riwṛə wide:re vwaꝝ bəwṛə owwíꝝ owwir savwaꝝ weni:re fwaꝝ kawṛə lwengo grwes grawis grew grew nowus nwebo nwɔ̄vo nɔw now nowellus nowella wetulus bweno bwɔ̄no lwēt̄e nwɑ̄s kwi kwa kwe		
X	0078	36
paxaro pjoxo oxa orexa oxa inoxo puxar bjexo roxo bermexo		
Y	0079	78
nyt ty syse sysi		
Z	007A	32
wazo frunzə piez sizer sizer auzi dizer dizer ziſe		
đ	00F0	73
fiyadu peđre peđre murđer		
ō	00F5	26
pəhō frōsə frōsə lōgu lōgu bō bō		
ø	00F8	62
kø fəvø fø bøꝝ savør vjø nør		
ĩ	0129	8
ifeti ifeti sizer sizer ligwə ligwə iſendžiar iſedjar		
ŋ	014B	61
saŋ ʌŋgwə ʌŋŋ		
œ	0153	48
fœj œf œg œl œg œt œtœl œœf		
ũ	0169	83
ū ū		
ã	0250	38
pasaru pasaru foŷa foŷa frōsə frōsə ʌf̄ kodžie kodie kaŷdə kaŷdə keþelu oreŷa oreŷa nəriſ boke boke pəkne pəkne ʒwəlyu ifpadwə ifpadwə figedu fiyadu istrel̄ istrel̄ agwə agwə suvə suvə pedre peđre arejə arejə sizer sizer ligwə ligwə seber keir keir etar etar erder		
ä	0251	58
ſar hare:na sabl savjɔ̄ bwaꝝ ḡra kra grav		

Appendix 5 - Words containing each segment

C	0254	46
pidəkkjo fəlləa əs əssə əs əhe wəvo əw kəs kərno kərn kərn kəw kədə əkej ərej əkkjo bək bəce gole pittʃəlo pəkəl dʒinəkkjo jju kəllo kəlu kəy dəssə pjəddəga salvalən fwəko fək nəttə jət nəm nən ʒə vəse mərdəs mərdere səfle kənetə kinəh kojəsi dəne grəsso grəs grəs nəwo nove: novel bwəno bən bən rədəs rəbbəjə rəf		
Ə	0259	39
pasəre pədukje fuə frunzə ərel rədəfjinə konnə coadə pər fəvə kəbəl urreə bokə bukə golə gurə kambə gamba pərnə ʒənə zənənə minə alə əspaλλə fedə əstel ajywə apə pluzə peðrə pjatrə ərenə arinə sorə sendə tʃenuʃə λəŋgwə limbə ʒə bewrə mərjə musəga musəgar musəya riwərə bewrə səbəs kuneʃə vəniş bəni əsta ləve λəba əlsa kawrə kədəqə krəma ənsendə amplə əspəs pəti pətit bərmələ neyərə ən		
E	025B	12
əfə pes pehə utsfello uhe utʃjəl ərel resən resta əʃʃi pelle pəli pər pjel ʃək əhe wes kwen kədə pəl kəbəl dʒəv urreə bəce dente pjəde pər pew pərnə pərnə pərnə pəkəl kwel dwes sen petto pət pwətrin əstel stəle ew pləf sel pjəs pjətra peðrə aren rene vento sendə tʃinise λəŋgwə 'lənge bewrə bewrə səbəs kənetə kuneʃə etə leve ʃər infəndere epe ispesu əspəs spe grwəs grəjef greve grevi novello novel novella novel vəkkjo vəkmej bərmələ neyərə ke kwe ən		
J	025F	71
jambe manja:		
G	0261	60
sangre sangwe səgi səgi səg gula gola gola golə gəj gole gurə gamba gamba gambə genikulum igado fegato figədu agwa agwa agwa age fwego fogu lāg lengwa lingwa ligwe λəŋgwə 'lənge ego: musəga musəgar sugere sugarə sugarə kogno:skere liga:re legare lega grandem gərə grande grande grēdzi grēdi gran grā grant longus lwengo lungo lōgu lung largus largo largo largu largu largu grəs graso grəsu grəs grəs gurdus gordo grossus gəo grəsso grəs gro grəs gro grəs gro grawis grəjef grabe gravi gravi grew gravi grew nigrum negru negru negru		
Y	0263	72
fiyədən ajywə foju musəya λiya neyərə neyərə		
Ψ	0265	77
plqi nqi		
İ	0268	11
ifəti pejʃi avi əfəti peli karni səgi sində pilu dəti minə istrelə vint nojti nojti nomi bißer minka ride kupiser iftar iftar livar infindəzə grēdi gravi virməjən ki in		
I	026A	68
naris əsendəjar		
ɿ	026B	80
alṣa alṣar flama		
ɲ	0272	13
nijo jju jət mərjə maji kojəsəs kupiser kojəsi viji: ju:ʃ		
f	027E	37
paxaro pasəru pasəru pasəre frəsə frəsə frunzə ristra karne karni karne sangre kwerno kornu pər oresha oreshə urrejərə urrejərə nariθ naris nerj gurə pjerna pərnə estreja istrelə istrelə pjedra pedrə peðrə pjatrə arena arejə arejə ərenə sajβru sajβru nombre beber bißer bewrə komer kumer morder murðer moskar suʃar sugarə reir ʃir riwərə ride ber ver bewrə oir owvir saber seber konoθer kupiser puxar pusar benis vir estar iftar iftar jebar livar alθar alṣar kaer keir keir dar dar donar duar atar ətar ətar deθir dizer dizer kemar kəjməre arder erder arde enθender əsendəjar əsədjər ənsendə grande grēdzi grēdi mare largo largu λark graso grəsu grəs gordo grosu gro grəs grabe gravi gravi grew grew lerdo lerdo roʃu berməxə virməjən neyərə negru negru negru negru prijeto pretu pretu		

Appendix 5 - Words containing each segment

Appendix 6 - Word Lists by Language

Latin

Cognate	IPA	Sounds
Child-Primary	infantem	e-n-f-ah-n-t-ay-m
Fish-Piskem	piskem	p-e-s-k-ay-m
Bird-Avem	awem	ah-w-ay-m
Bird-Aucellus	aukellus	au-k-ay-l-l-u-s
Bird-Passerem	passerem	p-ah-s-s-ay-r-ay-m
Dog-Primary	kanem	k-ah-n-ay-m
Louse-Primary	pe:dukulus	p-ai-d-u-k-u-l-u-s
Leaf-Primary	folia	f-oh-l-e-ah
Leaf-Frondea	frondea	f-r-oh-n-d-ay-ah
Root-Primary	ra:di:kem	r-A-d-E-k-ay-m
Root-Radicina	ra:di:ki:na	r-A-d-E-k-E-n-ah
Rope-Primary	fu:nem	f-U-n-ay-m
Rope-Restis	restem	r-ay-s-t-ay-m
Skin-Pellis	pellem	p-ay-l-l-ay-m
Meat-Primary	karnem	k-ah-r-n-ay-m
Blood-Primary	sang ^w inem	s-ah-n-gw-e-n-ay-m
Bone-Primary	ossum	oh-s-s-u-m
Egg-Primary	o:wum	O-w-u-m
Horn-Primary	kornu:	k-oh-r-n-U
Horn-Cornua	kornua	k-oh-r-n-u-ah
Tail-Primary	kau ^d a	k-au-d-ah
Hair-Primary	pilus	p-e-l-u-s
Hair-Capillus	kapillus	k-ah-p-e-l-l-u-s
Ear-Primary	aurikula	au-r-e-k-u-l-ah
Eye-Primary	okulus	oh-k-u-l-u-s
Nose-Primary	na:sus	n-A-s-u-s
Mouth-Primary	bukka	b-u-k-k-ah
Mouth-Gula	gula	g-u-l-ah
Tooth-Primary	dentem	d-ay-n-t-ay-m
Foot-Primary	pedem	p-ay-d-ay-m
Leg-Gamba	gamba	g-ah-m-b-ah
Leg-Perna	perna	p-ay-r-n-ah
Leg-Petiolus	petiolus	p-ay-t-e-oh-l-u-s
Knee-Genuculum	genikulum	g-ay-n-e-k-u-l-u-m
Hand-Primary	manum	m-ah-n-u-m
Wing-Primary	a:la	A-l-ah
Neck-Primary	kollum	k-oh-l-l-u-m
Back-Primary	dorsum	d-oh-r-s-u-m
Back-Spatula	spatula	s-p-ah-t-u-l-ah
Breast-Primary	sinus	s-e-n-u-s
Breast-Pectus	pektus	p-ay-k-t-u-s
Liver-Primary	fi:ka:tum	f-E-k-A-t-u-m
Star-Primary	ste:lla	s-t-ai-l-l-ah
Water-Primary	ak ^w a	ah-kw-ah
Rain-Primary	pluwia	p-l-u-w-e-ah
Salt-Primary	salem	s-ah-l-ay-m
Stone-Primary	saksum	s-ah-k-s-u-m
Stone-Petra	petra	p-ay-t-r-ah
Sand-Primary	hare:na	h-ah-r-ai-n-a
Sand-Sabulum	sabulum	s-ah-b-u-l-u-m
Sand-Sabulo	sabulo:nem	s-ah-b-u-l-O-n-ay-m
Wind-Primary	wentum	w-ay-n-t-u-m
Smoke-Primary	fu:mus	f-U-m-u-s
Fire-Focus	fokum	f-oh-k-u-m
Ash-Primary	kinerem	k-e-n-ay-r-ay-m
Night-Primary	noctem	n-oh-tya-t-ay-m
Name-Nomen	no:men	n-O-m-ay-n
Name-Nominem	no:minem	n-O-m-e-n-ay-m
Tongue-Primary	ling ^w a	l-e-n-gw-ah

Appendix 6 - Word Lists by Language

I-Primary	ego:	ay-g-O
YouPlural-Primary	wo:s	w-O-s
YouSingular-Primary	tu:	t-U
ToDrink-Primary	bibere	b-e-b-ay-r-ay
ToEat-Primary	komedere	k-oh-m-ay-d-ay-r-ay
ToEat-Manducare	manduka:re	m-ah-n-d-u-k-A-r-ay
ToBite-Primary	morde:re	m-oh-r-d-ai-r-ay
ToBite-Morsicare	morsika:re	m-oh-r-s-e-k-A-r-ay
ToSuck-Sugere	su:gere	s-U-g-ay-r-ay
ToBlow-Primary	suffla:re	s-u-f-f-l-A-r-ay
ToLaugh-Primary	ri:de:re	r-E-d-ai-r-ay
ToSee-Primary	wide:re	w-e-d-ai-r-ay
ToHear-Primary	audi:re	au-d-E-r-ay
ToKnow-Primary	ski:re	s-k-E-r-ay
ToKnow-Sapere	sapere	s-ah-p-ay-r-ay
ToKnow-Cognoscere	kogno:skere	k-oh-g-n-O-s-k-ay-r-ay
ToHit-Primary	pulsa:re	p-u-l-s-A-r-ay
ToCome-Primary	weni:re	w-ay-n-E-r-ay
ToStand-Primary	sta:re	s-t-A-r-ay
ToStand-Levare	leva:re	l-ay-v-A-r-ay
ToFall-Primary	kadere	k-ah-d-ay-r-ay
ToGive-Primary	dare	d-ah-r-ay
ToGive-Donare	dona:re	d-oh-n-A-r-ay
ToTie-Primary	liga:re	l-e-g-A-r-ay
ToTie-Aptare	apta:re	ah-p-t-A-r-ay
ToSay-Primary	di:kere	d-E-k-ay-r-ay
ToSay-Exponere	ekspo:nere	ay-k-s-p-O-n-ay-r-ay
ToBurn-Cremare	krema:re	k-r-ay-m-A-r-ay
ToBurn-Flammare	flamma:re	f-l-ah-m-m-A-r-ay
ToBurn-Ardere	arde:re	ah-r-d-ai-r-ay
ToBurn-Incendere	inkendere	e-n-k-ay-n-d-ay-r-ay
ToBurn-Ustulare	ustula:re	u-s-t-u-l-A-r-ay
Big-Grandem	grandem	g-r-ah-n-d-ay-m
Big-Majorem	majo:rem	m-aj-jg-O-r-ay-m
Long-Longum	longus	l-oh-n-g-u-s
Long-Largum	largus	l-ah-r-g-u-s
Wide-Primary	la:tus	l-A-t-u-s
Wide-Amplum	amplus	ah-m-p-l-u-s
Thick-Primary	krassus	k-r-ah-s-s-u-s
Thick-Spissum	spissus	s-p-e-s-s-u-s
Thick-Gurdum	gurdus	g-u-r-d-u-s
Thick-Grossus	grossus	g-r-oh-s-s-u-s
Heavy-Primary	grawis	g-r-ah-w-e-s
Heavy-Lurdus	lurdus	l-u-r-d-u-s
Small-Primary	pittitus	p-e-t-t-e-t-u-s
Small-Pitulus	pitulus	p-e-t-u-l-u-s
New-Primary	nowus	n-oh-w-u-s
New-Novellus	nowellus	n-oh-w-ay-l-l-u-s
New-Novella	nowella	n-oh-w-ay-l-l-ah
Old-Primary	wetulus	w-ay-t-u-l-u-s
Good-Primary	bonus	b-oh-n-u-s
Red-Primary	russus	r-u-s-s-u-s
Red-Vermiculus	vermikulus	v-ay-r-m-e-k-u-l-u-s
Red-Rubeus	rubeus	r-u-b-ay-u-s
Black-Primary	nigrum	n-e-g-r-u-m
One-Primary	u:nus	U-n-u-s
Who-Qui	k ^w is	kw-e-s
Who-Quem	k ^w em	kw-ay-m
What-Primary	k ^w id	kw-e-d
Not-Primary	no:n	n-O-n
Not-Nec	nek	n-ay-k
In-In	in	e-n
In-Deintus	deintus	d-ay-e-n-t-u-s

Appendix 6 - Word Lists by Language

French

Cognate	IPA	Sounds
Child-Primary	ãfã	NasalA-f-NasalA
Fish-Pescion	pwasõ	p-w-ah-s-oon
Bird-Aucellus	wazo	w-ah-zz-oh
Dog-Primary	ſjé	shh-jg-chnn
Louse-Primary	pu	p-u
Leaf-Primary	fœj	f-uuuh-jg
Root-Radicina	kasin	rr-ah-s-e-n
Skin-Primary	kwan	k-w-ah-n
Skin-Pellis	po	p-oh
Meat-Primary	ſeø	shh-eh-rr
Blood-Primary	sa	s-NasalA
Bone-Primary	øs	euh-s
Egg-Primary	œf	uuuh-f
Horn-Primary	køø	k-euh-rr
Horn-Cornua	køøn	k-euh-rr-n
Tail-Primary	kø	k-uu
Hair-Primary	pwal	p-w-ah-l
Hair-Capillus	ſøvø	shh-aah-v-uu
Ear-Primary	økej	euh-rr-ayj
Eye-Primary	œj	uuuh-jg
Nose-Primary	ne	n-ay
Mouth-Primary	buj	b-u-shh
Mouth-Gula	gœl	g-uuuh-l
Tooth-Primary	dã	d-NasalA
Foot-Primary	pje	p-jg-ay
Leg-Gamba	žãb	gzah-NasalA-b
Knee-Genuculum	žønu	gzah-aah-n-u
Hand-Primary	mẽ	m-chnn
Wing-Primary	el	ay-l
Neck-Primary	ku	k-u
Back-Primary	do	d-oh
Back-Spatula	epol	ay-p-oh-l
Breast-Primary	sé	s-ehnn
Breast-Pectus	pi	p-e
Breast-Pectorina	pwatšin	p-w-ah-t-rr-e-n
Liver-Primary	fwa	f-w-ah
Star-Primary	etwal	ay-t-w-ah-l
Water-Primary	o	oh
Rain-Primary	pluqi	p-l-eu-e
Salt-Primary	sel	s-eh-l
Stone-Petra	pjεø	p-jg-eh-rr
Sand-Sabulo	sabl	s-a-b-l
Wind-Primary	vã	v-NasalA
Fire-Focus	fe	f-uu
Ash-Primary	sãdø	s-NasalA-d-rr
Night-Primary	n̩i	n-eu-e
Name-Nomen	n̩ø	n-oon
Tongue-Primary	lãg	l-NasalA-g
I-Primary	žø	gzah-aah
YouPlural-Primary	vu	v-u
YouSingular-Primary	ty	t-ceh
ToDrink-Primary	bwaø	b-w-a-rr
ToEat-Manducare	mãžø	m-NasalA-gzah-ay
ToBite-Primary	mœvdø	m-euh-rr-d-rr
ToSuck-Primary	syse	s-ceh-s-ay
ToBlow-Primary	sufle	s-u-f-l-ay
ToLaugh-Primary	víø	rr-e-rr
ToSee-Primary	vwaø	v-w-ah-rr
ToHear-Primary	uiø	u-e-rr

Appendix 6 - Word Lists by Language

ToKnow-Sapere	savwaꝝ	s-ah-v-w-ah-rr
ToKnow-Cognoscere	kønetꝝ	k-euh-n-eh-t-rr
ToHit-Primary	puse	p-u-s-ay
ToCome-Primary	vøniꝝ	v-aah-n-e-rr
ToStand-Primary	etꝝ	eh-t-rr
ToStand-Levare	løve	l-aah-v-ay
ToStand-Altiare	ose	oh-s-ay
ToFall-Primary	ſwaꝝ	shh-w-ah-rr
ToGive-Donare	døne	d-euh-n-ay
ToTie-Primary	lje	l-jg-ay
ToSay-Primary	diꝝ	d-e-rr
ToBurn-Flammare	flame	f-l-ah-m-ay
ToBurn-Ardere	aardꝝ	ah-rr-d-rr
Big-Grandem	gꝝ	g-rr-NasalA
Long-Longum	l᷑	l-oon
Long-Largum	la᷑ꝝ	l-ah-rr-gzah
Wide-Primary	le	l-ay
Wide-Amplum	apl	NasalA-p-l
Thick-Primary	grꝝ	g-rr-a
Thick-Spissum	epe	ay-p-eh
Thick-Grossus	grø	g-rr-oh
Heavy-Primary	grijef	g-rr-e-jg-eh-f
Heavy-Lurdus	luꝝ	l-u-rr
Small-Primary	pøti	p-aah-t-e
New-Primary	nœf	n-uuh-f
New-Novellus	nuvo	n-u-v-oh
New-Novella	nuvel	n-u-v-eh-l
Old-Primary	vjø	v-jg-uu
Good-Primary	b᷑	b-oon
Far-Primary	lwétē	l-w-ehnn-t-ehnn
Red-Primary	ku	rr-u
Red-Vermiculus	værmøj	v-eh-rr-m-ehj
Red-Rubeus	ku᷑	rr-u-gzah
Black-Primary	nwaꝝ	n-w-ah-rr
One-Primary	᷑	uuhn
Who-Qui	ki	k-e
What-Primary	kwa	k-w-ah
Not-Primary	n᷑	n-oon
Not-Nec	ni	n-e
In-In	᷑	NasalA
In-Deintus	d᷑	d-NasalA

Spanish

Cognate	IPA	Sounds
Child-Primary	infante	e-n-f-ah-n-t-ay
Child-Ninnus	nijo	n-e-VdPalatalNasal-oh
Fish-Piskem	peθ	p-ay-th
Bird-Avem	abe	ah-b-ay
Bird-Passerem	paxaro	p-ah-xha-ah-er-oh
Dog-Primary	kan	k-ah-n
Louse-Primary	pjoxo	p-jg-oh-xha-oh
Leaf-Primary	oxa	oh-xha-ah
Root-Primary	raiθ	r-ah-e-th
Rope-Restis	ristra	r-e-s-t-er-ah
Skin-Pellis	pjel	p-jg-ay-l
Meat-Primary	karne	k-ah-er-n-ay
Blood-Primary	sangre	s-ah-n-g-er-ay
Bone-Primary	weso	w-ay-s-oh
Egg-Primary	webo	w-ay-b-oh
Horn-Primary	kwerno	k-w-ay-er-n-oh
Tail-Primary	kola	k-oh-l-ah

Appendix 6 - Word Lists by Language

Hair-Primary	pelo	p-ay-l-oh
Hair-Capillus	kabejo	k-ah-b-ay-VdPalatalFricative-oh
Ear-Primary	orexa	oh-er-ay-xha-ah
Eye-Primary	oxo	oh-xha-oh
Nose-Primary	naso	n-ah-s-oh
Nose-Nares	nariθ	n-ah-er-e-th
Mouth-Primary	boka	b-oh-k-ah
Mouth-Gula	gola	g-oh-l-ah
Tooth-Primary	djente	d-jg-ay-n-t-ay
Foot-Primary	pie	p-jg-ay
Leg-Perna	pierna	p-jg-ay-er-n-ah
Leg-Petiolus	peθiolo	p-ay-th-e-oh-l-oh
Knee-Genuculum	inoxo	e-n-oh-xha-oh
Hand-Primary	mano	m-ah-n-oh
Wing-Primary	ala	ah-l-ah
Neck-Primary	kwejo	k-w-ay-VdPalatalFricative-oh
Back-Spatula	espalda	ay-s-p-ah-l-d-ah
Breast-Primary	seno	s-ay-n-oh
Breast-Pectus	peʃo	p-ay-ts-oh
Liver-Primary	iqado	e-g-ah-d-oh
Star-Primary	estreja	ay-s-t-er-ay-VdPalatalFricative-ah
Water-Primary	agwa	ah-g-w-ah
Rain-Primary	jubja	VdPalatalFricative-u-b-jg-ah
Salt-Primary	sal	s-ah-l
Stone-Petra	pjedra	p-jg-ay-d-er-ah
Sand-Primary	arena	ah-er-ay-n-ah
Wind-Primary	bjento	b-jg-ay-n-t-oh
Smoke-Primary	umo	u-m-oh
Fire-Focus	fwego	f-w-ay-g-oh
Ash-Cinisia	θeniθa	th-ay-n-e-th-ah
Night-Primary	noʃe	n-oh-ts-ay
Name-Nominem	nombre	n-oh-m-b-er-ay
Tongue-Primary	lengwa	l-ay-n-g-w-ah
I-Primary	jo	VdPalatalFricative-oh
YouPlural-Primary	bos	b-oh-s
YouSingular-Primary	tu	t-u
YouSingular-VostramMercedem	usted	u-s-t-ay-d
ToDrink-Primary	beber	b-ay-b-ay-er
ToEat-Primary	komer	k-oh-m-ay-er
ToBite-Primary	morder	m-oh-er-d-ay-er
ToBite-Morsicare	moskar	m-oh-s-k-ah-er
ToLaugh-Primary	reir	r-ay-e-er
ToSee-Primary	ber	b-ay-er
ToHear-Primary	oir	oh-e-er
ToKnow-Sapere	saber	s-ah-b-ay-er
ToKnow-Cognoscere	konoθer	k-oh-n-oh-th-ay-er
ToHit-Primary	puخار	p-u-xha-ah-er
ToCome-Primary	benir	b-ay-n-e-er
ToStand-Primary	estar	ay-s-t-ah-er
ToStand-Levare	jebar	VdPalatalFricative-ay-b-ah-er
ToStand-Altiare	alθar	ah-l-th-ah-er
ToFall-Primary	kaer	k-ah-ay-er
ToGive-Primary	dar	d-ah-er
ToGive-Donare	donar	d-oh-n-ah-er
ToTie-Aptare	atar	ah-t-ah-er
ToSay-Primary	deθir	d-ay-th-e-er
ToBurn-Cremare	kemar	k-ay-m-ah-er
ToBurn-Ardere	arder	ah-er-d-ay-er
ToBurn-Incendere	enθender	ay-n-th-ay-n-d-ay-er
Big-Grandem	grande	g-er-ah-n-d-ay
Long-Longum	lwengo	l-w-ay-n-g-oh
Long-Largum	largo	l-ah-er-g-oh
Wide-Amplum	anʃo	ah-n-ts-oh

Appendix 6 - Word Lists by Language

Thick-Primary	graso	g-er-ah-s-oh
Thick-Spisum	espeso	ay-s-p-ay-s-oh
Thick-Gurdum	gordo	g-oh-er-d-oh
Heavy-Primary	grabe	g-er-ah-b-ay
New-Primary	nwebo	n-w-ay-b-oh
New-Novellus	noβijo	n-oh-bb-e-VdPalatalFricative-oh
New-Novella	noβija	n-oh-bb-e-VdPalatalFricative-ah
Old-Primary	bjexo	b-jg-ay-xha-oh
Good-Primary	bweno	b-w-ay-n-oh
Red-Primary	roxo	r-oh-xha-oh
Red-Vermiculus	bermexo	b-ay-er-m-ay-xha-oh
Red-Rubeus	rubjo	r-u-b-jg-oh
Black-Primary	neyro	n-ay-juh-er-oh
Black-Pretto	prjeto	p-er-jg-ay-t-oh
One-Primary	uno	u-n-oh
Who-Quem	kjen	k-jg-ay-n
What-Primary	ke	k-ay
Not-Primary	no	n-oh
Not-Nec	ni	n-e
In-In	en	ay-n

Italian

Cognate	IPA	Sounds
Child-Primary	fante	f-ah-n-t-ay
Child-Ninnus	nino	n-e-n-oh
Fish-Piskem	peʃʃe	p-ay-shh-shh-ay
Bird-Aucellus	utfel̪lo	u-t-ts-eh-l-l-oh
Bird-Passerem	passero	p-ah-s-s-ay-r-oh
Dog-Primary	kane	k-ah-n-ay
Louse-Primary	pidøkkjo	p-e-d-euh-k-k-jg-oh
Leaf-Primary	fəʎʎa	f-euh-yuh-yuh-ah
Leaf-Frondea	frondza	f-r-oh-n-VdPalatoAlveolarAffricate-ah
Rope-Primary	fune	f-u-n-ay
Rope-Restis	resta	r-eh-s-t-ah
Skin-Primary	kotenna	k-oh-t-ay-n-n-ah
Skin-Pellis	pelle	p-eh-l-l-ay
Meat-Primary	karne	k-ah-r-n-ay
Blood-Primary	sangwe	s-ah-n-g-w-ay
Bone-Primary	ɔsso	euh-s-s-oh
Egg-Primary	wɔvo	w-euh-v-oh
Horn-Primary	kørno	k-euh-r-n-oh
Tail-Primary	koda	k-oh-d-ah
Hair-Primary	pelo	p-ay-l-oh
Hair-Capillus	kapello	k-ah-p-ay-l-l-oh
Ear-Primary	orekkja	oh-r-ay-k-k-jg-ah
Eye-Primary	økkjo	euh-k-k-jg-oh
Nose-Primary	naso	n-ah-s-oh
Nose-Nares	nariʃe	n-ah-r-e-ts-ay
Mouth-Primary	bokka	b-oh-k-k-ah
Mouth-Gula	gola	g-oh-l-ah
Tooth-Primary	dente	d-eh-n-t-ay
Foot-Primary	pjede	p-jg-eh-d-ay
Leg-Gamba	gamba	g-ah-m-b-ah
Leg-Perna	perno	p-eh-r-n-oh
Leg-Petiolus	pitʃølo	p-e-t-ts-euh-l-oh
Knee-Genuculum	dʒinøkkjo	VdPalatoAlveolarSibilant-e-n-euh-k-k-jg-oh
Hand-Primary	mano	m-ah-n-oh
Wing-Primary	ala	ah-l-ah
Neck-Primary	kollo	k-euh-l-l-oh
Back-Primary	dosso	d-euh-s-s-oh
Back-Spatula	spalla	s-p-ah-l-l-ah

Appendix 6 - Word Lists by Language

Breast-Primary	seno	s-ay-n-oh
Breast-Pectus	petto	p-eh-t-t-oh
Liver-Primary	fegato	f-ay-g-ah-t-oh
Star-Primary	stella	s-t-ay-l-l-ah
Water-Primary	akkwa	ah-k-k-w-w-ah
Rain-Primary	pjøddža	p-jg-euh-d-VdPalatoAlveolarSibilant-ah
Salt-Primary	sale	s-ah-l-ay
Stone-Primary	sasso	s-ah-s-s-oh
Stone-Petra	piètra	p-jg-eh-t-r-ah
Sand-Primary	rena	r-ay-n-ah
Sand-Sabulo	sabbjone	s-ah-b-b-jg-oh-n-ay
Wind-Primary	vento	v-eh-n-t-oh
Smoke-Primary	fumo	f-u-m-oh
Fire-Focus	fwøko	f-w-euh-k-oh
Ash-Primary	ſenere	ts-ay-n-ay-r-ay
Night-Primary	nøtte	n-euh-t-t-ay
Name-Nomen	no:me	n-O-m-ay
Tongue-Primary	lingwa	l-e-n-g-w-w-ah
I-Primary	io	e-oh
YouPlural-Primary	voi	v-oh-e
YouSingular-Primary	tu	t-u
ToDrink-Primary	bere	b-ay-r-ay
ToBite-Primary	mørdere	m-euh-r-d-ay-r-ay
ToBite-Morsicare	morsikare	m-oh-r-s-e-k-ah-r-ay
ToSuck-Primary	sukkjare	s-u-k-k-jg-ah-r-ay
ToSuck-Sugere	suddžere	s-u-d-VdPalatoAlveolarSibilant-ay-r-ay
ToBlow-Primary	soffjare	s-oh-f-f-jg-ah-r-ay
ToLaugh-Primary	ridere	r-e-d-ay-r-ay
ToSee-Primary	vedere	v-ay-d-ay-r-ay
ToHear-Primary	udire	u-d-e-r-ay
ToKnow-Sapere	sapere	s-ah-p-ay-r-ay
ToKnow-Cognoscere	konosſere	k-oh-n-oh-shh-shh-ay-r-ay
ToCome-Primary	venire	v-ay-n-e-r-ay
ToStand-Primary	stare	s-t-ah-r-ay
ToStand-Levare	levare	l-ay-v-ah-r-ay
ToStand-Altiare	altsare	ah-l-VlAlveolarSibilantAffricate-ah-r-ay
ToFall-Primary	kadere	k-ah-d-ay-r-ay
ToGive-Primary	dare	d-ah-r-ay
ToGive-Donare	donare	d-oh-n-ah-r-ay
ToTie-Primary	legare	l-ay-g-ah-r-ay
ToSay-Primary	dire	d-e-r-ay
ToSay-Exponere	esporre	ay-s-p-oh-r-r-ay
ToBurn-Ardere	ardere	ah-r-d-ay-r-ay
ToBurn-Incendere	intendere	e-n-ts-eh-n-d-ay-r-ay
Big-Grandem	grande	g-r-ah-n-d-ay
Long-Longum	lungo	l-u-n-g-oh
Long-Largum	largo	l-ah-r-g-oh
Wide-Primary	lato	l-ah-t-oh
Wide-Amplum	ampjo	ah-m-p-jg-oh
Thick-Primary	grasso	g-r-ah-s-s-oh
Thick-Spissum	spesso	s-p-ay-s-s-oh
Thick-Grossus	grøsso	g-r-euh-s-s-oh
Heavy-Primary	greve	g-r-eh-v-ay
Heavy-Lurdus	lordo	l-oh-r-d-oh
New-Primary	nwøvo	n-w-euh-v-oh
New-Novellus	novello	n-oh-v-ch-l-l-oh
New-Novella	novella	n-oh-v-ch-l-l-ah
Old-Primary	vekkjo	v-eh-k-k-jg-oh
Good-Primary	bwøno	b-w-euh-n-oh
Far-Primary	lontano	l-oh-n-t-ah-n-oh
Red-Primary	rosso	r-oh-s-s-oh
Red-Rubeus	røbbjo	r-euh-b-b-jg-oh
Black-Primary	nero	n-ay-r-oh

Appendix 6 - Word Lists by Language

One-Primary	uno	u-n-oh
Who-Qui	ki	k-e
What-Primary	ke	k-ay
Not-Primary	non	n-oh-n
Not-Nec	ne	n-ay
In-In	in	e-n

Brazilian Portuguese

Cognate	IPA	Sounds
Child-Primary	iféʃi	een-f-ahn-ts-e
Child-Ninnus	nenẽj	n-ay-n-ehnj
Fish-Piskem	peʃʃi	p-ayj-shh-e
Bird-Avem	avi	ah-v-e
Bird-Passerem	pasəru	p-ah-s-ahh-er-u
Dog-Primary	kew̚	k-au_diphthong_nasal
Louse-Primary	pioʌu	p-e-oh-yuh-u
Leaf-Primary	fɔv̚e	f-oh-yuh-ahh
Leaf-Frondea	frõsə	f-er-on-s-ahh
Root-Primary	kaɪs	rr-ah-e-s
Rope-Restis	κεʃʃi	rr-eh-shh-ts-e
Skin-Primary	kodʒiə	k-oh-VdPalatoAlveolarSibilant-e-ahh
Skin-Pellis	peli	p-eh-l-e
Meat-Primary	kaʌni	k-ah-rr-n-e
Blood-Primary	səgi	s-ahn-g-e
Bone-Primary	osu	oh-s-u
Egg-Primary	ovu	oh-v-u
Horn-Primary	koɔnu	k-oh-rr-n-u
Tail-Primary	kauðə	k-au-d-ahh
Hair-Primary	pelu	p-ay-l-u
Hair-Capillus	kabelu	k-ah-b-ay-l-u
Ear-Primary	oreʌv̚ə	oh-er-ay-yuh-ahh
Eye-Primary	oýu	oh-yuh-u
Nose-Nares	naris	n-ah-er-e-s
Mouth-Primary	bokə	b-oh-k-ahh
Tooth-Primary	dẽʃʃi	d-ehn-ts-e
Foot-Primary	pe	p-eh
Leg-Perna	peɜnə	p-eh-rr-n-ahh
Knee-Genuculum	zueýu	gzah-u-ay-yuh-u
Hand-Primary	mẽw̚	m-au_diphthong_nasal
Wing-Primary	a	ah
Neck-Primary	kɔlu	k-euh-l-u
Back-Spatula	iʃpadw̚ə	e-shh-p-ah-d-w-ahh
Breast-Primary	seju	s-ayj-u
Breast-Pectus	pejtu	p-ayj-t-u
Liver-Primary	figedu	f-e-g-ahh-d-u
Star-Primary	istrelə	e-s-t-er-ay-l-ahh
Water-Primary	agw̚ə	ah-g-w-ahh
Rain-Primary	júvə	shh-u-v-ahh
Salt-Primary	saw	s-ah-w
Stone-Primary	sejʃu	s-ayj-shh-u
Stone-Petra	pedrə	p-ay-d-er-ahh
Sand-Primary	arejə	ah-er-ayj-ahh
Sand-Sabulum	sajβru	s-aj-bb-er-u
Wind-Primary	v̚etu	v-ehn-t-u
Smoke-Primary	fumu	f-u-m-u
Fire-Focus	fogu	f-oh-g-u
Ash-Cinia	siz̚e	s-een-zz-ahh
Night-Primary	nojti	n-oj_diphthong-t-eee
Name-Nomen	nomi	n-oh-m-e
Tongue-Primary	lɪgʷə	l-een-g-w-ahh
I-Primary	ew̚	ay-w

Appendix 6 - Word Lists by Language

YouPlural-Primary	vøjs	v-mid_low_diphthong-s
YouSingular-Primary	tu	t-u
YouSingular-VostramMercedem	vose	v-oh-s-ay
ToDrink-Primary	bebẽs	b-ay-b-ay-rr
ToEat-Primary	kome	k-oh-m-ay
ToBite-Primary	mõrdeš	m-oh-rr-d-ay-rr
ToBite-Morsicare	musøga	m-u-s-aah-g-ah
ToSuck-Primary	ſufar	shh-u-shh-ah-rr
ToSuck-Sugere	sugar	s-u-g-ah-rr
ToLaugh-Primary	κις	rr-e-rr
ToSee-Primary	veš	v-ay-rr
ToHear-Primary	owviv	oh-w-v-e-rr
ToKnow-Sapere	saber	s-ah-b-ay-rr
ToKnow-Cognoscere	kōneser	k-oh-VdPalatalNasal-ay-s-ay-rr
ToHit-Primary	pufar	p-u-shh-ah-rr
ToCome-Primary	viv	v-e-rr
ToStand-Primary	iſtar	eee-shh-t-ah-er
ToStand-Levare	levaš	l-ay-v-ah-rr
ToStand-Altiare	alsa	ah-ssha-s-ah
ToFall-Primary	keir	k-ahh-e-er
ToGive-Primary	daš	d-ah-rr
ToGive-Donare	doa	d-oh-ah
ToTie-Aptare	etar	ahh-t-ah-er
ToSay-Primary	dizer	d-e-zz-ay-er
ToBurn-Cremare	kejmare	k-ahhj-m-ah-er-ay
ToBurn-Ardere	ärdeš	ah-rr-d-ay-rr
ToBurn-Incendere	īsendžiar	een-s-ay-n-VdPalatoAlveolarSibilant-I-ah-er
Big-Grandem	grēdži	g-er-ahn-VdPalatoAlveolarSibilant-e
Long-Longum	lōgu	l-on-g-u
Long-Largum	lašgu	l-ah-rr-g-u
Wide-Primary	latu	l-ah-t-u
Wide-Amplum	ĕſu	ahn-shh-u
Thick-Spissum	ispesu	e-s-p-eh-s-u
Thick-Grossus	grosu	g-er-oh-s-u
Heavy-Primary	gravi	g-er-ah-v-e
Heavy-Lurdus	lerdo	l-ay-er-d-oh
New-Primary	novu	n-oh-v-u
Old-Primary	vejlyu	v-ahhj-yuh-u
Good-Primary	bō	b-on
Red-Primary	koſu	rr-oh-shh-NearCloseBackRounded
Red-Vermiculus	vekmeļu	v-ay-rr-m-ay-yuh-u
Red-Rubeus	rubeo	r-u-b-ay-oh
Black-Primary	negru	n-ay-g-er-u
Black-Pretto	pretu	p-er-ay-t-u
One-Primary	ū	ooo
Who-Quem	kēj	k-ehnj
What-Primary	ki	k-e
Not-Primary	new	n-au_diphthong_nasal
Not-Nec	nēj	n-ehnj
In-In	ĕj	ehnj

Portuguese

Cognate	IPA	Sounds
Child-Primary	ifeti	een-f-ahn-t-eee
Child-Ninnus	nenej	n-ay-n-ehnj
Fish-Piskem	pajſi	p-ahhj-shh-eee
Bird-Avem	avi	ah-v-eee
Bird-Passerem	pasaru	p-ah-s-ahh-er-u
Dog-Primary	kew	k-au_diphthong_nasal
Louse-Primary	pioyu	p-e-oh-yuh-u
Leaf-Primary	føy	f-oh-yuh-ahh

Appendix 6 - Word Lists by Language

Leaf-Frondea	frōse	f-er-on-s-ahh
Root-Primary	keif	rr-ahh-e-shh
Rope-Restis	kefti	rr-ay-shh-t-eee
Skin-Primary	kodiv	k-oh-d-e-ahh
Skin-Pellis	peli	p-ay-l-eee
Meat-Primary	karni	k-ah-er-n-eee
Blood-Primary	sēgi	s-ahn-g-eee
Bone-Primary	osu	oh-s-u
Egg-Primary	ovu	oh-v-u
Horn-Primary	kornu	k-oh-er-n-u
Tail-Primary	kaudə	k-au-d-ahh
Hair-Primary	pilu	p-eee-l-u
Hair-Capillus	keβelu	k-ahh-bb-ay-l-u
Ear-Primary	orejvə	oh-er-ahhj-yuh-ahh
Eye-Primary	oðu	oh-yuh-u
Nose-Nares	nariʃ	n-ahh-er-e-shh
Mouth-Primary	boke	b-oh-k-ahh
Tooth-Primary	dēti	d-ehn-t-eee
Foot-Primary	pe	p-eh
Leg-Perna	perna	p-eh-er-n-ahh
Knee-Genuculum	ȝwəyū	gzah-w-ahh-yuh-u
Hand-Primary	mæw̑	m-au_diphthong_nasal
Wing-Primary	a	ah
Neck-Primary	kəlu	k-euh-l-u
Back-Spatula	iʃpadwə	e-shh-p-ah-d-w-ahh
Breast-Primary	seju	s-ahhj-u
Breast-Pectus	pejtu	p-ahhj-t-u
Liver-Primary	fryeðu	f-e-juh-ahh-dd-u
Star-Primary	iſtrele	eee-shh-t-er-ay-l-ahh
Water-Primary	agwa	ah-g-w-ahh
Rain-Primary	ſuve	shh-u-v-ahh
Salt-Primary	sal	s-ah-l
Stone-Primary	ſejſu	s-ahhj-shh-u
Stone-Petra	peðrə	p-eh-dd-er-ahh
Sand-Primary	ereje	ahh-er-ahhj-ahh
Sand-Sabulum	sajþru	s-aj-bb-er-u
Wind-Primary	vētu	v-ehn-t-u
Smoke-Primary	fumu	f-u-m-u
Fire-Focus	foyū	f-oh-juh-u
Ash-Cinisia	sīze	s-een-zz-ahh
Night-Primary	nojti	n-oj_diphthong-t-eee
Name-Nomen	nomi	n-oh-m-eee
Tongue-Primary	līgwə	l-een-g-w-ahh
I-Primary	ew	ay-w
YouPlural-Primary	voʃ	v-oh-shh
YouSingular-Primary	tu	t-u
YouSingular-VostramMercedem	vøse	v-euh-s-ay
ToDrink-Primary	bíþer	b-eee-bb-ay-er
ToEat-Primary	kumer	k-u-m-ay-er
ToBite-Primary	murðer	m-u-er-dd-ay-er
ToBite-Morsicare	musəgar	m-u-s-aah-g-ah-r
ToSuck-Primary	ſujar	shh-u-shh-ah-er
ToSuck-Sugere	sugar	s-u-g-ah-er
ToLaugh-Primary	χir	rr-e-er
ToSee-Primary	ver	v-ay-er
ToHear-Primary	owvir	oh-w-v-e-er
ToKnow-Sapere	səber	s-ahh-b-ay-er
ToKnow-Cognoscere	kuniser	k-u-VdPalatalNasal-eee-s-ay-er
ToHit-Primary	pufar	p-u-shh-ah-er
ToCome-Primary	vir	v-e-er
ToStand-Primary	iſtar	eee-shh-t-ah-er
ToStand-Levare	livar	l-eee-v-ah-er
ToStand-Altiare	alsar	ah-ssha-s-ah-er

Appendix 6 - Word Lists by Language

ToFall-Primary	keir	k-ahh-e-er
ToGive-Primary	dar	d-ah-er
ToGive-Donare	duar	d-u-ah-er
ToTie-Aptare	etar	ahh-t-ah-er
ToSay-Primary	dizer	d-e-zz-ay-er
ToBurn-Cremare	kejmake	k-aj-y-m-ah-rr-ay
ToBurn-Ardere	erder	ahh-er-d-ay-er
ToBurn-Incendere	īsēdjar	een-s-ehn-d-jg-ah-er
Big-Grandem	grēdi	g-er-ahn-d-eee
Long-Longum	lōgu	l-on-g-u
Long-Largum	largu	l-ah-er-g-u
Wide-Primary	latu	l-ah-t-u
Wide-Amplum	ēsu	ahn-shh-u
Thick-Primary	grafu	g-er-ah-shh-u
Thick-Spissum	iſpesu	e-shh-p-ay-s-u
Thick-Grossus	groſu	g-er-oh-s-u
Heavy-Primary	gravi	g-er-ah-v-eee
Heavy-Lurdus	lerdo	l-ay-er-d-oh
New-Primary	novu	n-oh-v-u
Old-Primary	vēlu	v-ay-yuh-u
Good-Primary	bō	b-on
Red-Primary	koſu	rr-oh-shh-u
Red-Vermiculus	virmējxu	v-eee-er-m-ahhj-yuh-u
Red-Rubeus	rubeo	r-u-b-ay-oh
Black-Primary	negru	n-ay-g-er-u
Black-Pretto	pretu	p-er-ay-t-u
One-Primary	ū	ooo
Who-Quem	kej	k-ahnjn
What-Primary	ki	k-eee
Not-Primary	new	n-au_diphthong_nasal
Not-Nec	nej	n-ahnjn
In-In	ej	ahnjn

Catalan

Cognate	IPA	Sounds
Child-Ninnus	nen	n-ay-n
Fish-Piskem	peʃ	p-ay-shh
Bird-Avem	aw	ah-w
Bird-Aucellus	usey	u-s-ay-yuh
Dog-Primary	ka	k-ah
Louse-Primary	roj	p-oh-yuh
Leaf-Primary	fuʃe	f-u-yuh-aah
Root-Primary	ərel	aah-r-ch-l
Skin-Primary	konne	k-oh-n-n-ahah
Skin-Pellis	peʃ	p-ay-yuh
Meat-Primary	karn	k-ah-r-n
Blood-Primary	sar	s-ah-nya
Bone-Primary	os	euh-s
Egg-Primary	ow	euh-w
Horn-Primary	kɔrn	k-euh-r-n
Tail-Primary	kua	k-u-ah
Hair-Primary	pel	p-eh-l
Hair-Capillus	kəbeʃ	k-ahh-b-eh-yuh
Ear-Primary	ureʃe	u-er-eh-yuh-aah
Nose-Primary	nas	n-ah-s
Nose-Nares	na:ris	n-A-r-I-s
Mouth-Primary	bokə	b-oh-k-aaah
Mouth-Gula	golə	g-oh-l-aaah
Foot-Primary	pew	p-eh-w
Leg-Gamba	kambə	k-ah-m-b-aaah
Leg-Perna	pernə	p-eh-r-n-aaah

Appendix 6 - Word Lists by Language

Knee-Genuculum	զոնօ	gzah-aah-n-oh-yuh
Wing-Primary	ալ	ah-l-aah
Neck-Primary	կօլ	k-euh-yuh
Back-Primary	ծօս	d-oh-s
Back-Spatula	օսթալլէ	aah-s-p-ah-yuh-yuh-aah
Breast-Primary	սի	s-e
Breast-Pectus	պիտ	p-e-t
Liver-Primary	ֆեջօ	f-ay-VdPalatoAlveolarSibilant-aah
Star-Primary	օստէլ	aah-s-t-ch-l
Water-Primary	այշվէ	aj-juh-w-aah
Rain-Primary	պլւշօ	p-l-u-gzah-aah
Salt-Primary	սալ	s-ah-l
Stone-Petra	քէժրէ	p-ay-dd-er-aah
Sand-Primary	օրենօ	aah-er-ay-n-aah
Sand-Sabulum	սօրօ	s-oh-r-aah
Wind-Primary	բեն	b-ay-n
Smoke-Primary	ֆում	f-u-m
Fire-Focus	ֆօք	f-euh-k
Ash-Primary	սենդրօ	s-eh-n-d-r-aah
Night-Primary	նիտ	n-e-t
Name-Nomen	նօմ	n-euh-m
Tongue-Primary	ձեղցվէ	yuh-eh-nya-g-w-aah
I-Primary	յօ	gzah-ehu
YouPlural-Primary	բոս	b-u-s
YouSingular-Primary	տու	t-u
YouSingular-VostramMercedem	վօստէ	v-oh-s-t-ay
ToDrink-Primary	բէրվօ	b-eh-w-er-aah
ToEat-Manducare	մօրչա	m-aah-VdPalatalNasal-gzah-ah
ToBite-Morsicare	մուշչա	m-u-s-aah-juh-ah
ToLaugh-Primary	րիվօ	r-e-w-er-aah
ToSee-Primary	բէրվօ	b-eh-w-er-aah
ToHear-Primary	սի	u-e
ToKnow-Sapere	սօթէ	s-aah-bb-eh
ToKnow-Cognoscere	կոնէժօ	k-u-n-eh-shh-aah
ToCome-Primary	բօնի	b-aah-n-e
ToStand-Primary	օստա	aah-s-t-ah
ToStand-Levare	ձօբա	yuh-aah-b-ah
ToStand-Altiare	օլսա	aah-l-s-ah
ToFall-Primary	կավրօ	k-ah-w-r-aah
ToGive-Primary	դար	d-ah-r
ToGive-Donare	դոնա	d-u-n-ah
ToTie-Primary	ձիյա	yuh-e-juh-ah
ToSay-Primary	դի	d-e
ToBurn-Cremare	կրէմա	k-r-aah-m-ah
ToBurn-Flammare	ֆլամա	f-ssha-ah-m-ah
ToBurn-Incendere	օնսենդրօ	aah-n-s-ay-n-d-er-aah
Big-Grandem	գրան	g-r-ah-n
Long-Longum	լօյ	yuh-oh-nya
Long-Largum	լարկ	yuh-ah-er-k
Wide-Amplum	ամպլօ	ah-m-p-l-aah
Thick-Primary	գրաս	g-er-ah-s
Thick-Spissum	օսպէս	aah-s-p-eh-s
Thick-Grossus	գրօս	g-er-euh-s
Heavy-Primary	գրէվ	g-er-ay-w
Small-Primary	թօտիտ	p-aah-t-e-t
New-Primary	նօվ	n-euh-w
New-Novellus	նովելօ	n-u-bb-ay-yuh-oh
New-Novella	նովելա	n-u-bb-ay-yuh-ah
Old-Primary	վել	v-ay-yuh
Good-Primary	բօն	b-euh-n
Far-Primary	ձունտա	yuh-u-n-t-ah
Red-Primary	րօս	r-oh-s
Red-Vermiculus	բօրմէնչ	b-aah-r-m-eh-yuh

Appendix 6 - Word Lists by Language

Red-Rubeus	rudʒe	r-u-VdPalatoAlveolarSibilant-ay
Black-Primary	neɣrə	n-eh-juh-er-aah
One-Primary	un	u-n
Who-Qui	ki	k-e
What-Primary	kɛ	k-eh
Not-Primary	no	n-oh
Not-Nec	ni	n-e
In-In	ən	aah-n
In-Deintus	dins	d-e-n-s

Walloon

Cognate	IPA	Sounds
Child-Primary	ɛfā	eh-f-NasalA
Fish-Pescion	pēhō	p-eh-h-on
Bird-Aucellus	uhɛ	u-h-eh
Dog-Primary	fjè	ts-ehnn
Louse-Primary	pju	p-jg-u
Leaf-Primary	fɔj	f-mid_low_diphthong
Root-Radicina	resen	r-eh-s-eh-n
Skin-Primary	kojin	k-oj_diphthong-e-n
Skin-Pellis	pɛ	p-eh
Meat-Primary	fjar	ts-a-r
Blood-Primary	sɔg	s-oon-g
Bone-Primary	ɔhɛ	euh-h-eh
Egg-Primary	u	u
Horn-Cornua	kwen	k-w-eh-n
Tail-Primary	kɔw	k-euh-w
Hair-Capillus	dʒvɛ	VdPalatoAlveolarSibilant-v-eh
Ear-Primary	ɔrej	euh-VlUVularTrill-chj
Eye-Primary	uj	u-jg
Nose-Primary	ne	n-ay
Mouth-Primary	bɔk	b-euh-k
Mouth-Gula	gœj	g-uuh-jg
Tooth-Primary	dɛ	d-ehnn
Foot-Primary	pi	p-e
Leg-Gamba	dʒãp	VdPalatoAlveolarSibilant-NasalA-p
Knee-Genuculum	jŋo	VdPalatalNasal-VdPalatalNasal-euh
Hand-Primary	mẽ	m-ehnn
Wing-Primary	el	ay-l
Neck-Primary	ko	k-oh
Back-Primary	do	d-oh
Back-Spatula	spal	s-p-ah-l
Breast-Pectorina	pwetrin	p-w-eh-t-r-e-n
Liver-Primary	feť	f-uuh-t
Star-Primary	stœl	s-t-uuh-l
Water-Primary	ew	eh-w
Rain-Primary	plef	p-l-eh-f
Salt-Primary	se	s-ay
Stone-Petra	pir	p-e-r
Sand-Primary	aren	ah-r-eh-n
Sand-Sabulo	savjɔ̃	s-a-v-jg-oon
Wind-Primary	v̂e	v-ehnn
Fire-Focus	fœ	f-uuh
Ash-Primary	šet	s-ehnn-t
Night-Primary	nyt	n-eeh-t
Name-Nomen	nɔ̃	n-oon
Tongue-Primary	l̄ev	l-ehnn-v
I-Primary	dʒi	VdPalatoAlveolarSibilant-e
YouPlural-Primary	vo	v-oh
YouSingular-Primary	ti	t-e
ToDrink-Primary	bɔ̃r	b-uu-rr

Appendix 6 - Word Lists by Language

ToEat-Manducare	mäni	m-ah-VdPalatalNasal-e
ToSuck-Primary	sysi	s-ehh-s-e
ToBlow-Primary	sofle	s-euh-f-l-ay
ToLaugh-Primary	rir	r-e-r
ToSee-Primary	vej	v-ehj
ToHear-Primary	oji	mid_low_diphthong-e
ToKnow-Sapere	savör	s-ah-v-uu-r
ToKnow-Cognoscere	kinöh	k-e-n-euh-h
ToCome-Primary	vini	v-e-n-e
ToStand-Levare	leve	l-eh-v-ay
ToStand-Altiare	osi	oh-s-e
ToFall-Primary	ſer	ts-eh-r
ToGive-Donare	dine	d-e-n-ay
ToTie-Primary	löji	l-mid_low_diphthong-e
ToSay-Primary	dir	d-e-r
Big-Grandem	grä	g-r-NasalA
Long-Longum	lō	l-oon
Long-Largum	ladʒ	l-ah-VdPalatoAlveolarSibilant
Wide-Amplum	̄p	NasalA-p
Thick-Primary	kra	k-r-a
Thick-Spissum	spe	s-p-eh
Thick-Grossus	gro	g-er-euh
Heavy-Primary	grav	g-r-a-v
Heavy-Lurdus	lur	l-u-r
Small-Primary	piti	p-e-t-e
New-Primary	nu	n-u
New-Novellus	növe:	n-euh-v-ai
New-Novella	növel	n-euh-v-eh-l
Old-Primary	vi	v-e
Good-Primary	bɔ	b-oon
Red-Primary	rödʒ	r-euh-VdPalatoAlveolarSibilant
Red-Rubeus	rɔf	r-euh-ts
Black-Primary	nør	n-uu-r
One-Primary	ɔ	oon
Who-Qui	ki	k-e
What-Primary	kwε	k-w-eh
Not-Primary	nɔ	n-oon
Not-Nec	ni	n-e
In-In	en	eh-n

Friulian

Cognate	IPA	Sounds
Child-Ninnus	nini	n-e-n-e
Fish-Piskem	pes	p-eh-s
Bird-Aucellus	ujjel	u-ts-jg-ch-l
Bird-Passerem	pasar	p-ah-s-ah-r
Dog-Primary	can	tya-ah-n
Louse-Primary	pedo:li	p-ay-d-O-l-e
Leaf-Primary	fwee	f-w-ay-ay
Root-Primary	radri:s	r-ah-d-r-E-s
Rope-Restis	rjestē	r-jg-ay-s-t-ay
Skin-Pellis	pjel	p-jg-eh-l
Meat-Primary	ca:r	tya-A-r
Blood-Primary	sank	s-ah-n-k
Bone-Primary	wes	w-eh-s
Egg-Primary	uf	U-f
Horn-Cornua	kwar	k-w-ah-r
Tail-Primary	köde	k-euh-d-eh
Hair-Primary	pe:l	p-ai-l
Hair-Capillus	cavel	tya-ah-v-ay-l
Ear-Primary	ore:le	oh-r-ai-l-ay

Appendix 6 - Word Lists by Language

Eye-Primary	voli	v-oh-l-e
Nose-Primary	na:s	n-A-s
Mouth-Primary	bœ̄	b-euh-tya-eh
Mouth-Gula	gole	g-euh-l-ay
Tooth-Primary	dint	d-e-n-t
Foot-Primary	pi:t	p-E-t
Leg-Gamba	jambe	VdPalatalStop-ah-m-b-ay
Leg-Petiolus	pekøl	p-eh-k-euh-l
Knee-Genuculum	dʒenoli	VdPalatoAlveolarSibilant-ay-n-oh-l-e
Hand-Primary	man	m-ah-n
Wing-Primary	ale	ah-l-ay
Neck-Primary	kwel	k-w-eh-l
Back-Primary	dwes	d-w-eh-s
Back-Spatula	spale	s-p-ah-l-ay
Breast-Primary	sen	s-ch-n
Breast-Pectus	pet	p-eh-t
Liver-Primary	fia:t	f-e-A-t
Star-Primary	stele	s-t-eh-l-ay
Water-Primary	age	ah-g-ay
Rain-Primary	ploje	p-l-oh-jg-ay
Salt-Primary	sa:l	s-A-l
Stone-Primary	sas	s-ah-s
Stone-Petra	pjere	p-jg-ay-r-ay
Sand-Primary	rene	r-eh-n-ay
Sand-Sabulo	savaløn	s-ah-v-ah-l-euh-n
Wind-Primary	'vint	v-e-n-t
Smoke-Primary	fum	f-u-m
Fire-Focus	fu:k	f-U-k
Ash-Cinisia	ʃinise	ts-e-n-e-s-eh
Night-Primary	jøt	VdPalatalNasal-euh-t
Name-Nomen	nøn	n-euh-n
Tongue-Primary	'lenge	l-eh-n-g-ay
I-Primary	jo	jg-oh
YouPlural-Primary	vo:	v-O
YouSingular-Primary	tu	t-u
ToDrink-Primary	bevi	b-ay-v-e
ToEat-Manducare	manja:	m-ah-n-VdPalatalStop-A
ToBite-Primary	mwardi	m-w-ah-r-d-e
ToBite-Morsicare	morsea:	m-oh-r-s-ay-A
ToSuck-Primary	cuca:	tya-u-tya-A
ToBlow-Primary	sofla:	s-oh-f-l-A
ToLaugh-Primary	ridi	r-e-d-e
ToSee-Primary	vjodi	v-jg-oh-d-e
ToHear-Primary	uldi:	u-l-d-E
ToKnow-Sapere	save:	s-ah-v-ai
ToKnow-Cognoscere	koñosi	k-oh-VdPalatalNasal-euh-s-e
ToHit-Primary	pulsa:	p-u-l-s-A
ToCome-Primary	vipi:	v-e-VdPalatalNasal-E
ToStand-Primary	sta:	s-t-A
ToStand-Levare	leva:	l-ay-v-A
ToStand-Altiare	alṭa:	ah-l-ts-A
ToFall-Primary	cade	tya-ah-d-ay
ToGive-Primary	da:	d-A
ToGive-Donare	dona:	d-oh-n-A
ToTie-Primary	lea:	l-ay-A
ToSay-Primary	di:	d-E
ToBurn-Ardere	ardi	ah-r-d-e
Big-Grandem	grant	g-r-ah-n-t
Long-Longum	lunk	l-u-n-k
Long-Largum	lark	l-ah-r-k
Thick-Primary	gras	g-r-ah-s
Thick-Grossus	grwes	g-r-w-eh-s
Heavy-Primary	grevi	g-r-eh-v-e

Appendix 6 - Word Lists by Language

Small-Pitulus	pitſul	p-e-ts-u-l
New-Primary	ju:f	VdPalatalNasal-U-f
New-Novellus	novel	n-oh-v-ch-l
Old-Primary	vjei	v-jg-ay-e
Good-Primary	bon	b-euh-n
Far-Primary	lontan	l-oh-n-t-ah-n
Red-Primary	ros	r-euh-s
Black-Primary	neri	n-ay-r-e
One-Primary	un	u-n
Who-Qui	kwi	k-w-e
What-Primary	ſe	ts-ay
Not-Primary	no	n-oh

Romanian

Cognate	IPA	Sounds
Fish-Piskem	peſte	p-ay-shh-t-ay
Bird-Passerem	pasere	p-ah-s-aah-er-ay
Dog-Primary	kijne	k-eeej-n-ay
Louse-Primary	pədukje	p-aah-d-u-k-jg-ay
Leaf-Primary	foaje	f-oaa-jg-ay
Leaf-Frondea	frunzə	f-er-u-n-zz-aah
Root-Radicina	rədəʃinə	r-aaah-d-aah-ts-e-n-aah
Rope-Primary	funje	f-u-n-jg-ay
Skin-Pellis	pjele	p-jg-ay-l-ay
Meat-Primary	karne	k-ah-er-n-ay
Blood-Primary	sindʒe	s-eee-n-VdPalatoAlveolarSibilant-ay
Bone-Primary	os	oh-s
Egg-Primary	ow	oh-w
Horn-Primary	korn	k-oh-r-n
Tail-Primary	coadə	tya-ooaa-d-aaah
Hair-Primary	pər	p-aah-er
Ear-Primary	ureke	u-r-ay-k-ay
Eye-Primary	ok̪	oh-kpalatal
Nose-Primary	nas	n-ah-s
Mouth-Primary	bukə	b-u-k-aah
Mouth-Gula	gurə	g-u-er-aaah
Tooth-Primary	dinte	d-e-n-t-ay
Foot-Primary	piez	p-e-ay-zz
Leg-Gamba	gambə	g-ah-m-b-aah
Leg-Petiolus	pitʃor	p-e-ts-jg-oh-r
Knee-Genuculum	dʒenunk̪	VdPalatoAlveolarSibilant-ay-n-u-n-kpalatal
Hand-Primary	mina	m-eee-n-aaah
Back-Primary	do	d-oh
Back-Spatula	spate	s-p-ah-t-ay
Breast-Primary	san	s-ah-n
Breast-Pectus	pjept	p-jg-ay-p-t
Liver-Primary	fikat	f-e-k-ah-t
Star-Primary	stea	s-t-eaha
Water-Primary	apo	ah-p-aah
Rain-Primary	ploaje	p-l-ooaa-jg-ay
Salt-Primary	sare	s-ah-r-ay
Stone-Petra	pjatrə	p-jg-ah-t-er-aaah
Sand-Primary	arinə	ah-r-e-n-aaah
Wind-Primary	vint	v-eee-n-t
Smoke-Primary	fum	f-u-m
Fire-Focus	fok	f-oh-k
Ash-Cinisia	ʃenuʃə	ts-ay-n-u-shh-aah
Night-Primary	noapte	n-ooaa-p-t-ay
Name-Nomen	nume	n-u-m-ay
Tongue-Primary	limbə	l-e-m-b-aah
I-Primary	jew	jg-ay-w

Appendix 6 - Word Lists by Language

YouPlural-Primary	voj	v-oj_diphthong
YouSingular-Primary	tu	t-u
ToDrink-Primary	bea	b-eaha
ToEat-Manducare	minka	m-eee-n-k-ah
ToBite-Morsicare	murseka	m-u-r-s-ay-k-ah
ToSuck-Sugere	sudze	s-u-VdPalatoAlveolarSibilant-ay
ToBlow-Primary	sufla	s-u-f-l-ah
ToLaugh-Primary	ride	er-eee-d-ay
ToSee-Primary	vedea	v-ay-d-eaha
ToHear-Primary	auzi	au-zz-e
ToKnow-Primary	sti	shh-t-e
ToKnow-Cognoscere	kunoqaste	k-u-n-oaa-shh-t-ay
ToHit-Primary	pulsa	p-u-l-s-ah
ToCome-Primary	veni	v-ay-n-e
ToStand-Primary	sta	s-t-ah
ToStand-Levare	lua	l-u-ah
ToFall-Primary	kødea	k-aah-d-eaha
ToGive-Primary	da	d-ah
ToTie-Primary	lega	l-ay-g-ah
ToSay-Primary	zif'e	zz-e-ts-ay
ToSay-Exponere	spune	s-p-u-n-ay
ToBurn-Ardere	arde	ah-er-d-ay
ToBurn-Incendere	infjindze	eee-n-ts-e-n-d-gzah-ay
ToBurn-Ustulare	ustura	u-s-t-u-r-ah
Big-Majorem	mare	m-ah-er-ay
Long-Longum	lung	l-u-n-g
Long-Largum	larg	l-ah-r-g
Wide-Primary	lat	l-ah-t
Thick-Primary	gras	g-r-ah-s
Thick-Grossus	gros	g-r-oh-s
Heavy-Primary	grew	g-er-ay-w
New-Primary	now	n-oh-w
New-Novella	nuja	n-u-jg-ah
Old-Primary	veki	v-ay-kpalatal
Good-Primary	bun	b-u-n
Red-Primary	roju	er-oh-shh-u
Red-Rubeus	rojb	r-oj_diphthong-b
Black-Primary	negru	n-ay-g-er-u
One-Primary	unu	u-n-u
Who-Quem	fjine	ts-e-n-ay
What-Primary	fje	ts-ay
Not-Primary	nu	n-u
In-In	in	eee-n

Appendix 7 - Segment Groups

Where symbols appear in pairs, the one to the right represents a rounded vowel.

Vowel

	Front	Near-Front	Central	Near-Back	Back
Close	i • y		ɪ		u
Near-close		I		ʊ	
Close-mid	e • ø		ə		o
Mid					
Open-mid		ɛ • œ			ɔ
Near-open			a		
Open		a			ɑ

Long-Vowel

	Front	Near-Front	Central	Near-Back	Back
Close	i:				u:
Near-close					
Close-mid					
Mid	e:				o:
Open-mid					
Near-open					
Open			a:		

Nasal-Vowel

	Front	Near-Front	Central	Near-Back	Back
Close	ĩ				ẽ
Near-close					ã
Close-mid					õ
Mid					
Open-mid		ɛ			ɔ
Near-open			ã		
Open					ũ

Long-Nasal-Vowel

	Front	Near-Front	Central	Near-Back	Back
Close					
Near-close					

Appendix 7 - Segment Groups

Close-mid					
Mid					
Open-mid					
Near-open					
Open					

Vowel-Diphthong

	Front	Near-Front	Central	Near-Back	Back
Close			ɪj		
Near-close					
Close-mid					oj
Mid	ej				
Open-mid		ɛj			ɔj
Near-open		aj	ɑj		
Open			au		ʊj

Nasal-Vowel-Diphthong

	Front	Near-Front	Central	Near-Back	Back
Close					
Near-close					
Close-mid					
Mid	ẽj				
Open-mid		œ̃			
Near-open			ã̃		
Open			ã̃w̃		

Vowel-Non-Sylabic

	Front	Near-Front	Central	Near-Back	Back
Close					
Near-close					
Close-mid					
Mid					
Open-mid					
Near-open					
Open					

Vowel-Diphthong-Non-Sylabic

	Front	Near-Front	Central	Near-Back	Back

Appendix 7 - Segment Groups

Close							
Near-close							
Close-mid		ea					oa
Mid							
Open-mid							
Near-open							
Open							

Pulmonic Consonants

Manner	Bilabial	Labial-Velar	Labio-Dental	Dental	Alveolar	Post-Alveolar	Palatal	Velar	Uvular	Glottal
Nasal, Stop					n		j̊	ŋ		
Nasal	m									
Stop	p b kʷ gʷ			t d		c ʃ k g				
Sibilant, Fricative				s z	f z					
Fricative	β		f v θ ð				j x ɣ	χ h		
Approximant						j				
Tap/Flap					t					
Trill					r		R			
Lateral, Fricative					l		λ			
Lateral, Approximant										
Lateral, Tap/Flap										

Shaded areas denote articulations judged to be impossible. Where symbols appear in pairs, the one to the right represents a modally voiced consonant.

Non-Pulmonic Consonants

Manner	Palatal
Stop	k ^j
Ejective, Stop	
Ejective, Fricative	
Ejective, Lateral, Fricative	
Tenuis, Click	
Nasal, Click	
Tenuis, Lateral, Click	
Implosive	
Lateral, Approximant	

Shaded areas denote articulations judged to be impossible. Where symbols appear in pairs, the one to the right represents a modally voiced consonant.

Pulmonic Affricates

Manner	Alveolar	Palato-Alveolar
Sibilant	ts	tʃ
Lateral		
Voiced		
Non-Sibilant		

Shaded areas denote articulations judged to be impossible.

Ejective Affricates

Appendix 7 - Segment Groups

Manner
Central
Lateral

Shaded areas denote articulations judged to be impossible.

Other Segments

W Labial-Velar Vocoid Semivowel Voiced Approximant
Continuant Labial Velar

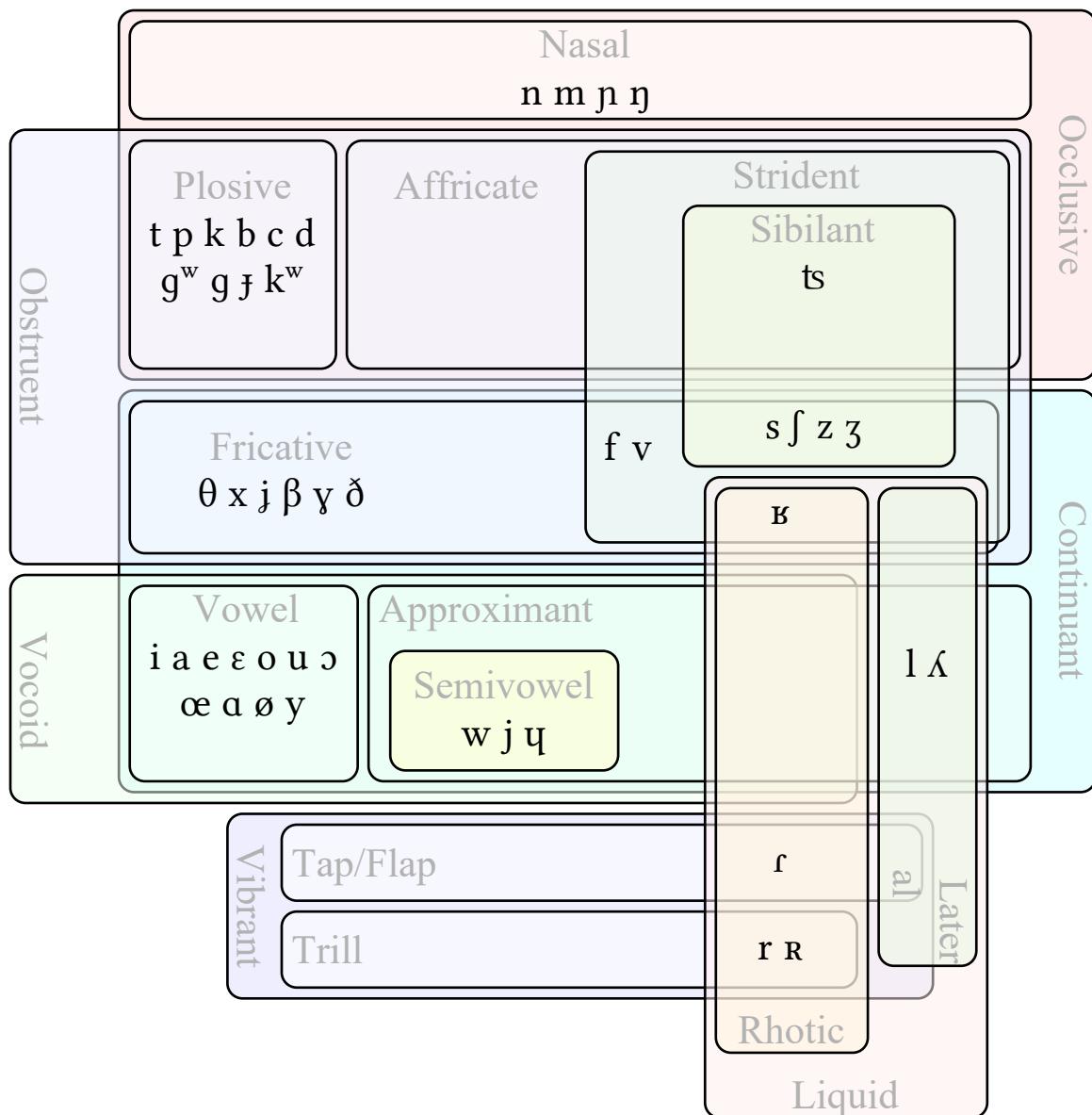
ç Palato-Alveolar Voiced Sibilant Affricate

ł Alveolar Voiced Velarized Pulmonic Lateral Approximant

dz Alveolar Voiced Sibilant Affricate

ł Palatal-Velar Vocoid Semivowel Voiced Approximant
Continuant Palatalized Labial

Appendix 8 - Euler Feature Diagram



Appendix 9 - International Phonetic Alphabet

IPA Segments

ãj	ẽẅ	aʊ	ea
0250, 0303, 006A, 0303 Near-open Central Nasal Vowel Diphthong	0250, 0303, 0077, 0303 Open Central Nasal Vowel Diphthong	0061, 0075, 032F Open Central Vowel Diphthong	0065, 032F, 0061 Close-mid Front Vowel Diphthong Non-Sylabic
œa	ẽj	aj	a:
006F, 032F, 0061 Close-mid Back Vowel Diphthong Non-Sylabic	1EBD, 006A, 0303 Mid Front Nasal Vowel Diphthong	0061, 006A Near-open Near-Front Vowel Diphthong	0061, 02D0 Open Central Vocoid Long Vowel Continuant
ej	e:	i:	k^j
0065, 006A Mid Front Vowel Diphthong	0065, 02D0 Mid Front Vocoid Long Vowel Continuant	0069, 02D0 Close Front Vocoid Long Vowel Continuant	006B, 02B2 Palatal Stop Palatalized
k^w	oŋ	ɔ:	u:
006B, 02B7 Labial-Velar Pulmonic Stop Occlusive Labial Velar	006F, 006A Close-mid Back Vowel Diphthong	006F, 02D0 Mid Back Rounded Vocoid Long Vowel Continuant	0075, 02D0 Close Back Rounded Long Vowel
œ̈	ãj	ã	ã
0153, 0303 Open-mid Near-Front Rounded Nasal Vowel Diphthong	0250, 006A Near-open Central Vowel Diphthong	0250, 0303 Near-open Central Rounded Nasal Vowel	0251, 0303 Near-close Back Nasal Vowel
ɔj	ɔ̈	ɛj	ɛ̈
0254, 006A Open-mid Back Vowel Diphthong	0254, 0303 Open-mid Back Rounded Nasal Vowel	025B, 006A Open-mid Near-Front Vowel Diphthong	025B, 0303 Open-mid Near-Front Nasal Vowel
g^w	ɪj	a	b
0261, 02B7 Labial-Velar Voiced Pulmonic Stop Occlusive Labial Velar	0268, 006A Close Central Vowel Diphthong	0061 Open Near-Front Vocoid Vowel Continuant Parent Vowel	0062 Bilabial Voiced Pulmonic Stop Occlusive
c	d	e	f
0063 Palatal Pulmonic Stop Occlusive	0064 Alveolar Voiced Pulmonic Stop Occlusive	0065 Close-mid Front Vocoid Vowel Continuant Parent Vowel	0066 Labio-Dental Pulmonic Fricative Strident Obstruent Continuant Labial Dental

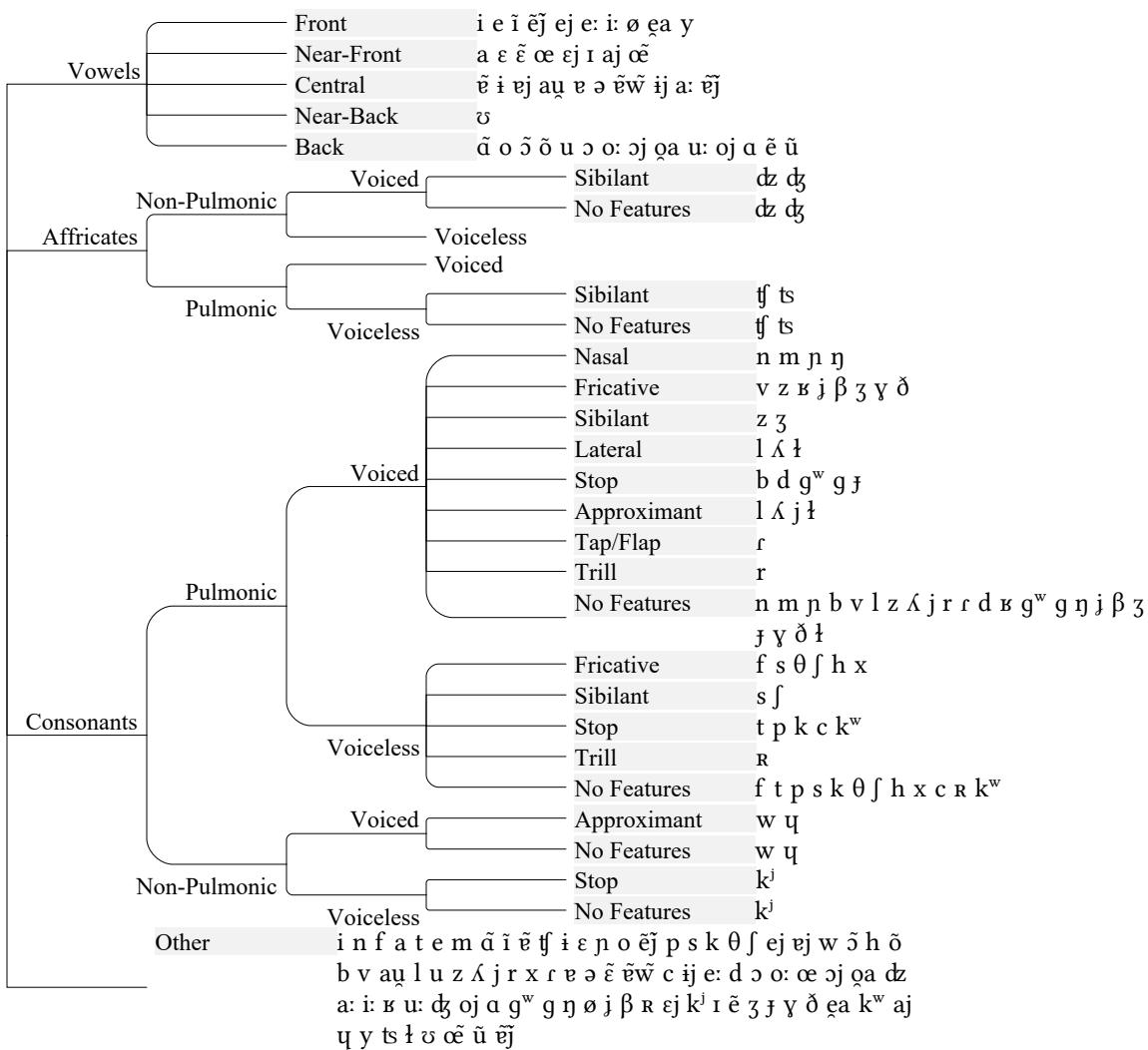
Appendix 9 - International Phonetic Alphabet

h	i	j	k
0068 Glottal Pulmonic Fricative	0069 Close Front Vocoid Vowel Continuant Parent Vowel	006A Palatal Vocoid Semivowel Voiced Pulmonic Approximant Continuant	006B Velar Pulmonic Stop Occlusive
l	m	n	o
006C Alveolar Vocoid Voiced Pulmonic Lateral Approximant Rhotic Liquid	006D Bilabial Voiced Pulmonic Nasal Occlusive	006E Alveolar Voiced Pulmonic Nasal Occlusive	006F Close-mid Back Rounded Vocoid Vowel Continuant Parent Vowel
p	r	s	t
0070 Bilabial Pulmonic Stop Occlusive	0072 Alveolar Voiced Pulmonic Trill Rhotic Vibrant Liquid	0073 Alveolar Pulmonic Sibilant Fricative Strident Obstruent Continuant	0074 Alveolar Pulmonic Stop Occlusive
u	v	w	x
0075 Close Back Rounded Vocoid Vowel Continuant Parent Vowel	0076 Labio-Dental Voiced Pulmonic Fricative Strident Obstruent Continuant Labial Dental	0077 Labial-Velar Vocoid Semivowel Voiced Approximant Continuant Labial Velar	0078 Velar Pulmonic Fricative Obstruent Continuant
y	z	ð	ɔ
0079 Close Front Rounded Vocoid Vowel Continuant Parent Vowel	007A Alveolar Voiced Pulmonic Sibilant Fricative Strident Obstruent Continuant	00F0 Dental Voiced Pulmonic Fricative Obstruent Continuant Dental	00F5 Close-mid Back Rounded Nasal Vowel
ø	í	ŋ	œ
00F8 Close-mid Front Rounded Vocoid Vowel Continuant Parent Vowel	0129 Close Front Nasal Vowel	014B Velar Voiced Pulmonic Nasal Occlusive	0153 Open-mid Near-Front Rounded Vocoid Vowel Continuant
ü	ä	ä	ö
0169 Open Back Nasal Vowel	0250 Near-open Central Rounded Vowel Parent Vowel	0251 Open Back Vocoid Vowel Continuant Parent Vowel	0254 Open-mid Back Rounded Vocoid Vowel Continuant Parent Vowel

Appendix 9 - International Phonetic Alphabet

ɛ	ɛ	ʃ	g
0259 Close-mid Central Vowel Parent Vowel	025B Open-mid Near-Front Vocoid Vowel Continuant Parent Vowel	025F Palatal Voiced Pulmonic Stop Occlusive	0261 Velar Voiced Pulmonic Stop Occlusive
ɣ	ψ	ɪ	ɪ
0263 Velar Voiced Pulmonic Fricative Obstruent Continuant	0265 Labial-Palatal Vocoid Semivowel Voiced Approximant Continuant Palatalized Labial	0268 Close Central Vowel Parent Vowel	026A Near-close Near-Front Vowel Parent Vowel
ɿ	ɲ	f	r
026B Alveolar Voiced Velarized Pulmonic Lateral Approximant	0272 Palatal Voiced Pulmonic Nasal Occlusive	027E Alveolar Voiced Pulmonic Tap/Flap Rhotic Vibrant Liquid	0280 Uvular Pulmonic Trill Rhotic Vibrant Liquid
β	ʃ	ʊ	ʌ
0281 Uvular Voiced Pulmonic Fricative Rhotic Strident Obstruent Continuant Liquid	0283 Post-Alveolar Pulmonic Sibilant Fricative Strident Obstruent Continuant	028A Near-close Near-Back Rounded Vowel	028E Palatal Vocoid Voiced Pulmonic Lateral Approximant Rhotic Liquid
ʒ	j	dʒ	dʒ
0292 Post-Alveolar Voiced Pulmonic Sibilant Fricative Strident Obstruent Continuant	029D Palatal Voiced Pulmonic Fricative Obstruent Continuant	02A3 Alveolar Voiced Sibilant Affricate	02A4 Palato-Alveolar Voiced Sibilant Affricate
ts	tʃ	þ	θ
02A6 Alveolar Pulmonic Sibilant Affricate Occlusive Strident	02A7 Palato-Alveolar Pulmonic Sibilant Affricate	03B2 Bilabial Voiced Pulmonic Fricative Obstruent Continuant	03B8 Dental Pulmonic Fricative Obstruent Continuant Dental
ẽ			
1EBD Close Back Nasal Vowel			

Appendix 10 - Feature Tree



Appendix 11 - Diacritics

Diacritics

Undefined escape character	~	Nasalized	..	Centralized
+ Advanced	-	Retracted	^	Rising Tone
o Voiceless		Implosive	_	Syllabic
,	ѣ	Pharyngealized	^	Falling tone
` Non-syllabic	ˇ	No audible release	“	Rhotic hook
Advanced tongue root	˘	Apical	„	Extra low tone
c Less rounded	˘	Dental	~	Velarized or Pharyngealized
Global fall	˘	Velarized	’	High tone
h Aspirated	j	Palatalized	~	Creaky voiced
` Low tone	l	Lateral release	-	Mid tone
□ Laminal	˘	Linguo-Labial	n	Nasal release
, More rounded	˘	Lowered	˘	Retracted tongue root
Global rise	˘	Raised	”	Extra high tone
.. Breathy voiced	˘	Voiced	w	Labialized
.. Extra short	˘	Mid-centralized	↓	Down-step
↑ Up-step	˘	Long	ˇ	Half-long
Indeterminacy in french vowels		Begin Non-segmental notation		End non-segmental notation
£ Voiced epiglottal fricative	!	Post-alveolar click		Minor group
Dental click		Major group		Alveolar lateral click
‡ Palatal click	°	Voiceless descender	-	Combining macron
) Tie-bar below	˘	Tie-bar above	‡	Ready made combination
→ Becomes		Separator		

Appendix 12 - Languages

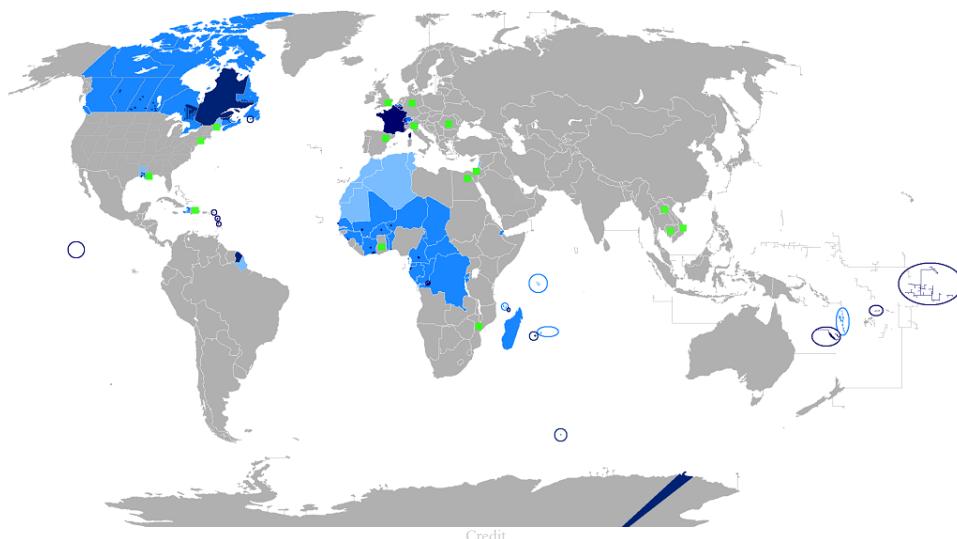
Latin



A classical language belonging to the Italic branch of the Indo-European languages. Latin was originally spoken in the area around Rome, known as Latium. Through the power of the Roman Republic, it became the dominant language in Italy, and subsequently throughout the western Roman Empire, before eventually becoming a dead language. Latin has contributed many words to the English language. In particular, Latin (and Ancient Greek) roots are used in English descriptions of theology, the sciences, medicine, and law.

By the late Roman Republic (75 BC), Old Latin had been standardised into Classical Latin. Vulgar Latin was the colloquial form spoken at that time and attested in inscriptions and the works of comic playwrights like Plautus and Terence[3] and author Petronius. Late Latin is the written language from the 3rd century; its colloquial form Vulgar Latin developed in the 6th to 9th centuries into the Romance languages, such as Italian, Sardinian, Venetian, Neapolitan, Sicilian, Piedmontese, Lombard, French, Franco-Provençal, Occitan, Corsican, Ladin, Friulan, Romansh, Catalan/Valencian, Aragonese, Spanish, Asturian, Galician, and Portuguese. Medieval Latin was used as a literary language from the 9th century to the Renaissance which used Renaissance Latin. Later, Early Modern Latin and New Latin evolved. Latin was the language of international communication, scholarship and science until well into the 18th century, when vernaculars (including the Romance languages) supplanted it. Ecclesiastical Latin remains the official language of the Holy See and the Roman Rite of the Catholic Church. Latin is a highly inflected language, with three distinct genders, six or seven noun cases, five declensions, four verb conjugations, six tenses, three persons, three moods, two voices, two or three aspects, and two numbers. The Latin alphabet is derived from the Etruscan and Greek alphabets and ultimately from the Phoenician alphabet.

French



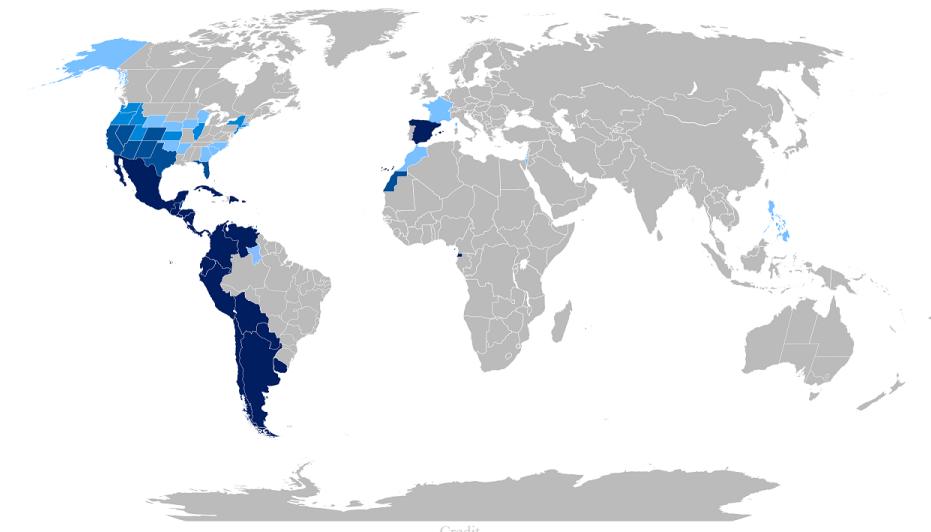
Appendix 12 - Languages

A Romance language of the Indo-European family. It descended from the Vulgar Latin of the Roman Empire, as did all Romance languages. French evolved from Gallo-Romance, the Latin spoken in Gaul, and more specifically in Northern Gaul. Its closest relatives are the other langues d'oïl—languages historically spoken in northern France and in southern Belgium, which French (Francien) largely supplanted.

French was also influenced by native Celtic languages of Northern Roman Gaul like Gallia Belgica and by the (Germanic) Frankish language of the post-Roman Frankish invaders. Today, owing to France's past overseas expansion, there are numerous French-based creole languages, most notably Haitian Creole. A French-speaking person or nation may be referred to as Francophone in both English and French.

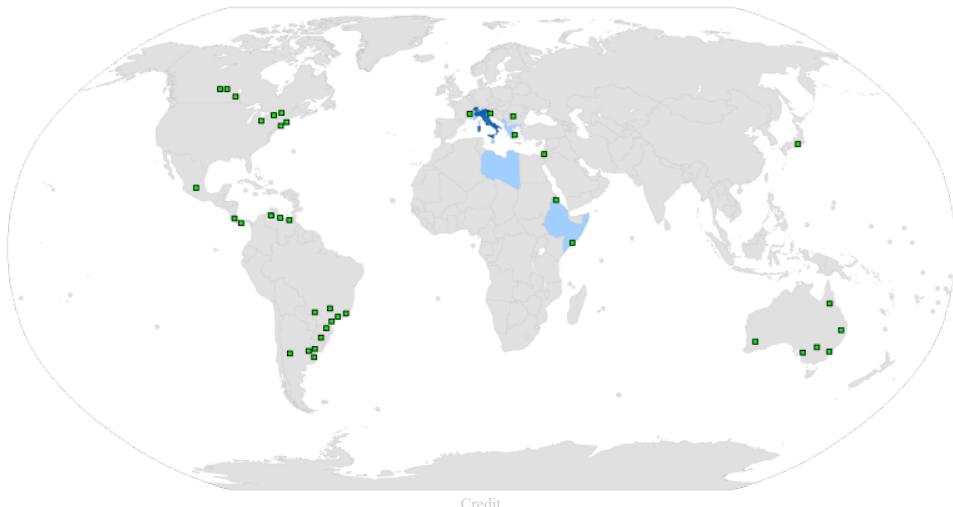
French is an official language in 29 countries across multiple continents, most of which are members of the Organisation internationale de la Francophonie (OIF), the community of 84 countries which share the official use or teaching of French. French is also one of six official languages used in the United Nations. It is spoken as a first language (in descending order of the number of speakers) in France; the Democratic Republic of Congo; Algeria; Morocco; Canada (provinces of Quebec, Ontario and New Brunswick as well as other Francophone regions); Cameroon; Belgium (Wallonia and the Brussels-Capital Region); Ivory Coast; Tunisia; western Switzerland (Romandy—all or part of the cantons of Bern, Fribourg, Geneva, Jura, Neuchâtel, Vaud, Valais); Monaco; parts of Luxembourg; parts of the United States (the states of Louisiana, Maine, New Hampshire and Vermont); northwestern Italy (autonomous region of Aosta Valley); and various communities elsewhere.

Spanish



A Romance language that originated in the Iberian Peninsula of Europe. Today, it is a global language with nearly 500 million native speakers, mainly in Spain and the Americas. It is the world's second-most spoken native language after Mandarin Chinese, and the world's fourth-most spoken language overall after English, Mandarin Chinese, and Hindi.

Italian



A Romance language of the Indo-European language family. Italian is the closest national language to Latin, from which it descends via vulgar Latin of the Roman Empire. Taking into account both national and regional languages, it is seen that Italian and Sardinian are together the least differentiated from Latin. Italian is an official language in Italy, Switzerland (Ticino and the Grisons), San Marino, and Vatican City. It has an official minority status in western Istria (Croatia and Slovenia).

It formerly had official status in Albania, Malta, Monaco, Montenegro (Kotor), Greece (Ionian Islands and Dodecanese), and is generally understood in Corsica by Corsican speakers (many linguists classify Corsican as an Italian dialect). It used to be an official language in the former colonial areas of Italian East Africa and Italian North Africa, where it still has a significant role in various sectors.

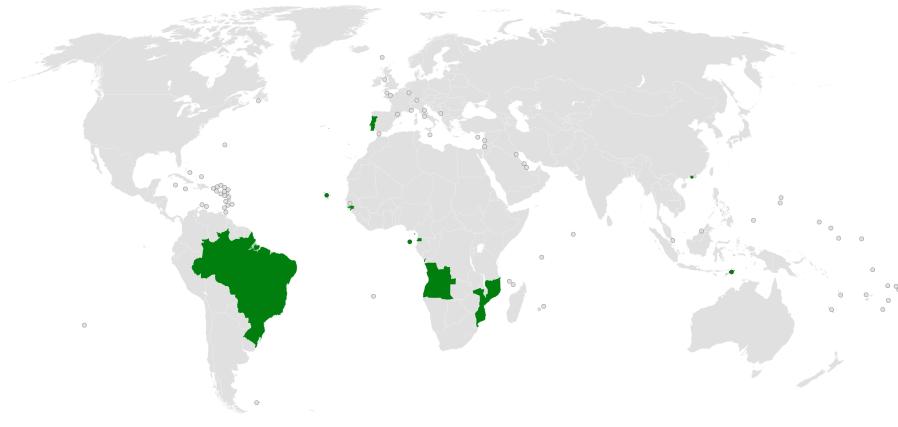
Italian is also spoken by large immigrant and expatriate communities in the Americas and Australia. Italian is included under the languages covered by the European Charter for Regional or Minority languages in Bosnia and Herzegovina and in Romania, although Italian is neither a co-official nor a protected language in these countries. Many speakers of Italian are native bilinguals of both Italian (either in its standard form or regional varieties) and another regional language of Italy.

Brazilian Portuguese



The set of dialects of the Portuguese language native to Brazil and the most influential form of Portuguese worldwide. It is spoken by almost all of the 200 million inhabitants of Brazil and spoken widely across the Brazilian diaspora, today consisting of about two million Brazilians who have emigrated to other countries. With a population of over 205 million, Brazil is by far the world's largest Portuguese-speaking nation and the only one in the Americas.

Portuguese



Credit

A Romance language originating in the Iberian Peninsula of Europe. It is the sole official language of Portugal, Angola, Mozambique, Guiné-Bissau, Cape Verde, São Tomé and Príncipe, and Brazil, while having co-official language status in East Timor, Equatorial Guinea, and Macau. A Portuguese-speaking person or nation is referred to as "Lusophone" (lusófono). As the result of expansion during colonial times, a cultural presence of Portuguese and Portuguese creole speakers are also found around the world. Portuguese is part of the Ibero-Romance group that evolved from several dialects of Vulgar Latin in the medieval Kingdom of Galicia and the County of Portugal, and has kept some Celtic phonology and its lexicon.

Catalan



Credit

A Western Romance language derived from Vulgar Latin. It is the official language of Andorra, and a co-official language of three autonomous communities in eastern Spain: Catalonia, the Valencian Community and the Balearic Islands. It also has semi-official status in the Italian comune of Alghero. It is also spoken in the Pyrénées-Orientales department of France and in two further areas in eastern Spain: the eastern strip of Aragon and the Carche area in the Region of Murcia. The Catalan-speaking territories are often called the Països Catalans or "Catalan Countries".

The language evolved from Vulgar Latin in the Middle Ages around the eastern Pyrenees. Nineteenth-century Spain saw a Catalan literary revival, culminating in the early 1900s.

Walloon

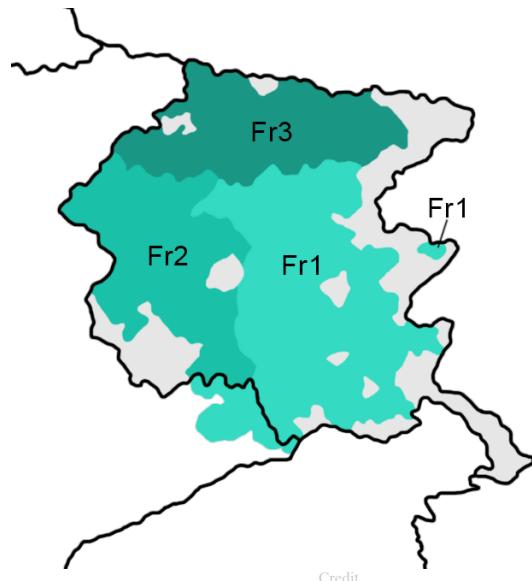


Credit

A Romance language that is spoken in much of Wallonia and (to small extent) in Brussels, Belgium; some villages near Givet, northern France; a clutch of communities in northeastern Wisconsin, U.S.; and in some parts of Canada. It belongs to the langue d'oïl language family, the most prominent member of which is the French language. The historical background of its formation was the territorial extension since 980 of the Principality of Liège to the south and west.

Despite its rich literature, beginning anonymously in the 16th century and with well-known authors since 1756, the use of Walloon has decreased markedly since France's annexation of Wallonia in 1795. This period definitively established French as the language of social promotion, far more than it was before. After World War I, public schools provided French-speaking education to all children, inducing a denigration of Walloon, especially when accompanied by official orders in 1952 to punish its use in schools. Subsequently, since the middle of the 20th century, generational transmission of the language has decreased, resulting in Walloon almost becoming a dead language. Today it is scarcely spoken among younger people, with vast majority of its native speakers being the elderly (aged 65 and over). In 2007, the number of people with knowledge of the language was estimated at 600,000.

Friulian



Credit

A Romance language belonging to the Rhaeto-Romance family, spoken in the Friuli region of northeastern Italy. Friulian has around 600,000 speakers, the vast majority of whom also speak Italian.

It is sometimes called Eastern Ladin since it shares the same roots as Ladin, but over the centuries, it has diverged under the

Appendix 12 - Languages

influence of surrounding languages, including German, Italian, Venetian, and Slovene. Documents in Friulian are attested from the 11th century and poetry and literature date as far back as 1300. By the 20th century, there was a revival of interest in the language.

Romanian



A Balkan Romance language spoken by approximately 24–26 million people as a native language, primarily in Romania and Moldova, and by another 4 million people as a second language. According to another estimate, there are about 34 million people worldwide who can speak Romanian, of whom 30 million speak it as a native language. It is an official and national language of both Romania and Moldova and is one of the official languages of the European Union.

Romanian is a part of the Eastern Romance sub-branch of Romance languages, a linguistic group that evolved from several dialects of Vulgar Latin which separated from the Western Romance languages in the course of the period from the 5th to the 8th centuries. To distinguish it within the Eastern Romance languages, in comparative linguistics it is called Daco-Romanian as opposed to its closest relatives, Aromanian, Megleno-Romanian and Istro-Romanian. Romanian is also known as Moldovan in Moldova, although the Constitutional Court of Moldova ruled in 2013 that "the official language of the republic is Romanian".

Appendix 13 - Concepts Used

	Child-Primary	Child-Ninnus	Fish-Piskem	Fish-Pescion
Latin	i n f a n t e m		p i s k e m	
French	ã - f ã - - - -			p w a s õ
Spanish	i n f a n t e -	n i p o	p e θ - - - -	
Italian	- - f a n t e -	n i n o	p e ſ ſ e - -	
PortugueseBrazil	ĩ - f ĩ - ſ i -	n e n ĕj	p ej ſ - i -	
Portuguese	ĩ - f ĩ - t i -	n e n ĕj	p ej ſ - i -	
Catalan		n e n -	p e ſ - - - -	
Walloon	ɛ - f ã - - - -	n i n i	p e ſ - - - -	p - ε h õ
Friulian				
Romanian				
	Bird-Avem	Bird-Aucellus	Bird-Passerem	Dog-Primary
Latin	a w e m	- a k - e l l u s	p a s s e r e m	k - a n e m
French		w a z - o - - - -		f j õ - - -
Spanish	a b e -		p a - x a r o -	k - a n - -
Italian		- u t ſ ε l l o -	p a s s e r o -	k - a n e -
PortugueseBrazil	a v i -		p a - s e r u -	k - ē - - -
Portuguese	a v i -		p a - s a r u -	k - ē - - -
Catalan	a w - -	- u s - e - A - - -		k - a - - -
Walloon		- u h - ε - - - -		f õ - ε - - -
Friulian		- u ſ j ε - 1 - -	p a - s a r - -	c - a n - -
Romanian			p a - s a r e -	k - ij n e -
	Louse-Primary	Leaf-Primary	Leaf-Frondea	Root-Primary
Latin	p - e: d u - k u l u sf	- o l i a	f r o n d e a	- r a: d - i: k e m
French	p - u - - - - - - -	f - œ j - -		
Spanish	p j o - - - x - - o - -	o x - a		- r a - - i θ - -
Italian	p - i d ſ k k - j o -	f - ſ A A a	f r o n d z - a	
PortugueseBrazil	p - i - o - - A u -	f - o A - a	f r ð - s - a	- x a - - i s - -
Portuguese	p - i - o - - A u -	f - o A - a	f r ð - s - a	- x e - - i ſ - -
Catalan	p - o - - - - - -	f - u A - e		ə r ε l - - - -
Walloon	p j u - - - - - -	f - ſ j - -		
Friulian	p - e d o: - - l i -	f w e - - e		- r a d r i s - -
Romanian	p - ə d u - k - j e -	f - ſ a - j e	f r u n z - ə	
	Root-Radicina	Rope-Primary	Rope-Restis	Skin-Primary
Latin	r a: d i: k i n a	f u: n - e m	r e s t - e m	
French	ʁ a - - s i n -			k w a - - n -
Spanish			r - i s t r a	
Italian		f u n - e -	r - ε s t - a	k - o t e n n a
PortugueseBrazil			ʁ - ε ſ ſ i	k - o ð i - - e
Portuguese			ʁ - e ſ t - i	k - o d i - - e
Catalan	r ε - - s ε n -			k - o - - n n e
Walloon			r j e s t - e	k - oj i - n -
Friulian	r ə d ə ſ i n ə	f u n j e -		
Romanian				

Appendix 13 - Concepts Used

	Skin-Pellis	Meat-Primary	Blood-Primary	Bone-Primary
Latin	p e l l e m	k a r n e m	s a n g ^w - i n e m	- o s s u m
French	p o - - -	ʃ ε k - -	s ă - - - -	- ɔ - s -
Spanish	p j e - l -	k a r n e -	s a n g - f e -	w e - s o -
Italian	p ε l l e -	k a r n e -	s a n g w e - -	- ɔ s s o -
PortugueseBrazil	p ε - l i -	k a s n i -	s ě g i - -	- o s s u -
Portuguese	p e - l i -	k a r n i -	s ě g i - -	- o s s u -
Catalan	p e - l -	k a r n -	s a ɲ - - -	- ɔ s -
Walloon	p ε - - -	ʃ a r - -	s ɔ g - - -	- ɔ h ε -
Friulian	p j ε l -	c a: r - -	s a n k - - -	w ε - s -
Romanian	p j e l e -	k a r n e -	s i n dʒ e - -	- o s -
	Egg-Primary	Horn-Primary	Horn-Cornua	Tail-Primary
Latin	- o: w u m	k - o r n u:	k - o r n u a	k a d a
French	- œ f - -	k - ɔ k - -	k - ɔ k n - -	k ø - -
Spanish	w e b o -	k w e r n o		k o l a
Italian	w ɔ v o -	k - ɔ r n o		k o d a
PortugueseBrazil	- o v u -	k - o k n u		k a d e
Portuguese	- o v u -	k - o r n u		k a d a
Catalan	- ɔ w - -	k - ɔ r n -		k u - a
Walloon	- u - -		k w ε - n - -	k ɔ w -
Friulian	- u: f - -		k w a r - - -	k ɔ d ε
Romanian	- o w - -	k - o r n -		c ɔ a d ə
	Hair-Primary	Hair-Capillus	Ear-Primary	Eye-Primary
Latin	p i l u s	k a p i l l u s	a r i k u l a	- o k u l u s
French	p w a l - -	ʃ ə v ə - - -	ɔ k ej - - -	- œ - j - - -
Spanish	p e l o -	k a b e - j o -	o r e - x - - a	- o - x - o - -
Italian	p e l o -	k a p e l l o -	o r e k k - j a	- ɔ k k - j o -
PortugueseBrazil	p e l u -	k a b e - l u -	o r e - - ʌ a	- o - - ʌ u -
Portuguese	p i l u -	k ə β e - l u -	o r a j - - ʌ a	- o - - ʌ u -
Catalan	p ε l - -	k ə b ε - ʌ - -	u r ε - - ʌ ə	- u - j - - -
Walloon		dʒ - v ε - - -	ɔ r ej - - -	- u - j - - -
Friulian	p e: l - -	c a v e l - - -	o r e: - - l e	v o - l i - -
Romanian	p ə r - -		u r e - - k - - e	- o - k - - - -
	Nose-Primary	Nose-Nares	Mouth-Primary	Mouth-Gula
Latin	n a: s u s		b u k k a	g u l a
French	n e - -		b u - f -	g œ l -
Spanish	n a s o -	n a r i θ -	b o - k a	g o l a
Italian	n a s o -	n a r i ſ e	b o k k a	g o l a
PortugueseBrazil		n a r i s -	b o - k a	
Portuguese		n e r i ſ -	b o - k a	
Catalan	n a s - -	n a: r i s -	b o - k ə	g o l ə
Walloon	n e - -		b ɔ - k -	g œ j -
Friulian	n a: s - -		b ɔ - c ε	g ɔ l e
Romanian	n a s - -		b u - k ə	g u r ə

Appendix 13 - Concepts Used

	Tooth-Primary	Foot-Primary	Leg-Gamba	Leg-Perna
Latin	d - e n t e m	p - e - d e m	g a m b a	p - e r n a
French	d - ã - - -	p j e - - -	z ã - b -	
Spanish	d j e n t e -	p j e - - -		p j e r n a
Italian	d - e n t e -	p j ε - d e -	g a m b a	p - ε r n o
PortugueseBrazil	d - ē - ſ i -	p - ε - - -		p - ε ſ n a
Portuguese	d - ē - t i -	p - ε - - -		p - ε r n a
Catalan		p - ε w - -	k a m b a	p - ε r n a
Walloon	d - ě - - - -	p - i - - -	dʒ ã - p -	
Friulian	d - i n t - -	p - i: - t - -	ʃ a m b e	
Romanian	d - i n t e -	p i e - z - -	g a m b a	
	Leg-Petiolus	Knee-Genuculum	Hand-Primary	Wing-Primary
Latin	p e - t i o l u s	g - e n i - k u l u n m a n u m		a: l a
French		3 - a n u - - -	m ũ - - -	e l -
Spanish	p e - θ i o l o -	- - i n o - x o - -	m a n o -	a l a
Italian	p i t ſ - o l o -	dʒ - i n o k k - j o -	m a n o -	a l a
PortugueseBrazil		3 u e - - - -	λ u m ũ - - -	a - -
Portuguese			3 w e - - - -	a - -
Catalan		3 - a n o - - -	λ - - -	a l a
Walloon		j n - - j o - - -	m ũ - - -	e l -
Friulian	p ε - k - o l - -	dʒ - e n o - - -	l i m a n - -	a l e
Romanian	p i - ſ j o r - -	dʒ - e n u n k - -	m i n a - -	
	Neck-Primary	Back-Primary	Back-Spatula	Breast-Primary
Latin	k - o l l u m	d - o r s u m	- s p a t u l a	s i n u s
French	k - u - - -	d - o - - -	e - p o - - l -	s ũ - - -
Spanish	k w e - j o -		e s p a l - d a	s e n o -
Italian	k - o l l o -	d - o s s o -	- s p a l - l a	s e n o -
PortugueseBrazil	k - o - l u -		i ſ p a d w - e	s e j u -
Portuguese	k - o - l u -		i ſ p a d w - e	s e j u -
Catalan	k - o - λ - -	d - o - s - -	ə s p a λ - λ a	s i - - -
Walloon	k - o - - - -	d - o - - -	- s p a - l -	
Friulian	k w ε - l - -	d w ε - s - -	- s p a - l e	s e n - -
Romanian		d - o - - -	- s p a t - e	s a n - -
	Breast-Pectus	Breast-Pectorina	Liver-Primary	Star-Primary
Latin	p - e k t u s		f - i: k a: t u m	- s t - e: l l a
French	p - i - - -	p w a t ſ i n	f w a - - -	e - t w a - l -
Spanish	p - e - ſ o -		- i g a d o -	e s t r e - j a
Italian	p - ε t t o -		f - e g a t o -	- s t - e l l a
PortugueseBrazil	p - ej - t u -		f - i g e d u -	i s t r e - l a
Portuguese	p - ej - t u -		f - i y e ð u -	i ſ t r e - l e
Catalan	p - i - t - -		f - e dʒ a - -	ə s t - e - l -
Walloon		p w ε t r i n	f - œ - t - -	- s t - œ - l -
Friulian	p - ε - t - -		f - i - a: t - -	- s t - ε - l e
Romanian	p j e p t - -		f - i k a t - -	- s t - e a - -

Appendix 13 - Concepts Used

	Water-Primary	Rain-Primary	Salt-Primary	Stone-Primary
Latin	a - k ^w - a	p l u - w i a	s a l e m	s a k s u m
French	o - - - -	p l q - - i -	s ε l - -	
Spanish	a - g w a	j - u - b j a	s a l - -	
Italian	a k k w a	p j o d ð z - a	s a l e -	s a s s o -
PortugueseBrazil	a - g w a	ʃ - u - v - a	s a w - -	s ej - ſ u -
Portuguese	a - g w a	ʃ - u - v - a	s a l - -	s ej - ſ u -
Catalan	aj - y w e	p l u - z - e	s a l - -	
Walloon	ɛ - - w -	p l ε - f - -	s e - - -	
Friulian	a - g - e	p l o - - j e	s a: l - -	s a - s - -
Romanian	a - p - ə	p l ə - - j e	s a r e -	
	Stone-Petra	Sand-Primary	Sand-Sabulum	Sand-Sabulo
Latin	p - e t r a	h a r e n a	s a b u l u m	s a - b u l o: n e m
French	p j ε - ɔ -	- a r e n a		s a - b - l - - - -
Spanish	p j e d r a	- a r e n a		
Italian	p j ε t r a	- - r e n a		s a b b - j o n e -
PortugueseBrazil	p - e d r a	- a r e j - a	s aj β - r u -	
Portuguese	p - ε ð r a	- a r ə j - a	s aj β - r u -	
Catalan	p - e ð r ə	- ə r e n ə	s o - - r ə -	
Walloon	p - i - r -	- a r ε n -		s a - v - j ɔ - - -
Friulian	p j e - r e	- - r ε n e		s a - v a l ɔ n - -
Romanian	p j a t r ə	- a r i n ə		
	Wind-Primary	Smoke-Primary	Fire-Focus	Ash-Primary
Latin	w - e n t u m	f u: m u s	f - o k u m	k i n e - r e m
French	v - ã - - - -		f - ø - - -	s ã - - d ɔ - -
Spanish	b j e n t o -	- u m o -	f w e g o -	
Italian	v - ε n t o -	f u m o -	f w ɔ k o -	ſ e n e - r e -
PortugueseBrazil	v - ē - t u -	f u m u -	f - o g u -	
Portuguese	v - ē - t u -	f u m u -	f - o y u -	
Catalan	b - e n - - -	f u m - -	f - o k - -	s ε n - d r ə -
Walloon	v - õ - - - -		f - œ - - -	s õ - - t - -
Friulian	v - i n t - -	f u m - -	f - u: k - -	
Romanian	v - i n t - -	f u m - -	f - o k - -	
	Ash-Cinisia	Night-Primary	Name-Nomen	Name-Nominem
Latin		n - o c t e m	n o: m e n	n o: m i n - e m
French		n ɥ i - - - -	n ɔ - - -	
Spanish	θ e n i θ a	n - o - ſ e -		n o m - b r e -
Italian		n - o t t e -	n o: m e -	
PortugueseBrazil	s ī - - z e	n - oj - t i -	n o m i -	
Portuguese	s ī - - z e	n - oj - t i -	n o m i -	
Catalan		n - i - t - -	n ɔ m -	
Walloon		n - y - t - -	n ɔ - -	
Friulian	tʃ i n i s ε	n - o - t - -	n ɔ n - -	
Romanian	tʃ e n u ſ ə	n - ə - p t e -	n u m e -	

Appendix 13 - Concepts Used

	Tongue-Primary	I-Primary	YouPlural-Primary	YouSingular-Primary
Latin	l i n g ^w - a	- e g o:	w o: - s	t u:
French	l ā - g - -	ʒ ə - -	v u - -	t y
Spanish	l e n g w a	j - - o	b o - s	t u
Italian	l i n g w a	- i - o	v o i -	t u
PortugueseBrazil	l ī - g w a	- e - w	v oj s -	t u
Portuguese	l ī - g w a	- e - w	v o - ſ	t u
Catalan	λ ε η g w a	ʒ - - o	b u - s	t u
Walloon	l ē - - v -	dʒ i - -	v o - -	t i
Friulian	l ε n g - e	j - - o	v o: - -	t u
Romanian	l i m b - ə	j e - w	v oj - -	t u
	YouSingular-VostramMercedem	ToDrink-Primary	ToEat-Primary	ToEat-Manducare
Latin		b - i b e r e	k o m e d e r e	m a n d u k a: r e
French		b w a - - ɔ -		m ā - ʒ - - e - -
Spanish	- u s t e d	b - e b e r -	k o m e - - - f -	
Italian		b - e - - r e		
PortugueseBrazil	v o s - e -	b - e b e ɔ -	k o m e - - - - -	
Portuguese	v ɔ s - e -	b - i β e r -	k u m - - e f -	
Catalan	v o s t e -	b - ε w - f ə		m ə p ʒ - - a - -
Walloon		b - ø - - ɔ -		m a p n - - i - -
Friulian		b - e v i - -		m a n f - - a: - -
Romanian		b - ea - - -		m i n - - k a - -
	ToBite-Primary	ToBite-Morsicare	ToSuck-Primary	ToSuck-Sugere
Latin	m - o r d e: r e	m o r s i k a: r e		s u: - g e r e
French	m - o ɔ d - ɔ -		s y - s - e - -	
Spanish	m - o r d e r -	m o - s - k a r -		
Italian	m - o r d e r e	m o r s i k a r e	s u k k j a r e	s u d dʒ e r e
PortugueseBrazil	m - o ɔ d e ɔ -	m u - s ə g a - -	ʃ u - ʃ a ɔ - -	s u - g a ɔ -
Portuguese	m - u r ð e r -	m u - s ə g a r -	ʃ u - ʃ a r - -	s u - g a f -
Catalan		m u - s ə y a - -		
Walloon			s y - s - i - -	
Friulian	m w a r d i - -	m o r s e a: - - -	c u - c - a: - -	
Romanian		m u r s e k a - -		s u - dʒ - e -
	ToBlow-Primary	ToLaugh-Primary	ToSee-Primary	ToHear-Primary
Latin	s u f f l a: r e	r i - d e: r e	w - i d e: r e	a - d i: r e
				u
French	s u - f l e - -	β i - - - ɔ -	v w a - - ɔ -	u - - i ɔ -
Spanish		r e - - i f -	b - - e f -	o - - i f -
Italian	s o f f j a r e	r i - d e r e	v - e d e r e	u - d i r e
PortugueseBrazil		β i - - - ɔ -	v - - e ɔ -	o w v i ɔ -
Portuguese		β i - - - f -	v - - e f -	o w v i f -
Catalan		r i w - - f ə	b - ε w - f ə	u - - i - -
Walloon	s o - f l e - -	r i - - - r -	v - ej - - -	ɔj - i - -
Friulian	s o - f l a: - -	r i - d i - -	v j o d i - -	u l d i: - -
Romanian	s u - f l a - -	r i - d e - -	v - e d ə a - -	a - z i - -
				u

Appendix 13 - Concepts Used

	ToKnow-Primary	ToKnow-Sapere	ToKnow-Cognoscere	ToHit-Primary
Latin	s k i r e	s a p - e r e	k o g n o : s k e r e	p u l s a: r e
French		s a v w a: s -	k o - n ε - t - s -	p u - s e - -
Spanish		s a b - e r -	k o - n o θ - e r -	p u - x a: r -
Italian		s a p - e r e	k o - n o ſ ſ e r e	
PortugueseBrazil		s a b - e s -	k o - p e s - e s -	p u - ſ a: s -
Portuguese		s e b - e r -	k u - p i s - e r -	p u - ſ a: r -
Catalan		s e β - ε - -	k u - n ε ſ - ε - -	
Walloon		s a v - ø r -	k i - n o h - - -	
Friulian		s a v - e: - -	k o - n o s - i - -	p u l s a: - -
Romanian	ʃ t i - - -		k u - n o ſ t e - - -	p u l s a - - -
	ToCome-Primary	ToStand-Primary	ToStand-Levare	ToStand-Altiare
Latin	w e n i: r e	- s t a: r e	l e v a: r e	
French	v e n i: s -	ε - t - s -	l a v e - -	o - s e - -
Spanish	b e n i: r -	e s t a: r -	j e b a: r -	a l θ a: r -
Italian	v e n i: r e	- s t a: r e	l e v a: r e	a l t s a: r e
PortugueseBrazil	v - - i s -	i ſ t a: r -	l e v a: s -	a ſ s a: - -
Portuguese	v - - i r -	i ſ t a: r -	l i v a: r -	a ſ s a: r -
Catalan	b e n i: - -	ə s t a: - -	ʌ a b a: - -	ə l s a: - -
Walloon	v i n i: - -		l ε v e - -	o - s i: - -
Friulian	v i n i: - -	- s t a: - -	l e v a: - -	a l ſ a: - -
Romanian	v e n i: - -	- s t a: - -	l u a: - -	
	ToFall-Primary	ToGive-Primary	ToGive-Donare	ToTie-Primary
Latin	k - a d e r e	d a r e	d o n a: r e	l i g a: r e
French	ʃ w a - - s -	d o n e -	d o n a: r -	l j - e - -
Spanish	k - a - e r -	d a: r -	d o n a: r -	
Italian	k - a d e r e	d a: r e	d o n a: r e	l e g a: r e
PortugueseBrazil	k - e - i r -	d a: s -	d o - a - -	
Portuguese	k - e - i r -	d a: r -	d u - a: r -	
Catalan	k - a w - r ə	d a: r -	d u n a: - -	ʌ i y a: - -
Walloon	tʃ - ε - - r -		d i n e - -	l oj i - - -
Friulian	c - a d e - -	d a: - -	d o n a: - -	l e - a: - -
Romanian	k - ə d e a: - -	d a: - -		l e g a: - -
	ToTie-Aptare	ToSay-Primary	ToSay-Exponere	ToBurn-Cremare
Latin	a p t a: r e	d i: k e r e	e k s p o: n e r e	k r e m a: r e
French		d i - - s -		
Spanish	a - t a: r -	d e θ i: r -		k - e m a: r -
Italian		d i - - r e	e - s p o: r - r e	
PortugueseBrazil	e - t a: r -	d i z e: r -		k - ej m a: r e
Portuguese	e - t a: r -	d i z e: r -		k - ej m a: s e
Catalan		d i - - -		k r ə m a - -
Walloon		d i - - r -		
Friulian		d i: - - -		
Romanian	z i ſ e - -		- - s p u n e - -	
	ToBurn-Flammare	ToBurn-Ardere	ToBurn-Incendere	ToBurn-Ustulare
Latin	f l a m m a: r e	a r d e: r e	i n k e n d - e r e	u s t u l a: r e
French	f l a - m e - -	a ſ d - ſ -		
Spanish		a ſ d e: r -	e n θ e n d - e r -	
Italian		a r d e: r e	i n ſ e n d - e r e	
PortugueseBrazil		a ſ d e ſ -	ĩ - s e n d ſ i a: r -	
Portuguese		a r d e: r -	ĩ - s ē - d j a: r -	
Catalan	f l a - m a: - -		ə n s e n d - - ſ ə	
Walloon		a r d i: - -		
Friulian		a r d e: - -		
Romanian			i n ſ i n d ʒ e: - -	u s t u r a: - -

Appendix 13 - Concepts Used

	Big-Grandem	Big-Majorem	Long-Longum	Long-Largum
Latin	g r a n d e m	m a j j o: r e m	l - o n g u s	l a r g u s
French	g ʁ ɑ̃ d		l - ɔ̃ - - -	l a ʁ 3 - -
Spanish	g r a n d e -		l w e n g o -	l a r g o -
Italian	g r a n d e -		l - u n g o -	l a r g o -
PortugueseBrazil	g r ē - ðʒ i -		l - õ - g u -	l a ʁ g u -
Portuguese	g r ē - d i -		l - õ - g u -	l a ʁ g u -
Catalan	g r a n - - -		ʎ - o ɲ - - -	ʎ a ɾ k - -
Walloon	g r ã - - -		l - ɔ̃ - - -	l a - ðʒ - -
Friulian	g r a n t - - -		l - u n k - - -	l a r k - -
Romanian		m a - - - - r e	l - u n g - - -	l a r g - - -
	Wide-Primary	Wide-Amplum	Thick-Primary	Thick-Spissum
Latin	l a: t u s	a m p l u s	k r a s s u s	- s p i s s u s
French	l e - - -	ã - p l - -	g ʁ a - - -	e - p ε - - -
Spanish		a n ſ - o -	g r a - s o -	e s p e s o - - -
Italian	l a t o -	a m p j o -	g r a s s o -	- s p e s s o -
PortugueseBrazil	l a t u -	ẽ - ſ - u -		i s p ε - s u -
Portuguese	l a t u -	ẽ - ſ - u -	g r a - ſ u -	i ſ p e - s u -
Catalan		a m p l ə -	g r a - s - -	ə s p ε - s - -
Walloon		ã - p - - -	k r a - - -	- s p ε - - -
Friulian			g r a s - - -	
Romanian	l a t - - -		g r a s - - -	
	Thick-Gurdum	Thick-Grossus	Heavy-Primary	Heavy-Lurdus
Latin	g u r d u s	g r o - s s u s	g r a - - w i s	l u r d u s
French		g ʁ o - - - -	g ʁ i j ε f - -	l u ʁ - - -
Spanish	g o r d o -		g r a - - b e -	
Italian		g r ɔ - s s o -	g r ε - - v e -	l o r d o -
PortugueseBrazil		g r o - - s u -	g r a - - v i -	l e r d o -
Portuguese		g r o - - s u -	g r a - - v i -	l e r d o -
Catalan		g r ɔ - - s - -	g r e - - w - -	
Walloon		g r ɔ - - - -	g r a - - v - -	l u r - - -
Friulian		g r w ε s - - -	g r ε - - v i -	
Romanian		g r o - s - - -	g r e - - w - -	
	Small-Primary	Small-Pitulus	New-Primary	New-Novellus
Latin	p i t t i t u s	p i t u l u s	n - o w u s	n o w e l l u s
French	p ə - t i - - -		n - œ f - -	n u v o - - -
Spanish			n w e b o -	n o β i - j o -
Italian			n w ɔ v o -	n o v ε l l o -
PortugueseBrazil			n - o v u -	
Portuguese			n - o v u -	
Catalan	p ə - t i t - - -		n - ɔ w - -	n u β e - λ o -
Walloon	p i - t i - - -	p i ſ u l - - -	n - u - -	n ɔ v e: - - -
Friulian			n - u: f - -	n o v ε l - - -
Romanian			n - o w - -	
	New-Novella	Old-Primary	Good-Primary	Far-Primary
Latin	n o w e l l a	w - e t u l u s	b - o n u s	
French	n u v ε - l -	v j ø - - - -	b - ɔ̃ - - -	l w ɛ - t ɛ - -
Spanish	n o β i - j a	b j e x o - - -	b w e n o -	
Italian	n o v ε l l a	v - ε k - k j o	b w ɔ n o -	l - o n t a n o
PortugueseBrazil		v - ej - - λ u -	b - õ - - -	
Portuguese		v - e - - λ u -	b - õ - - -	
Catalan	n u β e - λ a	v - e - - λ - -	b - ɔ n - -	λ - u n t a - -
Walloon	n ɔ v ε - l -	v i - - - -	b - ɔ n - -	
Friulian		v j e - - - i -	b - ɔ n - -	
Romanian	n u j - - - a	v - e k - - -	b - u n - -	l - o n t a n -

Appendix 13 - Concepts Used

	Red-Primary	Red-Vermiculus	Red-Rubeus	Black-Primary
Latin	r u s s u s	v e r m i k u l u s	r u b e u s	n i g r u m
French	v u - - - -	v ε v m ej - - - -	v u - 3 - - -	n w a - v - -
Spanish	r o - x o -	b e r m e x o - - -	r u - b j o -	n e y r o - -
Italian	r o s s o -	v e v m e - - - -	r o b b j o -	n e - r o - -
PortugueseBrazil	v o - ſ v -	v i r m e - - - -	r u - b e o -	n e g r u - -
Portuguese	v o - ſ u -	v i r m ej - - - -	r u - b e o -	n e g r u - -
Catalan	r o - s - -	b ā r m ē - - - -	r u - dʒ e - -	n e y r ē - -
Walloon	r o dʒ - - -	v e v m e - - - -	r o tʃ - - - -	n ø - r - -
Friulian	r o - s - -	v i r m ej - - - -	r oj - b - - -	n e - r i - -
Romanian	r o - ſ u -	v ī r m ē - - - -	r oj - b - - -	n e g r u - -
	Black-Pretto	One-Primary	Who-Qui	Who-Quem
Latin		u: n u s	k ^w - i s	k ^w - e m -
French		œ - - - -	k - i -	
Spanish	p r j e t o	u n o -		k j e n -
Italian		u n o -	k - i -	
PortugueseBrazil	p r - e t u	ũ - - -		k - ēj - -
Portuguese	p r - e t u	ũ - - -		k - ēj - -
Catalan		u n - -	k - i -	
Walloon		ɔ - - -	k - i -	
Friulian		u n - -	k w i -	
Romanian		u n u -		tʃ - i n e
	What-Primary	Not-Primary	Not-Nec	In-In
Latin	k ^w - i d	n o: n	n e k	i n
French	k w a -	n ɔ -	n i -	ã -
Spanish	k - e -	n o -	n i -	e n
Italian	k - e -	n o n	n e -	i n
PortugueseBrazil	k - i -	n ē -	n ēj -	ēj -
Portuguese	k - i -	n ē -	n ēj -	ēj -
Catalan	k - ε -	n o -	n i -	ə n
Walloon	k w ε -	n ɔ -	n i -	ɛ n
Friulian	tʃ - e -	n o -		
Romanian	tʃ - e -	n u -		i n
	In-Deintus			
Latin	d e i n t u s			
French	d ā - - - -			
Spanish				
Italian				
PortugueseBrazil				
Portuguese				
Catalan	d i - n - - s			
Walloon				
Friulian				
Romanian				