Understanding Language Evolution Using an Event-Based Model

Appendices

1. Character Assignments
2. Partition Assignments
3. Concepts Used
4. Results

Appendix 1 - Character Assignments

Each segment gets a different number

1 e 2 g 3 oː 4 ʒ 5 ə 6 ʝ 7 o 8 i 9 w 10 ɔ 11 ʤ 12 ɪ 13 j 14 n

15 s 16 u 17 ʃ 18 oj 19 v 20 b 21 t 22 uː 23 y 24 d 25 f 26 eː

27 m 28 a 29 ɾ 30 ɐ 31 œ 32 ɛ 33 l 34 r 35 x 36 ʎ 37 ʁ 38 iː 39 ɲ

40 o̯a 41 h 42 ẽj̃ 43 ɔ̃ 44 ɑ̃ 45 ĩ 46 ɐ̃ 47 ʧ 48 ɨ 49 p 50 z 51 ð 52 k

53 ʦ 54 aː 55 ɐ̃j̃ 56 ʁ 57 aj 58 ɛː 59 θ 60 ej 61 ɐj 62 õ 63 ɛ̃ 64 ɐ̃w̃

65 ẽ 66 c 67 ɨj 68 β 69 ɬ 70 ɥ 71 ɨw 72 ʣ 73 øː 74 ɔː 75 gʷ 76 ŋ

77 õː 78 ç 79 au̯ 80 ø 81 e̯a 82 kʲ 83 ã 84 ɟ 85 ɑ 86 ɣ 87 ɛj 88 kʷ

89 ẽː 90 ẽu̯ 91 ũ 92 ɻ 93 j̃ 94 œ̃ 95 ʊ

Model: “Linguistically Informed”

1)	e	e eː
2)	i	i iː
3)	a	a aː
4)	u	u uː
5)	o	oː o
6)	ɔ	ɔ ɔː
7)	ɛ	ɛ ɛː
8)	ø	øː ø
9)	Nasal Vowel	ẽj̃ ɔ̃ ɑ̃ ĩ ɐ̃ ɐ̃j̃ õ ɛ̃ ɐ̃w̃ ẽ õː ã ẽː ẽu̯ ũ œ̃
10)	Vowel	ə ɪ oj y ɐ œ o̯a ɨ aj ej ɐj ɨj ɨw au̯ e̯a ɑ ɛj ʊ
11)	Nasal Consonant	n m ɲ ŋ j̃
12)	Non Sylabic Sonorant	w j l r
13)	Consonant	ɡ ʒ ʝ ʤ s ʃ v b t d f ɾ x ʎ ʁ h ʧ p z ð k ʦ ʁ θ c β ɬ ɥ ʣ g^w ç k^j ɟ ɣ k^w ɻ

Appendix 3 - Concepts Used

	I	We	YouPlural	YouSingular
Latin	- e g oː	n oː - s -	w oː - s	t uː
French	ʒ ə - -	n u - - -	v u - -	t y
Spanish	ʝ - - o	n o - s -	b o - s	t u
Italian	i - - o	n oː i - -	v oː i -	t u
PortugueseBrazil	- e - w	n ɔ j - s	v ɔ j s	t u
Portuguese	- e - w	n ɔ - ʃ -	v o - ʃ	t u
Catalan	ʒ - - ɔ		b u - s	t u
Walloon	ʤ ɪ - -	n o - - -	v o - s	t y
Friulian	j - - o	n oː - - -	v oː - -	t u
Romanian	j e - w	n oj - - -	v oj - -	t u

	YouSingular-VostramMercedem	Woman	Woman-Mulier	Woman-Domina
Latin		f eː - m i - n - a	m u l i e r e m	d o m i n a
French		f a - m - - - - -		d a m - - -
Spanish	- u s t e d	- e - m - b ɾ - a	m u x - e ɾ - -	d o - - ɲ a
Italian		f e m m i - n - a	m o ʎ ʎ e - - -	d ɔ n - n a
PortugueseBrazil	v o s - e -	f e - m e - - - ɐ	m u ʎ - e ʁ - -	d o - - n ɐ
Portuguese	v ɔ s - e -	f e - m j - - - ɐ	m u ʎ - e ɾ - -	d o - - n ɐ
Catalan	v o s t e -	f e - m - b ɾ - a	m u ʎ - e - - -	d ɔ - - n ə
Walloon		f œ - m - - - - -		d œ m - - -
Friulian		f ɛ - m i - n - ɛ	m u - - iː r - -	d ɔ - - n e
Romanian		f e - m e - - j e	m u - j e r e -	d o̯a m - n ə

	ManHumanBeing	ManHumanBeing-Homo	Child	Child-Ninnus
Latin	h o m i - n e m	h - o m oː	i n f a n t e m	
French	- ɔ m - - - - - -	- - ɔ̃ - -	ɑ̃ - f ɑ̃ - - - -	
Spanish	o m - b ɾ e - -		i n f a n t e -	n i ɲ o
Italian		- w ɔ m o	- - f a n t e -	n i n o
PortugueseBrazil	o m ẽ ʃ - - - - -		ĩ - f ɐ̃ - ʧ i -	n e n ẽ ʃ
Portuguese	ɔ m ẽ ʃ - - - - -		ĩ - f ɐ̃ - t ɨ -	n e n ẽ ʃ
Catalan	- ɔ m ə - - - -			n e n -
Walloon	- ɔ m - - - - -		ɛ - f ɑ̃ - - - -	
Friulian	- ɔ m - - - - -			
Romanian	- o m - - - - -			

	Wife	Wife-Mulier	Husband	Husband-Sponsus
Latin	- s p o n s a	m u l i e r -	m a r iː t u s	- s p o n s u s
French	e - p u - z -		m a ʁ i - - -	e - p u - - - -
Spanish	e s p o - s a	m u x - e ɾ -	m a ɾ i ð o -	e s p o - s o -
Italian	- s p ɔ - z a	m o ʎ ʎ e - -	m a r i t o -	- s p ɔ - z o -
PortugueseBrazil	i s p o - z a	m u ʎ - e ʁ -	m a ɾ i d u -	i s p o - z u -
Portuguese	ɨ ʃ p o - z ɐ	m u ʎ - e ɾ -	m ɐ ɾ i ð u -	ɨ ʃ p o - z u -
Catalan	ə s p ɔ - z ə	m u ʎ - e - -	m a ɾ i t - -	ə s p ɔ - s - -
Walloon				
Friulian		m u - iː r - -	m a r iː t - -	- s p oː - s - -
Romanian		m u - j e r e	m ə r i t - -	

Appendix 3 - Concepts Used

	Husband-Socius	Mother	Father	Father-Tata
Latin	s o k i u s	m aː t r e m	p a t r e	t a t a
French		m e - ʁ - -	p e - ʁ -	
Spanish		m a ð ɾ e -	p a ð ɾ e	t a t a
Italian	s ɔ ʧ - o -	m aː d r e -	p aː d r e	t a t a
PortugueseBrazil		m ɐ̃j - - - -	p aj - - -	t a t a
Portuguese		m ɐ̃j - - - -	p aj - - -	t a t a
Catalan		m a - ɾ ə -	p a - ɾ ə	
Walloon		m e - ʁ - -	p ɛː - r -	
Friulian		m a - r i -	p a - r i	
Romanian	s o ʦ - - -			t a t ə

	Animal	Animal-Bestia	Fish-Piskem	Fish-Pescion
Latin	a n i m a l i a	b eː s t i a	p i s k e m	
French	o - - m a - j -			p w a s õ
Spanish	a l i m a ɲ - a		p e θ - - -	
Italian		b i ʃ ʃ - a	p e ʃ ʃ e -	
PortugueseBrazil		b i - ʃ - ɐ	p ej ʃ - i -	
Portuguese		b i - ʃ - ɐ	p ɐj ʃ - ɨ -	
Catalan			p e ʃ - - -	
Walloon				p - ɛ h õ
Friulian	n e m aː l - - -	b i s - - -	p ɛ s - - -	
Romanian	- n ə m a - j e		p e ʃ t e -	

	Bird-Avem	Bird-Avicellum	Bird-Passerem	Dog
Latin	a w e m	- a w i - k - e l l ʊ	p a s s e r e m	k - a n e m
French		w a - - - z - o - - -		ʃ j ɛ̃ - - -
Spanish	a b e -		p a - x a ɾ o -	k - a n - -
Italian		- - u - t ʧ - ɛ l l o	p a s s e r o -	k - a n e -
PortugueseBrazil	a v i -		p a - s ɐ ɾ u -	k - ɐ̃ - - -
				w̃
Portuguese	a v ɨ -		p a - s ɐ ɾ u -	k - ɐ̃ - - -
				w̃
Catalan	a w - -	- - u - - s - e - ʎ -		k - a - - -
Walloon		- - uː - - h - ɛː - - -		ʧ - ẽ - - -
Friulian		- - u - - ʧ j ɛ - l -		c - a n - -
Romanian			p a - s ə ɾ e -	k - ɨj n e -

	Louse	Snake	Worm	Tree
Latin	p - e d u - k l u s	s - e r p - e n t e	nw e r m e m	a r b o r e m
French	p - u - - - - - - -	s - e ʁ p - ɑ̃ - - -	v e ʁ - - -	a ʁ b - ʁ - -
Spanish	p j o - - x - o - -	s - e ɾ p j e n t e	b e ɾ m e -	a ɾ β o l - -
Italian	p - i d ɔ k k j o -	s - e r p - e n t e	v e r m e -	a l b e ɾ o -
PortugueseBrazil	p - i - o - ʎ u - -	s - e ʁ p - ẽ - ʧ i	v e ʁ m i -	a ʁ v o ɾ i -
Portuguese	p - i - o - ʎ u - -	s - ɨ ɾ p - ẽ - t ɨ	v e ɾ m ɨ -	a ɾ v u ɾ ɨ -
Catalan	p - o - - - ʎ - - -	s - ə r p - e n - -	v ɛ ɾ m - -	a - b - ɾ ə -
Walloon	p j u - - - - - - -	s j ɛ ʁ p - ẽ - - -	v j ɛ ʁ - -	oː - b - - - -
Friulian	p - e d o - l i - -	s - a r p - i n t -	v j ɛ r - -	a r b u l - -
Romanian	p - ə d u - k j e -	ʃ - a ɾ p - e - - -	v j e r m e	a r b o r e -

Appendix 3 - Concepts Used

	Forest	Stick	Fruit	Seed
Latin	s i l w a	p aː l u s	f r uː - k t u s	s eː m e n
French		p a l - -	f ʁ ɥ i - - - -	
Spanish	s e l b a	p a l o -	f ɾ u - - t o -	
Italian	s e l v a	p a l o -	f r u - t t o -	s e m e -
PortugueseBrazil	s ɛ w v a	p a w - -	f ɾ u - - t ɐ -	
Portuguese	s ɛ ɬ v ɐ	p a w - -	f ɾ u - - t ɐ -	
Catalan	s e l b a	p a l - -	f ɾ u j - t - -	
Walloon			f ʁ y - - - - -	
Friulian	s ɛ l v e	p aː l - -	f r u - - t - -	
Romanian		p a ɾ - -	f r u - k t - -	

	Seed-Sementis	Seed-Granum	Leaf	Leaf-Frondea
Latin	s e m - e n t i s	ɡ r aː n u m	f - o l i a	f r o n d e a
French	s ə m - ɑ̃ - - - s	ɡ ʁ ɛ n - -	f - œ j - -	
Spanish	s i m j e n t e -	ɡ ɾ a n o -	- - o x - a	
Italian	s e m - e n t e -	ɡ r a n o -	f - ɔ ʎ ʎ a	f r o n ʣ - a
PortugueseBrazil	s e m - ẽ - ʧ i -	ɡ ɾ ẽ - - - w̃	f - o ʎ - ɐ	f ɾ õ s - ɐ -
Portuguese	s ɨ m - ẽ - t ɨ -	ɡ ɾ ẽ - - - w̃	f - o ʎ - ɐ	f ɾ õ s - ɐ -
Catalan	s ə m - e n - - -	ɡ ɾ a - - -	f - u ʎ - ə	
Walloon	s i m - ẽ - s - -	ɡ r i n - -	f - ɔ j - -	
Friulian	s e m - ɛ n ʧ ɛ -	ɡ r a n - -	f w e - - e	
Romanian	s ə m - ɨ n ʧ ə -	ɡ r ɨ - - - w	f o̯a - j e -	f ɾ u n z - ə

	Root	Root-Radix	Root-Radicina	BarkOfATree
Latin	- r aː d iː k e m	r aː d iː k e	r aː d iː k iː n a	k o r t i k e m
French		ʁ a d i - -	ʁ a - - s i n -	
Spanish	- r a - i θ - -			
Italian		r a d iː ʧ e		k o r t i ʧ e -
PortugueseBrazil	- ʁ a - i s - -			k ɔ ʁ ʧ i s i -
Portuguese	- ʁ ɐ - i ʃ - -			k ɔ ɾ t i s ɨ -
Catalan	ə r ɛ - l - - -			
Walloon			ʁ ɛ - - s ɛ n -	
Friulian				
Romanian			r ə d ə ʧ i n ə	

	BarkOfATree-Corticea	BarkOfATree-Skortea	Flower	Grass
Latin	k o r t i k e a	- s k - o r t e a	f l oː r e m	- h e r b a
French		e - k - o ʁ s - -	f l œ ʁ - - -	- - ɛ ʁ b -
Spanish	k o ɾ t e θ - a		f l o ɾ - -	ʝ - e ɾ b a
Italian	k o r t e t ʧ a	- s k - ɔ r ʦ - a	f j oː ɾ e -	- - ɛ r b a
PortugueseBrazil	k o ʁ ʧ i s ɐ -		f l o ʁ - -	- - e ʁ v ɐ
Portuguese	k u ɾ t i s ɐ -		f l o ɾ - -	- - ɛ ɾ v ɐ
Catalan		ə s k - ɔ r s - ə	f l ɔ - - -	- - e r b ə
Walloon		- s k w a s - - -	f l øː ʁ - -	j - ɛ - p -
Friulian		- s k w a r ʦ - e	f l oː r - -	j - a r b e
Romanian		- s k - o̯a ɾ ʦ - ə	f l o̯a ɾ e -	j - a ɾ b ə

Appendix 3 - Concepts Used

	Grass-Gramen	Rope	Rope-Restis	Skin
Latin	ɡ r aː m e n	f uː n - e m	r e s t e m	
French	ɡ ʁ a m ɛ n			k w a - - - n -
Spanish	ɡ ɾ a m a -		ɾ i s t a -	
Italian		f u n - e -	r ɛ s t a -	k - o t e n n a
PortugueseBrazil	ɡ ɾ ɐ̃ m ɐ -		ʁ ɛ ʃ ʧ i -	k - o ʤ i - - ɐ
Portuguese	ɡ ɾ ɐ m ɐ -		ʁ e ʃ t ɨ -	k - o d i - - ɐ
Catalan	ɡ ɾ a m - -			k - o - - n n ə
Walloon				
Friulian				
Romanian		f u n j e -		

	Skin-Pellis	Meat	Meat-Vivenda	Blood
Latin	p - e l l e m	k a r n e m	w iː w - e n d a	s a n gʷ - i n e m
French	p - o - - - -	ʃ ɛ ʁ - - -	v j - - ɑ̃ - d -	s ɑ̃ - - - - - - -
Spanish	p j e l - - -	k a ɾ n e -	b i b j e n d a	s a ŋ ɡ - ɾ e - -
Italian	p - e l l e -	k a r n e -	v i v - a n d a	s a n ɡ w e - - -
PortugueseBrazil	p - ɛ - l i -	k a ʁ n i -	v i v - ẽ - d a	s ẽ - ɡ - i - - -
Portuguese	p - e - l ɨ -	k a ɾ n ɨ -	v i v - ẽ - d ɐ	s ẽ - ɡ - ɨ - - -
Catalan	p - e - ʎ - -	k a r n - -		s a ŋ - - - - - -
Walloon	p j a - - - -	ʧ ɔː - - - - -		s õː - ɡ - - - - -
Friulian	p j ɛ l - - -	c aː r - - -		s a ŋ k - - - -
Romanian	p j e - l e -	k a ɾ n e -		s ɨ n ʤ - e - - -

	Bone	FatNoun	FatNoun-Crassia	Egg
Latin	- - o s s u m	a d e p e m		- oː w u m
French	- - ɔ - s - -		ɡ ʁ ɛ s -	- œ f - -
Spanish	- w e s o - -		ɡ ɾ a s a	w e b o -
Italian	- - ɔ s s o -	a d i p e -		w ɔ v o -
PortugueseBrazil	- - o - s u -		ɡ ɾ a ʃ ɐ	- o v u -
Portuguese	- - o - s u -		ɡ ɾ a ʃ ɐ	- o v u -
Catalan	- - ɔ - s - -		ɡ ɾ e ʃ -	- ɔ w - -
Walloon	- - ɔ - ʃ - -		k ʁ ɔː ç -	- uː - - -
Friulian	v w ɛ - s - -			- uː f - -
Romanian	- - o - s - -			- o w - -

	Horn	Tail	Feather	Feather-Penna
Latin	k - o r n uː	k a d a -	p l uː m a	p e n n a
French	k - ɔ ʁ n -	k ø - - -	p l y m -	p ɛ - n -
Spanish	k w e ɾ n o	k o l a -	p l u m a	p e - ɲ a
Italian	k - ɔ r n o	k o d a -	p j u m a	p e n n a
PortugueseBrazil	k - o ʁ n u	k a w d ɐ		p e - n ɐ
Portuguese	k - o ɾ n u	k a w d ɐ		p e - n ɐ
Catalan	k - ɔ r n -	k u - a -	p l o m ə	p ɛ - ɲ ə
Walloon	k w ɛ - n -	k ɔ w - -	p l ɔ m -	p e - n -
Friulian	k w aː r - -	k ɔ d ɛ -	p l u m ɛ	p ɛ - n e
Romanian	k - o r n -	c o̯a d ə -		p a - n ə

Appendix 3 - Concepts Used

	Hair	Hair-Capillus	Head	Head-Testa
Latin	p - i l u s	k a p i l l u s	k a p i - t i a	t e s t a
French	p w a l - -	ʃ ə v ø - - - -	ʃ ə v ɛ - - - -	t ɛ - t -
Spanish	p - e l o -	k a b e - ɟ o -	k a β e - θ - a	
Italian	p - e l o -	k a p e l l o -	k a v e t t s a	t ɛ s t a
PortugueseBrazil	p - e l u -	k a b e - l u -	k a b e - s - ɐ	t ɛ s t ɐ
Portuguese	p - i l u -	k ɐ β e - l u -	k ɐ β e - s - ɐ	t ɛ ʃ t ɐ
Catalan	p - ɛ l - -	k ə b ɛ - ʎ - -	k a p - - - - -	t e s t ə
Walloon		ʧ i v j - - a -		ʧ ɛ s - -
Friulian	p - eː l - -	c a v ej - - - -	c aː f - - - - -	t ɛ s t e
Romanian	p - ə ɾ - -		k a p - - - - -	ʦ e̯a s t ə

	Ear	Eye	Nose	Nose-Nares
Latin	oː r i k l a -	- o - k u l u s	n aː s u s	
French	o ʁ ej - - - -	- œ - j - - - -	n e - - -	
Spanish	o ɾ e - x - a	- o - x - o - -	n a s o -	n a ɾ i θ -
Italian	o r e k k j a	- ɔ k k - j o -	n aː s o -	n a r i ʧ e
PortugueseBrazil	o ɾ e - - ʎ ɐ	- o - - - ʎ u -		n a ɾ i s -
Portuguese	o ɾ ɐj - - ʎ ɐ	- o - - - ʎ u -		n ɐ ɾ i ʃ -
Catalan	u ɾ ɛ - - ʎ ə		n a s - -	n aː r ɪ s -
Walloon	ɔ ʁ aj - - - -	- uː - j - - - -	n e - - -	
Friulian	o r e - - l e	v o - - l i - -	n aː s - -	
Romanian	u r e - k - e	- o - kʲ - - - -	n a s - -	

	Mouth	Mouth-Gula	Tooth	Fingernail
Latin	b u k k a	g u l a	d - e n t e m	u n g - u l a
French	b u - ʃ -	g œ l -	d - ɑ̃ - - - -	õ - g - - l -
Spanish	b o - k a	g o l a	d j e n t e -	u ɲ - - - - a
Italian	b o k k a	g o l a	d ɛ n t e - -	u n g j - - a
PortugueseBrazil	b o - k ɐ		d ẽ - ʧ i - -	u ɲ - - - - ɐ
Portuguese	b o - k ɐ		d ẽ - t ɨ - -	u ɲ - - - - ɐ
Catalan	b o - k ə	g o l ə		
Walloon	b ɔ k - -	g øː j -	d ẽ - - - - -	õ - g - - - -
Friulian	b ɔ - c ɛ	g ɔ l e	d i n t - - -	ɔ ŋ g - u l ɛ
Romanian	b u - k ə	g u ɾ ə	d i n t e - -	u n g j - - e

	Foot	Leg-Gamba	Leg-Perna	Leg-Petiolus
Latin	p - e - d e m	g a m b a	p e r n a -	p e - t i o l u s
French	p j e - - - -	ʒ ɑ̃ - b -		
Spanish	p j e - - - -	g a m b a	p j e ɾ n a	p e - θ i o l o -
Italian	p j ɛː - d e -	g a m b a	p ɛ r n o -	p i t ʧ - ɔ l o -
PortugueseBrazil	p - ɛ - - - -		p ɛ ʁ n ɐ -	
Portuguese	p - ɛ - - - -		p ɛ ɾ n ɐ -	
Catalan	p - ɛ w - - -	k a m b ə	p ɛ r n ə -	
Walloon	p - iː - - - -	ʤ ã - p -		
Friulian	p - iː - t - -	ɟ a m b e		p ɛ k o l - - - -
Romanian	p i e z - - -	g a m b ə	g a m b ə -	p i - ʧ j o r - -

Appendix 3 - Concepts Used

	Knee-Genuculum	Hand	Wing	Belly
Latin	ɡ - e n i - k u l u m	m a n u m	aː l a	w - e n t r e m
French	ʒ - ə n u - - - - -	m ẽ - - -	e l -	v - œ̃ - t ʁ - -
Spanish	- - i n o - x o - -	m a n o -	a l a	b j e n t ɾ e -
Italian	ʤ - i n ɔ k k j - o	m aː n o -	a l a	
PortugueseBrazil	ʒ u e - - - - - ʎ u	m ẽ w̃ - - -	a - -	
Portuguese	ʒ w ɐ - - - - - ʎ u	m ẽ w̃ - - -	a - -	
Catalan	ʒ - ə n o - - - ʎ -	-	a l ə	b - e n t ɾ ə -
Walloon	ʤ - i n ɔ - - - - -	m ẽ - - -	e l -	v - ɛ̃ - t - - -
Friulian	ʤ - e n o - - - l i	m a ŋ - -	a l e	v i n t r i - -
Romanian	ʤ - e n u n kʲ - - -	m ɨ n ə -		v i n t r e - -

	Belly-Pantex	Guts	Neck	Back
Latin	p a n t i k e m	i n t e r aː n e a	k - o l l u m	d - o r s u m
French	p ɑ̃ - s - - - -	ɑ̃ - t - ʁ a - - j	k - u - - - - -	d - o - - - -
Spanish	p a n θ - - - a	e n t - ɾ a ɲ - a	k w e - ʝ o -	
Italian	p a n ʧ - - a -		k - o l l o -	d - ɔ s s o -
PortugueseBrazil	p ẽ - s - - ɐ -	ĩ - t - ɾ ẽ ɲ - ɐ	k - ɔ - l u -	
Portuguese	p ẽ - s - - ɐ -	ẽ - t - ɾ ɐ ɲ - ɐ	k - ɔ - l u -	
Catalan	p a ɲ ʃ - - ə -	ə n t - ɾ a ɲ - ə	k - ɔ - ʎ - -	d - o - s - -
Walloon	p ã - s - - - -			d - ɔ - - - -
Friulian	p a n ʦ - - e -		k w ɛ - l - -	d w e - s - -
Romanian	p ɨ n t e ʧ e -			d - o - - - -

	Back-Spatula	Breast	Breast-Pectus	Heart
Latin	- s p a t u l a	s i n u s	p - ɐ k t u s	k - o r -
French	e - p o - - l -	s ẽ - - -	p - i - - - -	k - œ ʁ -
Spanish	e s p a l - d a	s e n o -	p - e - ʧ o -	
Italian	- s p a l - l a	s e n o -	p - ɛ t t o -	k w ɔ r e
PortugueseBrazil	i ʃ p a d - w ɐ	s ɐj - u -	p - ɐj - t u -	k - ɔ ʁ -
Portuguese	i ʃ p a d - w ɐ	s ɐj - u -	p - ɐj - t u -	k - o ɾ -
Catalan	ə s p a ʎ - ʎ ə	s i - - -	p - i - t - -	k - ɔ r -
Walloon	- s p a - - l -			k - uː ʁ -
Friulian	- s p a - - l ɛ	s e n - -	p - ɛ - t - -	k - uː r -
Romanian	- s p a t - - e	s a n - -	p j e p t - -	

	Heart-Anima	Liver	Sun	Sun-Soliculus
Latin	a n i m a	f - iː k aː t u m	s oː l e m	s o l i k u l u s
French	ɑ - - m -	f w ɑ - - - - -		s ɔ l ɛj - - - - -
Spanish	a l - m a	- - i ɣ a ð o -	s o l - -	
Italian	a l - m a	f - e ɡ a t o -	s o l e -	
PortugueseBrazil	a w - m ɐ	f - i ɡ ɐ d u -	s ɔ w - -	
Portuguese	a l - m ɐ	f - i ɣ ɐ ð u -	s ɔ ɫ - -	
Catalan		f - e ʤ ə - - -	s ɔ l - -	
Walloon	ɔː - - m -	f - øː - - t - -	s ɔ l ɔ -	
Friulian	a n i m e	f - i j aː t - -		s o r e - - l i -
Romanian	i n i m ə	f - i k a t - -	s o̯a ɾ e -	

Appendix 3 - Concepts Used

	Moon	Star	Water	Rain
Latin	l uː n a	– s t – eː l l a	a – kʷ – a	p l u – w i a
French	l y n –	e – t w a – l –	o – – – –	p l ɥ – – i –
Spanish	l u n a	e s t ɾ e – ʝ a	a – ɣ w a	ʝ – u – b j a
Italian	l u n a	– s t – e l l a	a k k w a	p j o d ʤ – a
PortugueseBrazil	l u – ɐ	i s t ɾ e – l ɐ	a – ɡ w ɐ	ʃ – u – v – ɐ
Portuguese	l u – ɐ	ɨ ʃ t ɾ e – l ɐ	a – ɡ w ɐ	ʃ – u – v – ɐ
Catalan	ʎ u n ə	ə s t – ɛ – l –	aj – ɣ w ə	p l u – ʒ – ə
Walloon	l ø n –	– s t – øː – l –	ɛː – – w –	p l uː – ʁ – –
Friulian	l u n e	– s t – ɛ – l e	a – ɡ – e	p l o – – j e
Romanian	l u n ə	– s t – e̯a – – –	a – p – ə	p l o̯a – – j e

	River	River-Rivus	River-Riparia	Lake
Latin	f l uː m e n	r iː w u s	r iː p – aː r i a	l a k u m
French		ʁ y – – –	ʁ i v j e ʁ – –	l a k – –
Spanish		r i – o –		l a ɡ o –
Italian	f j u m e –	r i – o –		l a ɡ o –
PortugueseBrazil	f l u m i –	ʁ i – w –		l a ɡ u –
Portuguese	f l u m ɨ –	ʁ i – u –		l a ɣ u –
Catalan		r i – w –		ʎ a k – –
Walloon			r i v iː – ʁ – –	l a k – –
Friulian	f l u m – –			l aː t – –
Romanian		r ɨ – w –		l a k – –

	Sea	Salt	Stone	Stone-Petra
Latin	m a r e	s aː l e m	s a k s u m	p – e t r a
French	m ɛ ʁ –	s ɛ l – –		p j e – ʁ –
Spanish	m a ɾ –	s a l – –		p j e ð ɾ a
Italian	m a r e	s a l e –	s a s s o –	p j eː t r a
PortugueseBrazil	m a ʁ –	s a w – –	s ej – ʃ u –	p – e d ɾ ɐ
Portuguese	m a ɾ –	s a l – –	s ɐj – ʃ u –	p – ɛ ð ɾ ɐ
Catalan	m a r –	s a l – –		p – e ð ɾ ə
Walloon	m e ʁ –	s e – – –		p – iː – ʁ –
Friulian	m aː r –	s aː l – –		p j eː – r e
Romanian	m a r e	s a r e –		p j a t ɾ ə

	Stone-Lapidem	Sand	Sand-Sabulum	Sand-Sabula
Latin	l a p i d e m	h a r eː n ɑ	s a b u l u m	s a – b u l a
French			s a b – l – –	
Spanish	l a u – d e –	– a ɾ e n a		
Italian	l a p i d e –			s a b b – j a
PortugueseBrazil		– a ɾ ej – ɐ	s aj β – ɾ u –	
Portuguese		– ɐ ɾ ɐj – ɐ	s aj β – ɾ u –	
Catalan		– ə ɾ e n ə	s o r ə – – –	
Walloon			s oː v j õ – –	
Friulian			s a v a l ɔ n	
Romanian		– a r i n ə		

Appendix 3 - Concepts Used

	Dust	Dust-Pulwus	Earth	Cloud
Latin	p u l w e r e m	p u l w u s	t - e r r a	n uː b eː s
French	p u d ʁ - - - -		t - ɐ - ʁ -	n y - - -
Spanish		p o l b o -	t j e - r a	n u b e -
Italian	p o l v e r e -		t - ɛ r r a	n u b e -
PortugueseBrazil		p ɔ - - - -	t - e - ʁ ɐ	n u v ẽj -
Portuguese		p ɔ - - - -	t - ɛ - ʁ ɐ	n u v ɐ̃j -
Catalan		p o l s - -	t - ɛ - r ə	
Walloon			t - ɛː - ʁ -	
Friulian	p ɔ l v a r - -		t j ɛ - r e	
Romanian	p u l b e r e -		ʦ - a - r ə	

	Cloud-Secondary	Fog	Fog-Nebula	Fog-Tenebrae
Latin	n uː b i l u s	k aː l iː g i n e m	n - e - b u l a	t e n eː b r aj
French			n j ɔ - - - l y	
Spanish	n u b - l o -	k a l i - - n a -	n j e - b - l a	
Italian	n u v o l a -	k a l i ʤ i n e -	n - e b b - j a	t ɛː n e b r e
PortugueseBrazil	n u b l a d u	k a l i ʒ ẽj - - -	n - ɛ - v w - ɐ	
Portuguese	n u b l a d u	k ɐ l i ʒ ɐ̃j - - -	n - ɛ - v w - ɐ	
Catalan	n u β u ɫ - -		n - e - - w l ə	
Walloon				
Friulian	n uː - - l - -			
Romanian	n o - - r - -		n e ɡ u r ə - -	

	Fog-Tenebras	Fog-Fumata	Fog-Caecia	Sky
Latin	t - e n - eː b r aː s	f uː m aː t a	k aj k i a	k - aj l u m
French	t - ɐ n - ɛ b ʁ - -	f y m e - -		s j ɛ l - -
Spanish	t - i n j e b l a s	f u m a t a		θ j e l o -
Italian	t - ɛː n - e b r e -	f u m aː t a		ʧ - ɛ l o -
PortugueseBrazil	t ɾ - - - ɛ v - ɐ s	f u m a s ɐ		s - ɛ w - -
Portuguese	t ɾ - - - ɛ v - ɐ ʃ	f u m a s ɐ		s - ɛ w - -
Catalan	t - ə n - e b ɾ ə s			s - ɛ l - -
Walloon				s - iː ʁ - -
Friulian		f u m a t e		ʧ - iː l - -
Romanian			ʧ e̯a ʧ - ə	ʧ - e ɾ - -

	Wind	Snow	Ice	Ice-Glacies
Latin	w - e n t u m	n - i w e m	ɡ e l uː	
French	v - ɑ̃ - - - -		ʒ ɛ l -	ɡ l a - s -
Spanish	b j e n t o -	n j e b e -	ʝ e l o	
Italian	v - ɛ n t o -	n - e v e -	ʤ ɛ l o	ɡ j a t ʧ a
PortugueseBrazil	v - ẽ - t u -	n - ɛ v i -		
Portuguese	v - ẽ - t u -	n - ɛ v ɨ -		
Catalan	b - e n - - -	n - e w - -	ʒ ɛ ɬ -	ɡ l a - s -
Walloon	v - ẽ - - - -	n iː f - - -		ɡ l ɛ - s -
Friulian	v - i n t - -	n - eː f - -		ɡ l a - ʧ e
Romanian	v - ɨ n t - -	n - e̯a - - -	ʤ e r -	ɡ - e̯a - ʦ ə

Appendix 3 - Concepts Used

	Smoke	Fire-Focus	Ash	Ash-Cinisia
Latin	f u: m u s	f - o k u m	k i n e - r e m	
French		f - ø - - -	s q̃ - - d ʁ - -	
Spanish	- u m o -	f w e g o -		θ e n i θ a -
Italian	f u m o -	f w ɔ k o -	ʧ e n e - r e -	
PortugueseBrazil	f u m u -	f - o g u -		s ĩ - - z ɐ ʃ
Portuguese	f u m u -	f - o ɣ u -		s ĩ - - z ɐ ʃ
Catalan	f u m - -	f - ɔ k - -	s ɛ n - d r ə -	
Walloon		f - øː - - -	s ɛ̃ː - - d - - -	
Friulian	f u m - -	f - uː k - -		ʧ i n i z ɛ -
Romanian	f u m - -	f - o k - -		ʧ e n u ʃ ə -

	Road	Road-Strata	Road-Camminus	Mountain
Latin	w i a	- s t r aː t a	k a m m iː n u m	m o n t e m
French	v w a		ʃ ə - m ɛ̃ - - -	m ɔ̃ - - - -
Spanish	b i a	e s t ɾ a d a	k a - m i n o -	m o n t e -
Italian	v i a	- s t r a d a	k a m m i n o -	m o n t e -
PortugueseBrazil	v i ɐ	i s t ɾ a d ɐ	k a - m ĩ ɲ u -	m õ - ʧ i -
Portuguese	v i ɐ	i ʃ t ɾ a ð ɐ	k ɐ - m i ɲ u -	m õ - t ɨ -
Catalan	b i ə		k ə - m i - - -	m u n - - -
Walloon				
Friulian				m ɔ n t - -
Romanian				m u n t ɛ -

	Mountain-Montanea	Night	Day	Day-Diurnus
Latin	m o n t aː - n e a	n - o c t e m	d i eː s	d i u r n u m
French	m õ - t a - ɲ - -	n ɥ i - - - -		ʒ - u ʁ - - -
Spanish	m o n t a - ɲ - a	n - o - ʧ e -	d i a -	d j u ɾ n o -
Italian	m o n t a ɲ ɲ - a	n - ɔ t t e -	d i - -	ʤ - o r n o -
PortugueseBrazil	m õ - t ẽ - ɲ - ɐ	n - oj t ɨ - -	d i ɐ -	
Portuguese	m õ - t ɐ - ɲ - ɐ	n - oj t ɨ - -	d i ɐ -	
Catalan	m u n t a - ɲ - ə	n - i - t - -	d i ə -	ʒ - o ɾ n - -
Walloon	m õ - t a - ɲ - -	n - y - t - -	ʤ uː - -	ʤ - uː - - - -
Friulian	m ɔ n t a - ɲ e -	ɲ - ɔ - t - -	d i - -	
Romanian		n - o̯a p t e -	z i - -	

	Day-Diurna	Day-Diurnata	Year	Name-Nomen
Latin		d i u r n aː t a	a n n u m	n oː m e n
French		ʒ - u ʁ n e - -	q̃ - - - - -	n ɔ̃ - - -
Spanish		x - o ɾ n a d a	a - ɲ o -	
Italian		ʤ o r n a t a -	a n n o -	n oː m e -
PortugueseBrazil	ʒ ɔ ʁ n a		ɐ - n u -	n o m i -
Portuguese	ʒ ɔ ʁ n a		ɐ - n u -	n o m ɨ -
Catalan			a - ɲ - -	n ɔ m - -
Walloon			q̃ - - - -	n õ - - -
Friulian		ʤ - o r n a d e	a - ŋ - -	n ɔ ŋ - -
Romanian			a n - - -	n u m e -

Appendix 3 - Concepts Used

	Name-Nominem	Tongue	ToDrink	ToEat
Latin	n oː m i n - e m	l i n gʷ - a	b - i b e r e	k o m e d e r e
French		l ɑ̃ - g - -	b w ɑ - - ʁ -	
Spanish	n o m - b ɾ e -	l e ŋ g w a	b - e b e ɾ -	k o m e - - ɾ -
Italian		l i n g w a	b - e - - ɾ e	
PortugueseBrazil		l ĩ - g w ɐ	b - e b e ʁ -	k o m e - - - -
Portuguese		l ĩ - g w ɐ	b - i̯ β e ɾ -	k u m - - e ɾ -
Catalan			b - ɛ w - ɾ ə	
Walloon		l ẽ - - - -	b øː - - ʁ - -	
Friulian		l ɛ n g - ɛ	b - e v i - -	
Romanian		l i m b - ə	b - e̯a - - - -	

	ToEat-Manducare	ToBite	ToBite-Morsicare	ToSuck
Latin	m a n d u k aː r e	m - o r d eː r e	m o r s i k aː r e	s uː g e r e
French	m ɑ̃ - ʒ - - e - -	m - o ʁ d - ʁ -		s y s e - -
Spanish	m a n d u k a ɾ -	m - o ɾ ð e ɾ -	m o - s - k a ɾ -	
Italian	m a n ʤ - - a ɾ e	m - ɔ r d e r e	m o r s i k a ɾ e	
PortugueseBrazil	m ẽ - ʒ - - a ʁ -	m - o ʁ d e ʁ -	m u - s ə g a - -	s u g a ʁ -
Portuguese	m ẽ - ʒ - - a ɾ -	m - u ɾ ð e ɾ -	m u - s ə g a r -	s u g a ɾ -
Catalan	m ə ɲ ʒ - - a - -		m u - s ə ɣ a - -	
Walloon	m a ɲ - - - iː - -			s y s iː - -
Friulian	m a ŋ ɟ - - aː - -	m w a r d i - -		c u c aː - -
Romanian	m i̯ n - - k a - -		m u r s e k a - -	s u ʤ e - -

	ToSpit	ToSpit-Exconspuere	ToSpit-Sputare	ToVomit
Latin	k o n s p u e r e		- s p u t e r e	w o m e r e
French	k ɔ̃ - s p y e - -			v o m i ʁ -
Spanish		e s k u - p i ɾ	e s p u t a ɾ -	
Italian			- s p u t a ɾ e	v ɔ m e r e
PortugueseBrazil	k u - s p i ʁ - -			
Portuguese	k u - ʃ p i ɾ - -			
Catalan		ə s k u - p i -		
Walloon				v oː m i - -
Friulian			- s p u d aː - -	
Romanian		- s k u j p a -		v o̯a m e - -

	ToBlow	ToBreathe	ToLaugh	ToSee
Latin	s u f f l aː r e	r e s p iː r aː r e	r iː - d eː r e	w - i d eː r e
French	s u - f l e - -		ʁ i - - - ʁ -	v w a - - ʁ -
Spanish		r e s p i ɾ a ɾ -	r e - - i ɾ -	b - - - e ɾ -
Italian	s o f f j a r e	r e s p i r a ɾ e	r iː - d e ɾ e	v - e d e ɾ e
PortugueseBrazil		ʁ e s p i ɾ a ɾ -	ʁ i - - - ʁ -	v - - - e ʁ -
Portuguese		ʁ i̯ ʃ p i ɾ a ɾ -	ʁ i - - - ɾ -	v - - - e ɾ -
Catalan		r ə s p i ɾ a - -	r i w - - ɾ ə	b - ɛ w - ɾ ə
Walloon	s u - f l e - -		ʁ iː - - - ʁ -	v - iː - - ʁ -
Friulian	s o - f l aː - -	r e s p i r aː - -	r i - d i - -	v j o d i - -
Romanian	s u - f l a - -		ɾ i̯ - d e - -	v - e d e̯a - -

Appendix 3 - Concepts Used

	ToHear	ToKnow	ToKnow-Sapere	ToKnow-Cognoscere
Latin	a u̯ d iː r e	s k iː r e	s a p - e r e	k o g n oː s k e r e
French	w - - i ʁ -		s a v w a ʁ -	k ɔ - n ɛ - t ʁ - -
Spanish	o - - i ɾ -		s a b - e ɾ -	k o - n o θ e ɾ - -
Italian	u - d i ɾ e		s a p - e r e	k o - n o ʃ ʃ e r e
PortugueseBrazil	o w v i ʁ -		s a b - e ʁ -	k o - ɲ e s - e ʁ -
Portuguese	o w v i ɾ -		s ɐ b - e ɾ -	k u - ɲ i̯ s - e ɾ -
Catalan	u - - i - -		s ə β - ɛ - -	k u - n ɛ ʃ - ə - -
Walloon	õ - - ʁ - -		s a v - øː ʁ -	k i - n ɔ h - - - -
Friulian	u l d iː - -		s a v - eː - -	k o - ɲ o s - i - -
Romanian	a u z i - -	ʃ t i - -		k u - n o̯a ʃ t e - -

	ToThink	ToThink-Pensare	ToSmell-Sentire	ToSmell-Olere
Latin	k - oː g i t aː r e	p eː n s aː r e	s e n t iː r e	o l eː r e
French	k ɥ - - i d e - -	p ɑ̃ - s e - -	s ɑ̃ - t i ʁ -	
Spanish	k w - - i d a ɾ -	p e n s a ɾ -	s e n t i ɾ -	o l e ɾ -
Italian	k - o ʤ i t a r e	p e n s a ɾ e	s e n t i r e	o l i r e
PortugueseBrazil	k - u ʒ i t a ʁ -	p ẽ - s a ʁ -	s ẽ - ʧ i ʁ -	
Portuguese	k - u ʒ i t a ɾ -	p ẽ - s a ɾ -	s ẽ - t i ɾ -	
Catalan	k - u - j d a - -	p ə n s a - -	s ə n t i - -	u l u ɾ a
Walloon		p ɛ̃ - s e - -	s ɛ̃ - t i - -	
Friulian		p e ŋ s aː - -	s i n t iː - -	
Romanian	k - u ʤ e t a - -	p ə - s a - -	s i m ʦ i - -	

	ToSmell-Odorare	ToSmell-Fragrare	ToFear	ToFear-Tremere
Latin	o d oː r aː r e	f r aː g r aː r e	t i m eː r e	t r e m - e r e
French		f l ɛ - ʁ e - -		k ʁ ẽ - d - ʁ -
Spanish			t e m e ɾ -	t ɾ e m - e ɾ -
Italian	o d o r a r e	f r a g r a r e	t e m e r e	t r e m - a r e
PortugueseBrazil		ʃ - ej - ɾ a ʁ -	t e m e ʁ -	t ɾ e m - e ʁ -
Portuguese		ʃ - ɐj - ɾ a ɾ -	t i̯ m e ɾ -	t ɾ i̯ m - e ɾ -
Catalan		f l ə j ɾ a - -	t e m ə - -	
Walloon				
Friulian			t e m i - -	t r i m - aː - -
Romanian			t e m e - -	

	ToSleep	ToLive	ToDie	ToKill
Latin	d - o r m iː r e	w iː w e r e		n - e k aː r e
French	d - ɔ ʁ m i ʁ -	v i v - ʁ -	m u ʁ i ʁ -	n w aj e - - -
Spanish	d - o ɾ m i ɾ -	b i b i ɾ -	m o ɾ i ɾ -	
Italian	d - o r m i r e	v i v e r e	m o r i r e	
PortugueseBrazil	d - o ʁ m i ʁ -	v i v e ʁ -	m o ʁ e ʁ -	
Portuguese	d - u ɾ m i ɾ -	v i v e ɾ -	m u ʁ e ɾ -	
Catalan	d - u r m i - -	b i w - ɾ ə	m u ɾ i - -	n - ə g a - -
Walloon	d w a ʁ m i - -		m ɔ ʁ i - -	
Friulian	d - u r m iː - -	v i v i - -	m u r iː - -	
Romanian	d - o r m i - -	v i - a - -	m u r i - -	n - e k a - -

Appendix 3 - Concepts Used

	ToKill-Adnecare	ToKill-Tutari	ToKill-Mactare	ToKill-Occidere
Latin		t uː - t aː r i	m a k t aː r e	o k k iː d e r e
French		t - ɥ - e - -	m a - t e - -	ɔ k s i - - ʁ -
Spanish	a - n e ɡ a ɾ -		m a - t a ɾ -	
Italian	a n n e ɡ a r e			u t ʧ i d e ɾ e
PortugueseBrazil			m a - t a ʁ -	
Portuguese			m ɐ - t a ɾ -	
Catalan			m ə - t a - -	u k s i - - - -
Walloon		t u w - e - -		
Friulian			m a ʧ - aː - -	
Romanian				u - ʧ i d e - -

	ToFight	ToFight-Battuere	ToHunt-Captiare	ToHit
Latin	p u ɡ n aː r e	b a t t u e r e	k a p t i aː r e	p u l s aː r e
French		b a t - - ʁ - -	ʃ a - s - e - -	p u - s e - -
Spanish	p u - ɲ a ɾ -	b a - t - i ɾ -	k a - θ - a ɾ -	p u - x a ɾ -
Italian	p u ɲ ɲ a r e	b a t t - e r e	k a t ʧ - a r e	p u l s a r e
PortugueseBrazil		b a - t - e ʁ -	k a - s - a ʁ -	p u - ʃ a ʁ -
Portuguese		b ɐ - t - e ɾ -	k ɐ - s - a ɾ -	p u - ʃ a ɾ -
Catalan	p u - ɲ a - -	b a - t - - ɾ ə	k ə - s - a - -	
Walloon		b a t - e - - -	ʧ ɛ - s - iː - -	
Friulian		b a t - i - - -	c a - ʧ - aː - -	p u l s aː - -
Romanian		b a t - e - - -		p u l s a - -

	ToCut	ToCut-Curtare	ToCut-Excurtare	ToCut-Taliare
Latin	s - e k aː r e	k u r t aː r e	e k s k u r t aː r e	t aː - l i aː r e
French	s j e - - - -		e - - k u ʁ t e - -	t ɑ j - - e - -
Spanish	s - e ɡ a ɾ -	k o ɾ t a ɾ -		t a - x - a ɾ -
Italian	s - e ɡ a r e		- - s k o r t a r e	t a - ʎ ʎ aː r e
PortugueseBrazil	s - e ɡ a ʁ -	k o ʁ t a ʁ -		t a - ʎ - a ʁ -
Portuguese	s - i ɣ a ɾ -	k u ɾ t a ɾ -		t ɐ - ʎ - a ɾ -
Catalan	s - ə ɣ a - -			t ə - ʎ - a - -
Walloon				t ɛ - - j iː - -
Friulian	s - e - aː - -		- - s k u r t aː - -	t a - - j aː - -
Romanian			- - s k u r t a - -	t ə - - j a - -

	ToSplit	ToSplit-Scindere	ToSplit-Findere	ToSplit-Partire
Latin	d iː w i d e r e	s k i n d e r e	f i n d e r e	p a r t iː r e
French		s - ɛ̃ - d e - -	f ɑ̃ - d - ʁ -	p a ʁ t i ʁ -
Spanish	d i b i d i ɾ -		- e n d e ɾ -	p a ɾ t i ɾ -
Italian	d i v i d e r e	ʃ - i n d e r e	f ɛ n d e r e	p a r t i r e
PortugueseBrazil	ʤ i v i ʤ i ʁ -		f ẽ - d e ʁ -	p a ʁ ʧ i ʁ -
Portuguese	d i v i ð i ɾ -		f ẽ - d e ɾ -	p ɐ ɾ t i ɾ -
Catalan	d i b i d i - -		f ɛ n d - ɾ ə	p ə r t i - -
Walloon			f ɛ̃ - t - - -	p ɔː ʁ t i - -
Friulian	d i v i d i - -			p a r t iː - -
Romanian	d i v i d e - -			

Appendix 3 - Concepts Used

	ToSplit-Separare	ToStab	ToStab-Iugulare	ToScratch
Latin	s eː p a r aː r e -	p - u n ɡ e r e	j u ɡ u l aː r e	r aː d e r e
French	s ə - v - - - ʁ e	p w ɛ̃ - d - ʁ -	ʒ y ɡ y l e - -	
Spanish	s e p a ɾ a ɾ - -			r a - e ɾ -
Italian	s e p a r a r e -	p - u n ʤ e r e	j u ɡ u l aː r e	r a d e r e
PortugueseBrazil	s e p a ɾ a ʁ - -	p - ũ - ʒ i ʁ -		ʁ a - e ʁ -
Portuguese	s i p ɐ ɾ a ɾ - -	p - ũ - ʒ i ɾ -		ʁ ɐ - e ɾ -
Catalan	s ə p ə ɾ a - - -	p - u ɲ - i - -		r a w - ɾ ə
Walloon				
Friulian	s e p a r aː - - -			r a d aː - -
Romanian	s e p a r a - - -	p u n ʤ e - - -		r a d e - -

	ToScratch-Rasare	ToScratch-Rasicare	ToScratch-Coctiare	ToDig
Latin				f - o d e r e
French	ʁ ɑ z e - -			f w i - - ʁ -
Spanish	r a s a ɾ -	r a s k a ɾ		
Italian	r a s a r e			
PortugueseBrazil	ʁ a z a ʁ -	ʁ a ʃ k a ʁ	k o s a ɻ	
Portuguese	ʁ ɐ z a ɾ -	ʁ ɐ ʃ k a ɾ	k u s a ɾ	
Catalan	r ə z a - -	r ə s k a -		
Walloon				
Friulian	r a s aː - -			
Romanian				

	ToDig-Cavare	ToDig-Excavare	ToSwim	ToSwim-Navigare
Latin	k a w aː r e	e k s k a w aː r e	n - a t aː r e	n a v i ɡ aː r e
French	ʃ ə v e - -			n a - - ʒ e - -
Spanish	k a b a ɾ -	e s k a b a ɾ - -	n - a d a ɾ -	n a b e ɡ a ɾ -
Italian	k a v a r e	- - s k a v a r e	n w o t a ɾ e	n a v i ɡ a r e
PortugueseBrazil	k ɐ v a ʁ -	i - ʃ k ɐ v a ʁ -	n - a d a ʁ -	n a v ɨ ɣ a ʁ -
Portuguese	k ɐ v a ɾ -	i - ʃ k ɐ v a ɾ -	n - ɐ ð a ɾ -	n ɐ v ɨ ɣ a ɾ -
Catalan	k ə b a - -		n - ə d a - -	n ə b ə ɡ a - -
Walloon				n ɛ - - ʤ iː - -
Friulian	ɟ a v aː - -	- - z ɟ a v aː - -	n - a d aː - -	n a v i ɡ aː - -
Romanian				n a v i ɡ a - -

	ToFly	ToFly-Exvolare	ToWalk	ToWalk-Marcher
Latin	w o l aː r e			
French	v o l e - -		ʃ ə m i n e - - -	m a ʁ ʃ e
Spanish	b o l a ɾ -		k a m i n a ɾ - -	
Italian	v o l a ɾ e	z v o l a ɾ e	k a m m i n a ɾ e	
PortugueseBrazil	v o - a ʁ -		k ɐ m i ɲ a ʁ - -	
Portuguese	v w - a ɾ -		k ɐ m i ɲ a ɾ - -	
Catalan	b u l a - -		k ə m i n a - - -	
Walloon	v ɔ l e - -		ʧ i m i n e - - -	m aː ʁ ʧ iː
Friulian		z v o l aː - -	c a m i n aː - - -	
Romanian		z b u ɾ a - -		

Appendix 3 - Concepts Used

	ToWalk-Mergere	ToWalk-Ambitare	ToCome	ToLieAsInABed
Latin	m e r g e r e	a m b i t a: r e	w e n i: r e	e k s t e n d e r e
French			v ə n i ʁ -	e - t d̃ - d - ʁ - -
Spanish		a n d - - a ɾ -	b e n i ɾ -	e k s t e n d e ɾ -
Italian	m ɛ r ʤ e r e	a n d - - a r e	v e n i ɾ e	e - s t ɛ n d e r e
PortugueseBrazil		ẽ - d - - a ʁ -	v - - i ʁ -	i s t ẽ - d e ʁ - -
Portuguese		ẽ - d - - a ɾ -	v - - i ɾ -	i ʃ t ẽ - d e ɾ - -
Catalan			b ə n i - -	ə - s t e n d - ɾ ə
Walloon			v i n i - -	
Friulian			v i ɲ i: - -	
Romanian	m e r ʤ e - -		v e n i - -	e k s t i n d e - -

	ToLieAsInABed-Iacere	ToSit	ToSit-Sedentare	ToStand
Latin	j a - k e: r e	s - e d e: r e	s e d e n t a: r e	- s t a: r e
French	ʒ e - z i ʁ -	s w a - - ʁ -		ɛ - t - ʁ -
Spanish	ʝ a - θ e ɾ -	s - e - - ɾ -	s e - - n t a ɾ -	e s t a ɾ -
Italian	ʤ a - ʧ e: ɾ e	s - e d e r e		- s t a r e
PortugueseBrazil	ʒ ɐ - z e ʁ -	s - e - - ʁ -	s ẽ - - - t a ɾ -	i ʃ t a ɾ -
Portuguese	ʒ ɐ - z e ɾ -	s - e - - ɾ -	s ẽ - - - t a ɾ -	i ʃ t a ɾ -
Catalan	ʒ a w - - ɾ ə			ə s t a - -
Walloon	ʤ e - - r e -			ɛ s - - - -
Friulian	j e - s i - -		s e - - n t a: - -	- s t a: - -
Romanian	z ə - ʧ e̯a - -	ʃ - e d e̯a - -		- s t a - -

	ToStand-Levare	ToStand-Altiare	ToTurnIntransitive	ToTurnIntransitive-Gyrare
Latin	l e v a: r e	- a l t i a: r e	t o r n a: r e	ɡ y r a: r e
French	l ə v e - -	- o - s - e - -	t u ʁ n e - -	ʒ i ʁ e - -
Spanish	ʝ e b a ɾ -	- a l θ - a ɾ -	t o ɾ n a ɾ -	x i ɾ a ɾ -
Italian	l e v a r e	- a l ʦ a r e -	t o r n a r e	ʤ i r a ɾ e
PortugueseBrazil	l e v a ʁ -	- a ɬ s - a - -	t o ʁ n a ʁ -	ʒ i ɾ a ɾ -
Portuguese	l i v a ɾ -	- a ɬ s - a ɾ -	t u ɾ n a ɾ -	ʒ i ɾ a ɾ -
Catalan	ʎ ə b a - -	- ə l s - a - -	t u r n a - -	ʒ i ɾ a - -
Walloon	l ə v e - -	h ɔ: - s - i: - -	t u: r n e - -	
Friulian	l e v a: - -	- a l t ʃ - a: -	t o r n a: - -	ʤ i r a: - -
Romanian	l - u a - -		t u r n a - -	

	ToTurnIntransitive-AncestralClass3	ToTurnIntransitive-Torquere	ToFall	ToFall-Tumbare
Latin		t o r kʷ e: r e	k - a d e r e	
French	v i ʁ e - -	t ɔ ʁ d - ʁ -	ʃ w a - - ʁ -	t õ - b e -
Spanish	b i ɾ a ɾ -	t o ɾ θ e ɾ -	k - a - e ɾ -	t u m b a ɾ
Italian	v i r a ɾ e	t ɔ r ʧ e r e	k - a d e ɾ e	
PortugueseBrazil	v i ɾ a ɾ -	t u r s e r -	k - ɐ - i ɾ -	t õ - b a ʁ
Portuguese	ʒ i ɾ a ɾ -	t u r s e r -	k - ɐ - i ɾ -	t õ - b a ɾ
Catalan	b i ɾ a - -	t ɔ r s ə - -	k - a w - r ə	t u m b a -
Walloon	v i ʁ e - -		ʧ - ɛ: - - ʁ -	t u m - - e -
Friulian	ʤ i r a: - -		ʧ j a d e - -	
Romanian		t o̯a r ʧ e - -	k ə d e̯a - - -	

Appendix 3 - Concepts Used

	ToGive	ToGive-Donare	ToHold	ToHold-Segurar
Latin	d a r e	d o n aː r e	t e n - eː r e	
French		d ɔ n e - -	t ə n - i ʁ -	
Spanish	d a ɾ -	d o n a ɾ -	t e n - e ɾ -	s e ɡ u ɾ a ɾ
Italian	d a r e	d o n a r e	t e n - e ɾ e	
PortugueseBrazil	d a ʁ -	d o - a - -	t e - - - ʁ -	s i ɡ u ɾ a ʁ
Portuguese	d a ɾ -	d u - a ɾ -	t e - - - ɾ -	s i ɣ u ɾ a ɾ
Catalan	d a r -	d u n a - -	t ə n - i - -	
Walloon		d i n e - -	t i n - i - -	
Friulian	d aː - -	d o n aː - -	t i n j i - -	
Romanian	d a - -		ʦ i n - e - -	

	ToSqueeze	ToSqueeze-Serrere	ToSqueeze-Serare	ToSqueeze-Appectorare
Latin	e k s p r i m - e r	es e r r e r e	s e - r a r e	a p p e k t o r aː r e
French	e - - p ʁ ɛ̃ - d - ʁ	-	s e - ʁ e - -	
Spanish	e k s p ɾ e m - i ɾ	- s e - r a ɾ -	θ e - r a ɾ -	a - p - - ɾ e t a ɾ -
Italian	- - s p r ɛ m - e r e		s e r r a r e	
PortugueseBrazil	i - ʃ p r ə m - e ʁ	- s e - ʁ a - -	s i - ʁ a ɾ -	ɐ - p i - ɾ - t a ɾ -
Portuguese	i - ʃ p r ə m - e r	- s ə - ʁ a ɾ -	s i - ʁ a ɾ -	ɐ - p i - ɾ - t a ɾ -
Catalan	ə - s p ɾ e m - ə -	- s ə - r a - -		
Walloon			s ɛ - ʁ e - -	
Friulian	e - s p r i m - i - -			
Romanian	- s k - r e m e - - -			

	ToSqueeze-Stringere	ToRub	ToRub-Exfricare	ToRub-Frictare
Latin	- s t r i n ɡ e r e	f r i k aː r e		f r i k t aː r e
French	e - t ʁ ɛ̃ - d - ʁ -	f ʁ ɛj e - - -		f ʁ o t e - - -
Spanish	e s t ɾ e ɲ - i ɾ -	f ɾ e ɡ a ɾ -		f ɾ o t a ɾ - -
Italian	- s t r i n ʤ e r e	f r e ɡ a r e		f r e t t a r e
PortugueseBrazil	ə ʃ t r ĩ - ʒ i r -		ɨ ʃ f ɾ ɨ ɡ a ɾ	
Portuguese	ə ʃ t r ĩ ʒ i r - -		ɨ ʃ f ɾ ɨ ɣ a ɾ	
Catalan	ə s t ɾ ɛ ɲ - ə - -	f ɾ ə ɡ a - -		
Walloon	- s t r i n ɡ e - -	f r oj - - - -		f ʁ o t e - - -
Friulian	- s t r ɛ n ɡ iː - -	f r e - a - -		
Romanian	- s t r ɨ n ʤ e - -	f r e k a - -		

	ToRub-Frictiare	ToWash	ToWipe	ToWipe-Extergere
Latin		l a w aː r e	t e r ɡ e r e	e k s t e r ɡ e r e
French		l a v e - -		
Spanish	f r i s a ɾ	l a β a ɾ -		e - s t a ɾ s i ɾ -
Italian		l a v a r e	t ɛ r ʤ e r e	
PortugueseBrazil		l ɐ v a ɾ -		
Portuguese		l ɐ v a ɾ -		
Catalan	f ɾ ə s a -	ʎ ə b a - -		ə - s t ə r ʒ i - -
Walloon		l a v e - -		
Friulian		l a v aː - -		
Romanian		l a - - - -		- - ʃ t e r ʤ e - -

Appendix 3 - Concepts Used

	ToWipe-Exsucare	ToWipe-Limpidare	ToPull	ToPull-Pulsare
Latin	e k s - uː k - aː r e	l i m p i d aː r e	t i r aː r e	p u l s aː r e
French	e - s ɥ i - j e - -		t i ʁ e - -	p u - s e - -
Spanish	e n x - u g - a ɾ -	l i m p j - a ɾ -	t i ɾ a ɾ -	p u - x a ɾ -
Italian	a ʃ ʃ - u g - a r e		t i r a r e	p u l s a r e
PortugueseBrazil	ẽ - ʃ - u g - a ɾ -	l ĩ - p - - a ɾ -	ʧ i ɾ a - -	p u - ʃ a ɾ -
Portuguese	ẽ - ʃ - u ɣ - a ɾ -	l ĩ - p - - a ɾ -	t i ɾ a ɾ -	p u - ʃ a ɾ -
Catalan	ə - ʃ - u g a - - -		t i ɾ a - -	
Walloon	- - s - u - w e - -		t i r e - -	p uː s iː - - -
Friulian	- - s - u - j aː - -		t i r aː - -	p u l s aː - -
Romanian	u - s - - k - a - -			p u l s a - -

	ToPull-Trahere	ToPush	ToThrow	ToThrow-Lanceare
Latin	t r a h e r e	i m p i n g e r e	j a k t aː r e	l a n k e aː r e
French	t ʁ - - ɛ ʁ -		ʒ ə - t e - -	l ɑ̃ - s - e - -
Spanish			- e - ʧ a ɾ -	l a n θ - a ɾ -
Italian	t r a r - r e	i m p i n ʤ e r e	ʤ e t t a r e	l a n ʧ - a r e
PortugueseBrazil	t ɾ a z e - -		ʒ ej t a ɾ - -	l ɐ̃ - s - a - -
Portuguese	t ɾ ɐ z e ɾ -		ʒ ej t a ɾ - -	l ɐ̃ - s - a ɾ -
Catalan	t ɾ ɛ w - ɾ ə	ə m p ɛ ɲ - ə - -	x i - t a - -	ʎ ə n s - a - -
Walloon			ʤ ɛ - t e - -	l a n c - iː - -
Friulian	t r aj - - - -			l a n ʧ - aː - -
Romanian	t r a ʤ e - -	i m p i n ʤ e - -		

	ToThrow-Eruncare	ToTie	ToTie-Aptare	ToSew
Latin	eː - r u n k aː r e	l i g aː r e	a p t aː r e	k oː n - s u e r e
French		l i - e - -		k u - d - - - ʁ -
Spanish	a - r a n k a ɾ -	l e g a ɾ -	a - t a ɾ -	k o - - s - e ɾ -
Italian	a r r o n ʧ a r e	l e g a r e		k u - - ʧ - i r e
PortugueseBrazil			ɐ - t a ɾ -	k u - - z - e ɾ -
Portuguese			ɐ - t a ɾ -	k u - - z - e ɾ -
Catalan		ʎ i ɣ a - -		k u - - z - i - -
Walloon		l ɔ j iː - -		k øː - - z - - - -
Friulian		l e - aː - -		k u - - z i - - -
Romanian	a - ɾ u ŋ k a - -	l e g a - -		c o̯a - - s - e - -

	ToCount	ToCount-Enumerare	ToCount-Numerare	ToSay
Latin	k o m p u t aː r e	eː n u m e r aː r e	n u m e r aː r e	d iː k e r e
French	k õ - - - t e - -	e n u m e ʁ e - -	n ɔ̃ - b ʁ e - -	d i - - ʁ -
Spanish	k o n - - t a ɾ -	e n u m e ɾ a ɾ -		d e θ i ɾ -
Italian	k o n - - t a r e	e n u m e r a r e	n o v e r a r e	d i - - r e
PortugueseBrazil	k õ - - - t a ɾ -	e n u m e ɾ a ɾ -		d i z e ɾ -
Portuguese	k õ - - - t a ɾ -	e n u m e ɾ a ɾ -		d i z e ɾ -
Catalan	k u m - - t a - -	e n u m e ɾ a - -	n u m e ɾ a - -	d i - - - -
Walloon	k õ - - - t e - -			d iː - - ʁ -
Friulian	k o n - - t aː - -		n u m e r aː - -	d iː - - - -
Romanian			n u m a r a - -	z i ʧ e - -

Appendix 3 - Concepts Used

	ToSay-Exponere	ToSing-AncestralClass	ToPlay-Ludere	ToPlay-Jiocare
Latin	e k s p oː n e r e	k a n t aː r e	l uː d e r e	j o - k aː r e
French		ʃ ɑ̃ - t e - -		ʒ - w - e - -
Spanish		k a n t a ɾ -	l u d i ɾ -	x u - ɡ a ɾ -
Italian	- - s p o r - r e	k a n t a r e		ʤ o - k a r e
PortugueseBrazil		k ẽ - t a ɾ -		ʒ o - ɡ a ʁ -
Portuguese		k ẽ - t a ɾ -		ʒ u - ɣ a ɾ -
Catalan		k ə n t a - -		ʒ u - ɡ a - -
Walloon		ʧ ɑ̃ - t e - -		ʤ u w - e - -
Friulian		c a n t aː - -		ʤ u j - aː - -
Romanian	- - s p u n e - -	k ɨ n t a - -		ʒ u - k a - -

	ToFloat	ToFloat-Fluitare	ToFlow	ToFlow-Colare
Latin	f l uː k t u aː r e	f l u i t aː r e	f l u e r e	k oː l aː r e
French	f l y k t ɥ e - -		f l y e - -	k u l e - -
Spanish	f l u ɡ t w a ɾ -		f l u i ɾ -	k o l a ɾ -
Italian	f l u t t u a r e	f l u i t a r e	f l u i r e	k o l a r e
PortugueseBrazil	f l u - t u a ʁ -		f l w i ʁ -	k o - a ʁ -
Portuguese	f l u - t u a ɾ -		f l w i ɾ -	k u - a ɾ -
Catalan	f l u k t u a - -		f l u i - -	k u ɫ a - -
Walloon				k ɔ l e - -
Friulian				
Romanian	f l u c t u a - -			

	ToFlow-Excurrere	ToFlow-Currere	ToFreeze	ToFreeze-Glaciare
Latin	e k s k u r r e r e	k u r r e r e	ɡ e l aː r e	ɡ l a - k i aː r e
French		k u - ʁ i ʁ -	ʒ ə l e - -	ɡ l a - s - e - -
Spanish	e - s k u r i ɾ - -	k o - r e ɾ -	- e l a ɾ -	
Italian	- - s k o r r e r e	k o r r e r e	ʤ e l a r e	ɡ j a t ʧ j a r e
PortugueseBrazil	i - ʃ k o - ʁ e ʁ -	k o - ʁ e ʁ -	ʒ i l a ɾ -	
Portuguese	i - ʃ k u - ʁ e ɾ -	k u - ʁ e ɾ -	ʒ i l a ɾ -	
Catalan	ə - s k o - r ə - -	k o - r ə - -	ʒ ə l a - -	ɡ l ə - s - a - -
Walloon		k ɔ - ʁ i - -	ʤ a l e - -	
Friulian	- - s k o - r iː - -	k o - r i - -		ɡ l a - ʧ - aː - -
Romanian	- - s k u ɾ ʤ e - -	k u ɾ ʤ e - -		

	ToFreeze-Inglaciare	ToSwell	ToSwell-Inflare	ToSwell-Conflare
Latin	i n ɡ l a k i aː r e	a ɡ m e n t aː r e u̯	i n f l aː r e	- k - o n f l aː r e
French		o ɡ m ɑ̃ - t e - -	ɑ̃ - f l e - -	- ɡ - õ - f l e - -
Spanish		a - m e n t a ɾ - u̯	i n ʧ - a ɾ -	
Italian		a m e n t a r e - u̯	e n f i a r e	- ɡ - o n f j a r e
PortugueseBrazil		a ɡ m e n t a ɾ - u̯	ĩ - ʃ - a ɾ -	
Portuguese		a ɡ m e n t a ɾ - u̯	ĩ - ʃ - a ɾ -	
Catalan		a u ɡ m e n t a -	i m f l a - -	
Walloon			ẽ - f l e - -	- ɡ - õ - f l e - -
Friulian			e n f l aː - -	z ɡ l o ŋ f - aː - -
Romanian	ɨ n ɡ - e ʦ - a - -		u m f l a - -	

Appendix 3 - Concepts Used

	ToSwell-Intumescere	ToSwell-Crescere	ToBurn-Brojan	ToBurn-Cremare
Latin	i n t u m eː s k e r e	k r - eː s k eː r e		k r e m aː r e
French		k ʁ w a - t - ʁ -	b ʁ y l e - -	k ʁ a m e - -
Spanish	e n t u m e θ e ɾ -	k ɾ - e θ - e ɾ -		k - e m a ɾ -
Italian		k r - e ʃ ʃ e r e	b r u ʧ a r e	k r e m a r e
PortugueseBrazil	ĩ - t u m e s - e ɾ	k ɾ - e s - e ʁ -		k - ɐj m a ɾ e
Portuguese	ĩ - t u m e s - e ɾ	k ɾ - i ʃ s e ɾ -		k - ej m a ʁ e
Catalan		k ɾ - e - ʃ ə - -		k r ə m a - -
Walloon			b ʁ uː l e - -	
Friulian			b r u z aː - -	
Romanian		k ɾ - e ʃ t e - -		

	ToBurn-Flammare	ToBurn-Ardere	ToBurn-Flagrare	ToBurn-Incendere
Latin	f l a m m aː r e	a r d eː r e	f l a g r aː r e	i n k e n d - e r e
French	f l a - m e - -	a ʁ d - ʁ -	f l a g ʁ e - -	ɛ̃ - s ɑ̃ - d j e - -
Spanish		a ɾ d e ɾ -	f l a g ɾ a ɾ -	e n θ e n d - e ɾ -
Italian	f j a m m a r e	a r d e r e	f l a g r a r e	i n ʧ ɛ n d j a r e
PortugueseBrazil		a ʁ d e ʁ -	f l a g ʁ a ʁ -	ĩ - s e n ʤ ɪ a ɾ -
Portuguese		ɐ ɾ d e ɾ -	f l a g ɾ a ɾ -	ĩ - s ẽ - d j a ɾ -
Catalan	f ɫ a - m a - -			ə n s e n d - - ɾ ə
Walloon				
Friulian	f l a - m aː - -			
Romanian		a ɾ d e - -		i n ʧ i n d ʒ e - -

	ToBurn-AncestralClass8	All	All-Totus	Many
Latin	u s t u l aː r e	o m n eː s	t oː - t u s	m u l t u s
French			t u - - - -	m u - - - -
Spanish			t o - d o -	m u - ʧ o -
Italian	u s t o l a r e	o ɲ ɲ i -	t u t t o -	m o l t o -
PortugueseBrazil			t o - d u -	m ũ ʒ̃ - t u
Portuguese			t o - ð u -	m ũ ʒ̃ - t u
Catalan			t o - t - -	m o l - - -
Walloon			t ɔ - - - -	
Friulian			d u - t - -	m o l c - -
Romanian	u s t u r a - -		t o - t - -	m u l t - -

	Many-Tantus	Some	Few	Other
Latin	t a n t u s		p a k u̯ s	a l t e r -
French		o - k œ̃ - -	p ø - - -	o - t - ʁ -
Spanish	t a n t o -	a l g u n o	p o k o -	o - t - ɾ o
Italian	t a n t o -	a l k u n o	p ɔ k o -	a l t - r o
PortugueseBrazil	t ẽ - t u -	a w g ũ - -	p o w k u	o w t - ɾ u
Portuguese	t ẽ - t u -	a ɫ g ũ - -	p o w k u	o w t - ɾ u
Catalan	t a n t - -	ə l g u - -	p ɔ k - -	a l t - ɾ ə
Walloon			p õ - - -	õ - t - - -
Friulian	t a n c - -		p oː k - -	a l t - r i
Romanian				a l t - - -

Appendix 3 - Concepts Used

	Other-Alius	Big	Big-Grandem	Big-Majjorem
Latin	a l i u s	m a g n u s	g r a n d e m	m aj j oː r e m
French			g ʁ ɑ̃ - - - -	
Spanish		m a - ɲ o -	g ɾ a n d e -	
Italian		m a ɲ ɲ o -	g r a n d e -	
PortugueseBrazil	a w - - -		g ɾ ɐ̃ - ʤ i -	
Portuguese	a ɫ - - -		g ɾ ɐ̃ - d i -	
Catalan			g r a n - - -	
Walloon			g ʁ ɑ̃ - - - -	
Friulian			g r a n t - -	
Romanian				m a - - - ɾ e

	Long-Longum	Long-Largum	Wide	Wide-Amplum
Latin	l o - n g u s	l a r g u s	l aː t u s	a m p l u s
French	l ɔ̃ - - - - -	l a ʁ ʒ - -	l e - - -	ɑ̃ - p l - -
Spanish	l o - n g o -	l a ɾ ɣ o -	l a t o -	a n ʧ - o -
Italian	l u - n g o -	l a r g o -	l a t o -	a m p j o -
PortugueseBrazil	l õ - g u - -	l a ʁ g u -	l a t u -	ɐ̃ - ʃ - u -
Portuguese	l õ - g u - -	l a ɾ g u -	l a t u -	ɐ̃ - ʃ - u -
Catalan	ʎ o - ŋ - - -	ʎ a ɾ k - -		a m p l ə -
Walloon	l õ - - - - -			
Friulian	l u n k - - -	l a r k - -		
Romanian	l u n g - - -	l a r g - -	l a t - -	

	Thick	Thick-Spissum	Thick-Gurdum	Thick-Grossum
Latin	k r a s s u s	- s p i s s u s	g u r d u s	g r o - s s u s
French	g ʁ ɑ - - - -	e - p e - - - -		g ʁ o - - - - -
Spanish	g ɾ a - s o -	e s p e s o - -	g o ɾ d o -	
Italian	g r a s s o -	- s p e s s o -		g r ɔ - s s o -
PortugueseBrazil		i s p ɛ - s u -		g ɾ o - s u - -
Portuguese	g ɾ a - ʃ u -	i ʃ p e - s u -		g ɾ o - s u - -
Catalan	g ɾ a - s - -	ə s p ɛ - s - -		g ɾ ɔ - s - - -
Walloon		- s p ɛ - - - -		
Friulian	g r a s - - -			g r w ɛ s - - -
Romanian	g r a s - - -			g r o - s - - -

	Heavy	Heavy-Lurdus	Small	Small-Pittinus
Latin	g r a - - w i s	l u r d u s	p i t t i t u s	p i t t i n u s
French	g ʁ i j ɛ f - -	l u ʁ - - -	p ə - t i - - -	
Spanish	g ɾ a - - b e -	l e ɾ d o -		p e - k e ɲ o -
Italian	g r ɛ - - v e -	l o r d o -		p i t ʧ i n o -
PortugueseBrazil	g ɾ a - - v i -	l e ɾ d o -		p e - k e n u -
Portuguese	g ɾ a - - v ɨ -	l e ɾ d o -		p ɨ - k e n u -
Catalan	g ɾ e - - w - -		p ə t i t - - -	
Walloon	g r a - - v - -		p i - t i - - -	
Friulian	g r ɛ - - v i -			
Romanian	g ɾ e - - w - -			p u - ʦ i n - -

Appendix 3 - Concepts Used

	Small-Pitulus	Short	Short-Brevis	Narrow
Latin	p i - t u l u s	k u r t u s	b r e w i s	a n g u s t u s
French		k u ʁ - - -	b ʁ ɛ f - -	
Spanish		k o ɾ t o -	b ɾ e b e -	a n ɡ o s t o -
Italian	p i k k o l o -	k o r t o -	b r ɛ v e -	a n g u s t o -
PortugueseBrazil		k u ʁ t u -	b ɾ ɛ v i -	
Portuguese		k u ɾ t u -	b ɾ ɛ v ɨ -	
Catalan		k u ɾ t - -	b ɾ e w - -	
Walloon		k uː ʁ - - -	b ʁ e f - -	
Friulian	p i - ʧ u l - -	k u r t - -		
Romanian				ɨ ŋ g u s t - -

	Narrow-Strictus	Thin	Thin-Delicatus	Thin-Subtilis
Latin	- s t r - i - k t u s	m i n uː - t u s	d eː l i k aː t u s	s u b t iː l e m
French	e - t ʁ w a - - - -	m ə n y - - - -	d uː - - ʒ eː - - -	
Spanish	e s t ɾ - e - - ʧ o	m e n u - d o -	d e l - ɣ a ð o -	s u - t i l - -
Italian	- s t r - e - t t o	m i n u - t o -	d e l i k a t o -	s o t t i l e -
PortugueseBrazil	i s t ɾ - ej - - t u	m i - u - d u -	d e w - ɡ a d u -	s u - ʧ i w - -
Portuguese	ɨ ʃ t ɾ - ɐj - - t u	m i - u - ð u -	d ɛ ɬ - ɣ a ð u -	s u - ʧ i w - -
Catalan	ə s t ɾ - ɛ - - t -	m ə n u - t - -	d ə l i k a t - -	s u p t i l - -
Walloon	- s t ʁ - øː - - - -	m i n u - - - -		s uː - t i - - -
Friulian	- s t r - ɛ - - t -	m i n uː - t - -		s u - t iː l - -
Romanian	- s t r - ɨ m - t -	m ə r u n t - -		s u b ʦ i r e -

	Warm	Cold	Cold-Recens	Full
Latin	k a l i d u s	f r - iː ɡ i d u s	r e k - e n t e m	p l eː n u s
French	ʃ o - - - - - -	f ʁ w a - - - - -		p l ɛ̃ - - -
Spanish	k a l - d o -	f ɾ - i - - - o -	r e θ j e n t e -	- ʎ e n o -
Italian	k a l - d o -	f r - e d - d o -	r e ʧ - ɛ n t e -	p j ɛː n o -
PortugueseBrazil	k a w - - d u	f ɾ - i - - - u -	ʁ e s - ẽ - ʧ i -	ʃ - ɐj - u -
Portuguese	k a l - d u -	f ɾ - i - - - u -	ʁ e s - ẽ - ʧ i -	ʃ - ɐj - u -
Catalan	k a ɬ - - - -	f ɾ - ɛ - - t - -		p ɬ ɛ - - -
Walloon	ʧ õ - - - - -	f ʁ w ɛ - - - - -		p l ẽ - - -
Friulian	c a l - t - -	f r - eː - - t - -	r e ʦ - i n t - -	p l ɛ n - -
Romanian	k a l - d - -		r e ʧ - e - - - -	p l i n - -

	New	Old	Good	Bad
Latin	n - o w u s	w - e t u l u s	b - o n u s	m a l u s
French	n - u v o -	v j ø - - - - -	b - õ - - -	m a l - -
Spanish	n w e β o -	b j e x o - - -	b w e n o -	m a l o -
Italian	n - ɔ v o -	v - ɛ k - k j o	b w ɔː n o -	m a l o -
PortugueseBrazil	n - o v u -	v - ɐj - - ʎ u -	b - õ - - -	m a w - -
Portuguese	n - o v u -	v - e - - ʎ u -	b - õ - - -	m a w - -
Catalan	n - ɔ w - -	v - e - - ʎ - -	b - ɔ n - -	m a l - -
Walloon	n - ɔ v ɛ -	v iː - - - - - -	b - õ - - -	m ɔː - - -
Friulian	ɲ - uː f - -	v j e - - - i -	b - ɔ n - -	m aː l - -
Romanian	n - o w - -	v - e kʲ - - - -	b - u n - -	

Appendix 3 - Concepts Used

	Rotten	Rotten-Putrem	Dirty	Dirty-Spurcus
Latin	p u t r i d u s	p u t r e m	s o r d i d u s	- s p u r c u s
French				
Spanish	p o ð ɾ i ð o -	p o ð ɾ e -	s o ɾ d i d o -	
Italian	p u t r i d o -		s ɔ r d i d o -	- s p ɔ r k o -
PortugueseBrazil		p o d ɾ i -	s ɔ ɾ d i d u -	i s p u ɾ k u -
Portuguese		p o ð ɾ ɨ -	s ɔ ɾ d i d u -	i ʃ p u ɾ k u -
Catalan	p u ð ɾ i t - -			
Walloon				
Friulian				- s p ɔ r k - -
Romanian	p u t r e d - -			- s p u r k - -

	Straight	Round	SharpAsAKnife	DullAsAKnife
Latin	d iː r - eː k t u s	r o t u n d u s	a k uː t u s	h e b e t e m
French	d - ʁ w a - - - -	ʁ õ - - - - - -		
Spanish		r e d o n d o -	a ɣ u ð o -	
Italian	d - r - i t t o -	r i t o n d o -		ɛ b e t e - -
PortugueseBrazil	ʤ i ɾ - ej - t u -	ʁ e d õ - d u -		
Portuguese	d i ɾ - ɐj - t u -	ʁ ɨ d õ - d u -	ɐ ɣ u ð u -	
Catalan	d - ɾ - ɛ - t - -	r ə d o - - - -	ə g u t - -	
Walloon	d - r - øː - - - -	r õ - - - - - -		
Friulian	d - r - ɛ - t - -	t a r ɔ n t - -		
Romanian	d - r - e p t - -	r ə t u n d - -		

	DullAsAKnife-Retusus	Smooth	Smooth-Nitidus	Wet
Latin	r e t uː s u s	s u aː w e m	n i t i d u s	uː m i d u s
French			n ɛ t - - - - -	
Spanish			n i ð i - o -	
Italian	r e t u z o -	s o a v e -	n e t - t o -	u m i d o -
PortugueseBrazil			n ɛ ʤ u - - -	
Portuguese			n ɛ ʤ u - - -	
Catalan		s u a w - -	n ɛ t - - - -	
Walloon				
Friulian			n ɛ t - - - -	u m i d - -
Romanian			n e t e d - -	u m e d - -

	Wet-Udus	Dry	Correct	Near
Latin	uː d u s	s i k k u s	k o r r eː k t u s	p r o k s i - - m u s
French		s ɛ - k - -		
Spanish		s e - k o -		p ɾ o x - i - - m o -
Italian		s e k k o -	k o r r e t t o -	p r ɔ s s i - - m o -
PortugueseBrazil		s e - k u -		p ɾ o s i - - m u -
Portuguese		s e - k u -		p ɾ o s i - - m u -
Catalan		s ɛ k - - -		p ɾ o - - - i z m e -
Walloon		s ɛ ʧ - - -		
Friulian		s ɛ - k - -		p r o - s i - - m - -
Romanian	u d - -	s e k - - -		

Appendix 3 - Concepts Used

	Near-AdPrope	Near-Pressus	Near-Vicinus	Near-Circa
Latin	a d p r o p r e	p r e s s u s	w - iː k iː n u s	k i r k a
French		p ʁ e - - - -	v w a z ɛ̃ - - -	θ e ɾ k a
Spanish			b - e θ i n o -	
Italian		p r ɛ s s o -	v - i ʧ i n o -	
PortugueseBrazil			v - i z i ɲ u -	
Portuguese			v - i z i ɲ u -	
Catalan	ə - p ɾ ɔ p - -		b - ə - i - - -	
Walloon		p r ɛ - - - -	v - i ʒ ẽ - - -	
Friulian			v - i ʧ i n - -	
Romanian	a - p r o̯a p - e		v - e ʧ i n - -	

	Far	Right-Dextrem	Left	Red
Latin		d - e k s t r u m	s i n - i s t r u m	r u s s u s
French	l w ɛ̃ - t ɛ̃ - -		s ə n - ɛ s t ʁ - -	ʁ u - - - -
Spanish		d j e - s t ɾ o -	s i n j e s t ɾ o -	r o - x o -
Italian	l - o n t a n o	d - ɛ - s t r o -	s i n - e s t r o -	r o s s o -
PortugueseBrazil		d - ɛ - s t ɾ u -	s - - - ɛ ʃ t ɾ u -	ʁ o - ʃ ʊ -
Portuguese		d - ɛ - ʃ t ɾ u -	s - - - ɛ ʃ t ɾ u -	ʁ o - ʃ u -
Catalan	ʎ - u n t a - -	d - e - s t ɾ ə -		r o - s - -
Walloon				
Friulian	l - o n t a n -	d j e - s t r i -	s i ɲ - e s t r i -	r ɔ - s - -
Romanian				ɾ o - ʃ u -

	Red-Vermiculus	Red-Rubeus	Green	Yellow
Latin	v e r m i k u l u s	r u - b e u s	w i r i d e m	g a l b i n u s
French	v ɛ ʁ m ɛj - - - - -	ʁ u - ʒ - - -	v e ʁ - - - -	ʒ o - - - n - -
Spanish	b e ɾ m e x o - - -	r u - b j o -	b e ɾ - d e -	
Italian	v e r m i ʎ - ʎ o -	r ɔ b b j o -	v e r - d e -	
PortugueseBrazil	v e ʁ m e - - ʎ u -	r u - b e o -	v e ɾ - d i -	
Portuguese	v i ɾ m ɐj - - ʎ u -	r u - b e o -	v e ɾ - d i -	
Catalan	b ə r m ɛ - - ʎ - -	r u - ʤ e - -	v ɛ ɾ - t - -	
Walloon		r ɔ - ʧ - - -	v ɛ ʁ - - - -	ʤ ɛ - - - n - -
Friulian			v ɛ r - t - -	
Romanian		r o̯j - b - - -	v e ɾ - d e -	g a l b e n - -

	Yellow-Amarellus	Yellow-Croceus	White	One
Latin	a m a r e l l u s	k r o k e u s	a l b u s	uː n u m
French				œ̃ - - -
Spanish	a m a ɾ i - ʝ o -		a l b o -	u n o -
Italian		k r o ʧ e o -	a l b o -	u n o -
PortugueseBrazil	ɐ m a ɾ ɛ - l u -		a w v u -	ũ - - -
Portuguese	ɐ m ɐ ɾ ɛ - l u -		a l v u -	ũ - - -
Catalan		g ɾ ɔ k - - -	a l b - -	u n - -
Walloon				õ - - -
Friulian				u ŋ - -
Romanian			a l b - -	u n u -

Appendix 3 - Concepts Used

	Two-Duos	Two-Duae	Two-Duas	Three
Latin	d u oː s	d u - aj	d u a s	t r - eː s
French	d - ø -			t ʁ w ɑ -
Spanish	d - o s			t ɾ - e s
Italian		d u - e		t r - e -
PortugueseBrazil	d - oj s		d u ɐ s	t ɾ - e s
Portuguese	d - oj ʃ		d u ɐ ʃ	t ɾ - e ʃ
Catalan	d - o s			t r - ɛ s
Walloon	d - øː -			t r - øː -
Friulian	d - oj -			t r - eː -
Romanian	d - oj -	d o w ə		t r - ej -

	Four	Five	Here	There
Latin	kʷ - a t t w o r -	kʷ iː n kʷ - e	- e k k u m h iː k	i l l aː k
French	k - a - t - - ʁ -	s ẽ - k - -	i - - s - - - i -	- - l a -
Spanish	k w a - t - - ɾ o	θ i n k - o	- a - k - - - i -	a - ʝ a -
Italian	k w a t t - - r o	ʧ i ŋ k w e	- - - k w - - i -	- - l a -
PortugueseBrazil	k w a - t - - ɾ u	s ĩ - k - u	- a - k - - - i -	- - l a -
Portuguese	k w a - t - - ɾ u	s ĩ - k - u	- ɐ - k - - - i -	- - l a -
Catalan	k w a - t - - ɾ ə	s i ŋ k - -	- a - k - - - i -	ə - ʎ a -
Walloon	k w a - t - - - -	s ẽ - k - -		- - l a -
Friulian	k w a - t - - r i	ʧ i ŋ k - -	- a - k - - - i -	
Romanian	p - a - t - - r u	ʧ i n ʧ - -		- - l a -

	There-Ibi	There-AdIbi	Who-Qui	Who-Quem
Latin	i b iː		kʷ - i s	kʷ - e m -
French			k - i -	
Spanish		a i		k j e n -
Italian	- v i		k - i -	
PortugueseBrazil		a i		k - ẽj - -
Portuguese		ɐ i		k - ɐ̃j - -
Catalan			k - i -	
Walloon			k - iː -	
Friulian			k w i -	
Romanian				ʧ - i n e

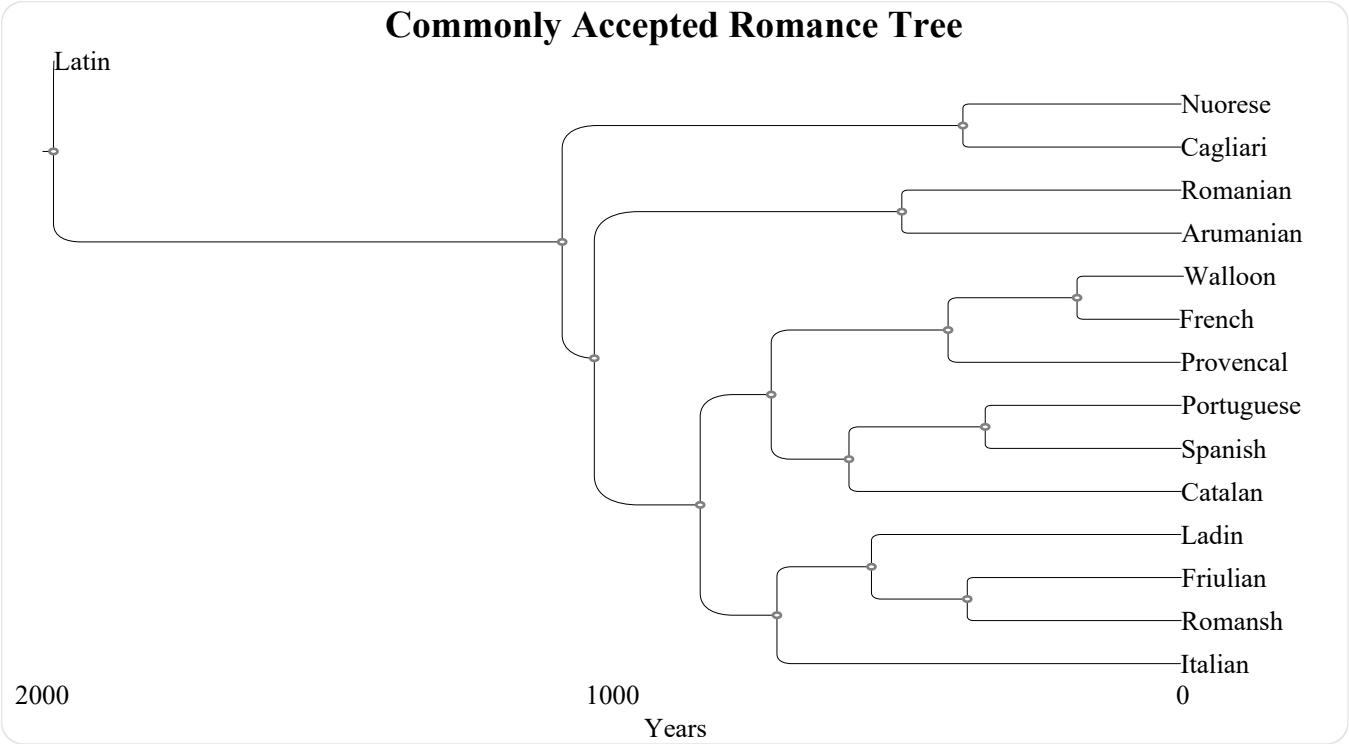
	What	When-Quando	How-Quomodo	Not
Latin	kʷ - i d	kʷ - a n d oː	kʷ oː m o d o	n oː n
French	k w a -	k - ɑ̃ - - -	k ɔ m ɑ̃ - -	n ɔ̃ -
Spanish	k - e -	k w a n d o	k o m o - -	n o -
Italian	k - e -	k w a n d o	k o m e - -	n o n
PortugueseBrazil	k - i -	k w ẽ - d u	k o m u - -	n ẽ - w̃
Portuguese	k - ɨ -	k w ẽ - d u	k o m u - -	n ẽ - w̃
Catalan	k - ɛ -	k w a n - -	k ɔ m - - -	n o -
Walloon	k w ɛː -	k w a n d -	k ɔ m ɛ̃ - -	n ɔ̃ -
Friulian	ʧ - e -	k w a n t -	ʧ e m uː t -	n o -
Romanian	ʧ - e -	k - ɨ n d -	k u m - - -	n u -

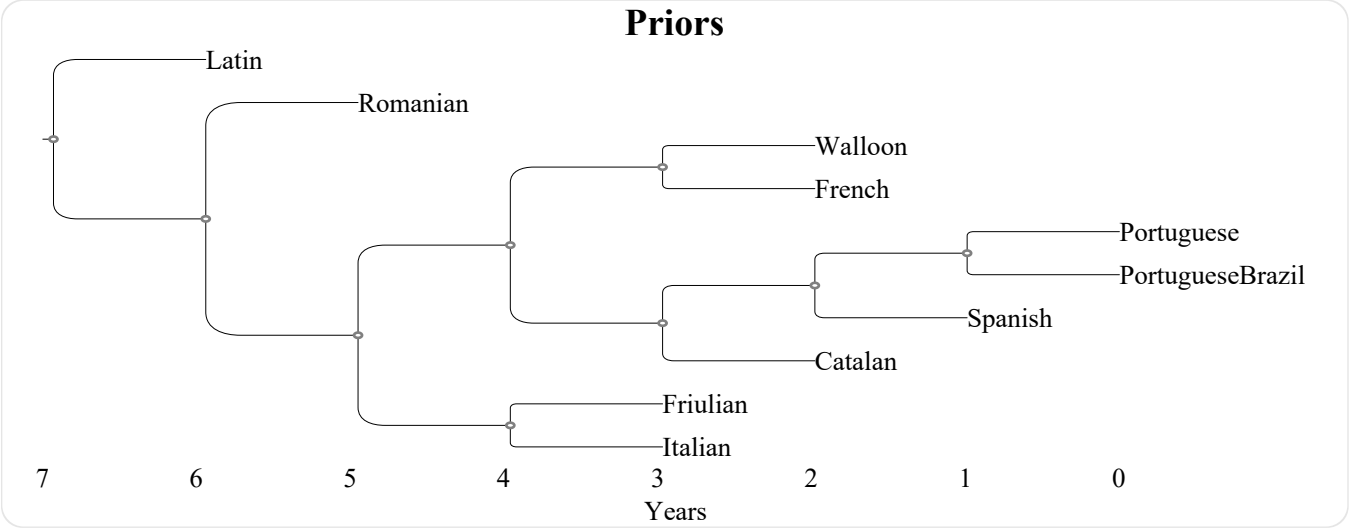
Appendix 3 - Concepts Used

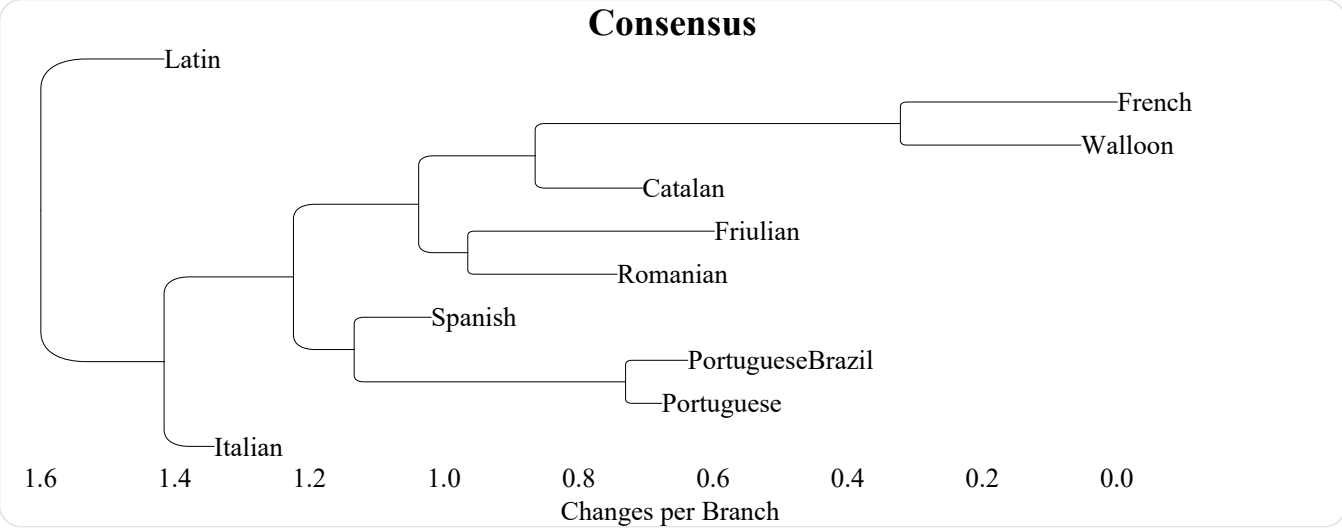
	Not-Nec	At	In-In	In-Deintus
Latin	n e k	a d	i n	d e i n t u s
French	n i -	a -		d ɑ̃ - - - - -
Spanish	n i -	a -	e n	
Italian	n e -	a -	i n	
PortugueseBrazil	n ẽj̃ -	a -	ẽj̃ -	
Portuguese	n ɐ̃j̃ -	ɐ -	ɐ̃j̃ -	
Catalan	n i -	a -	ə n	d i - n - - s
Walloon	n ẽ -	a -		
Friulian		a -		
Romanian		a -	ɨ n	

	With-Cum	With-Abhoc	And-Et	And-Si
Latin	k u m	a b h o c	e t	s iː k
French		a v - e k	e -	s i -
Spanish	k o n		i -	s i -
Italian	k o n		e -	s i -
PortugueseBrazil	k õ -		i -	s ĩ -
Portuguese	k õ -		i -	s ĩ -
Catalan			i -	s i -
Walloon		a v - u -	ɛ -	s i -
Friulian			e -	s i -
Romanian	k u -		e -	ʃ i -

	Because-Quod
Latin	kʷ o d
French	k ə -
Spanish	k e -
Italian	k e -
PortugueseBrazil	k i -
Portuguese	k ɨ -
Catalan	k ə -
Walloon	k iː -
Friulian	k e -
Romanian	k ə -


Commonly Accepted Romance Tree
Latin
Nuorese
Cagliari
Romanian
Arumanian
Walloon
French
Provencal
Portuguese
Spanish
Catalan
Ladin
Friulian
Romansh
Italian
2000
1000
0
Years


Priors
Latin
Romanian
Walloon
French
Portuguese
PortugueseBrazil
Spanish
Catalan
Friulian
Italian
7
6
5
4
3
2
1
0
Years


Consensus
Latin
French
Walloon
Catalan
Friulian
Romanian
Spanish
PortugueseBrazil
Portuguese
Italian
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
Changes per Branch