

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	f	2	e:	3	m	4	i	5	n	6	a	7	e	8	b	9	r	10	ɐ	11	j	12	œ	13	ɛ	14	u
15	l	16	r	17	x	18	o	19	ʌ	20	ɤ	21	i:	22	d	23	ɲ	24	ɔ	25	ə	26	ɔ̣a	27	t		
28	ã	29	ĩ	30	ẽ	31	ʈʂ	32	ɨ	33	ẽj	34	s	35	p	36	z	37	ʃ	38	ð	39	o:	40	k		
41	ʈs	42	a:	43	ẽj	44	aj	45	θ	46	ej	47	ɐj	48	w	49	õ	50	h	51	v	52	aɯ				
53	ẽ	54	ẽw	55	c	56	ij	57	ẽ	58	β	59	ɭ	60	ɑ	61	u:	62	ɥ	63	y	64	g				
65	iw	66	ɔj	67	dz	68	j	69	dʒ	70	oj	71	g ^w	72	ŋ	73	õ	74	ø	75	ɛ̣a	76	r				
77	ɛj	78	k ^j	79	ɪ	80	ʒ	81	ʃ	82	ɣ	83	k ^w														

Appendix 2 - Partition Assignments

Model: “Linguistically Informed”

1) e	e: e
2) i	i i:
3) a	a a:
4) u	u u:
5) o	o o:
6) ε	ε
7) ø	ø
8) Nasal Vowel	ã ĩ ẽ ĕj ĕj õ ẽ ĕw ĕ ã
9) Vowel	ɐ œ ɔ ə ɔa i aj ej ɐj au ij a y iw ɔj oj ɛa ej ɪ
10) Nasal Consonant	m n ɲ ŋ
11) Non Sylabic Sonorant	j l r w
12) Consonant	f b ɾ x ʎ ɸ d t ʈ s p z ʃ ʈ k ts θ h v c β ɭ ɥ g dz j dʒ g ^w ɾ k ^j ʒ ʃ ɣ k ^w

Appendix 3 - Concepts Used

	Woman-Primary	Woman-Mulier	Woman-Domina	Child-Primary
Latin	f e : - m i - n - a	m u l i e r e m	d o m i n a	i n f a n t e m
French	f a - m - - -		d a m - - -	ã - f ã - - -
Spanish	- e - m - b r - a	m u x - e r - -	d o - - n a	i n f a n t e -
Italian	f e m m i - n - a	m o l l e - - -	d o n - n a	- - f a n t e -
PortugueseBrazil	f e - m e - - - e	m u l l e - - -	d o - - n e	ĩ - f ã - t i -
Portuguese	f e - m j - - - e	m u l l e r - - -	d o - - n e	ĩ - f ã - t i -
Catalan	f e - m - b r - a	m u l l e - - -	d o - - n a	
Walloon	f œ - m - - - -		d a m - - -	ε - f ã - - - -
Friulian	f ε - m i - n - e	m u - - i : r - -	d o - - n e	
Romanian	f e - m e - - j e	m u - j e r e -	d o a m - n a	
	Child-Ninnus	Wife-Primary	Husband-Primary	Husband-Sponsus
Latin		- s p o n s a	m a r i : t u s	- s p o n s u s
French		e - p u - z -	m a r i - - -	e - p u - - - -
Spanish	n i n o	e s p o - s a	m a r i ð o -	e s p o - s o -
Italian	n i n o	- s p o - z a	m a r i t o -	- s p o - z o -
PortugueseBrazil	n e n ã	i s p o - z a	m a r i d u -	i s p o - z u -
Portuguese	n e n ã	i f p o - z e	m e r i ð u -	i f p o - z u -
Catalan	n e n -	ə s p o - z ə	m a r i t - -	ə s p o - s - -
Walloon				
Friulian	n i n i	- s p o - s e	m a r i : t - -	- s p o : - s - -
Romanian			m ə r i t - -	
	Husband-Socius	Mother-Primary	Father-Primary	Father-Tata
Latin	s o k i u s	m a : t r e m	p a t r e	t a t a
French		m e - r - -	p e - r - -	
Spanish		m a ð r e -	p a ð r e	t a t a
Italian		m a d r e -	p a d r e	t a t a
PortugueseBrazil		m ã - - - -	p a j - - -	t a t a
Portuguese		m ã - - - -	p a j - - -	t a t a
Catalan		m a - r ə -	p a - r ə	
Walloon		m e - r - -	p ε - r - -	
Friulian		m a - r i -	p a - r i	t a t e
Romanian	s o t s - - -			t a t ə
	Animal-Primary	Animal-Bestia	Fish-Piskem	Fish-Pescion
Latin	a n i m a l i a	b - e : s t i a	p i s k e m	
French	o - - m a - j -			p w a s ð
Spanish	a l i m a n - a		p e θ - - -	
Italian		b - i f f - a	p e f f e -	
PortugueseBrazil		b - i - f - e	p e j f - i -	
Portuguese		b - i - f - e	p e j f - i -	
Catalan			p e f - - -	
Walloon		b i ε s - - -		p - ε h ð
Friulian	- n e m a : l - -	b - i s - - -	p ε s - - -	
Romanian	- n ə m a - j e		p e f t e -	

Appendix 3 - Concepts Used

	Bird-Avem	Bird-Aucellum	Bird-Passerem	Dog-Primary
Latin	a w e m	- a k - e l l u s u	p a s s e r e m	k - a n e m
French		w a z - o - - -		f j ã - - -
Spanish	a b e -		p a - x a r o -	k - a n - -
Italian		- u t t f 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 - ã - - -
Portuguese	a v i -		p a - s e r u -	k - ã - - -
Catalan	a w - -	- u s - e - λ - -		k - a - - -
Walloon		- u h - ε - - -		t f - ã - - -
Friulian		- u t f j ε - l - -	p a - s a r - -	c - a n - -
Romanian			p a - s ə r e -	k - i j n e -
	Louse-Primary	Snake-Primary	Worm-Primary	Tree-Primary
Latin	p - e d u - k l u s	s - e r p - e n t e n w - e r m e m		a r b o r e m
French	p - u - - - - -	s - e ʁ p - ã - - -	v - e ʁ - - -	a ʁ b - ʁ - -
Spanish	p j o - - - x - o -	s - e r p j e n t e - b - e r m e -		a r 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 r o -
PortugueseBrazil	p - i - o - λ u - -	s - e ʁ p - ã - t f i - v - e ʁ m i -		a ʁ v o r i -
Portuguese	p - i - o - λ u - -	s - i r p - ã - t i - v - e r m i -		a r v u r i -
Catalan	p - o - - - λ - - -	s - ə r p - e n - - - v - ε r m - -		a - b - r ə -
Walloon	p j u - - - - -	s j ε r p - ã - - - v j e r - - -		ɔ - p - - -
Friulian	p - e d o : - l i - -	s - a r p - i n t - - v j a : r - - -		a r b u l - -
Romanian	p - ə d u - k j e -	f - a r p - e - - - v j e r m e -		a r b o r e -
	Forest-Primary	Stick-Primary	Fruit-Primary	Seed-Primary
Latin	s i l w a	p a : l u s	f r u : - k t u s	s e : m e n
French		p a l - -	f ʁ ʁ i - - -	
Spanish	s e l b a	p a l o -	f r u - t t o -	
Italian	s e l v a	p a l o -	f r u - t t o -	s e m e -
PortugueseBrazil	s ε w v a	p a w - -	f r u - t t e -	
Portuguese	s ε t v e	p a w - -	f r u - t t e -	
Catalan	s e l b a	p a l - -	f r u j - t - -	
Walloon		p a - - -	f r y - t - -	
Friulian	s ε l v e	p a : l - -	f r u - t - -	
Romanian		p a r - -	f r u - k t - -	
	Seed-Sementis	Seed-Granum	Leaf-Primary	Leaf-Frondea
Latin	s e m - e n t i s	g r a : n u m	f - o l i a	f r o n d e a
French	s ə m - ã - - - s	g ʁ ε n - -	f - œ j - -	
Spanish	s i m j e n t e -	g r a n o -	- o x - a	
Italian	s e m - e n t e -	g r a n o -	f - ɔ λ λ a	f r o n d z - a
PortugueseBrazil	s e m - ã - t f i -	g r ã - - -	f - o λ - e	f r õ - s - e
Portuguese	s i m - ã - t i -	g r ã - - -	f - o λ - e	f r õ - s - e
Catalan	s ə m - e n - - -	g r a - - -	f - u λ - ə	
Walloon	s i m - ã - s - -	g r i n - -	f - ɔ j - - -	
Friulian	s e m - ε n t f ε -	g r a n - -	f w e - - e	
Romanian	s ə m - i n t f ə -	g r i - - -	f - ɔ a - j e	f r u n z - ə

Appendix 3 - Concepts Used

	Root-Primary	Root-Radicina	BarkOfATree-Primary	BarkOfATree-Corticea
Latin	- r a: d - i: k e m	r a: d i: k i: n a	k o r t i k e m	k o r t i - k e a
French		ɛ a - - s i n -		
Spanish	- r a - - i θ - -			k o r t e - θ - a
Italian				k o r t e t t̃ a -
PortugueseBrazil	- ɤ a - - i s - -		k ɔ ɤ t̃ i s i -	k o ɤ t̃ i - s ɐ -
Portuguese	- ɤ ɐ - - i ʃ - -		k ɔ r t i s i -	k u r t i - s ɐ -
Catalan	ə r ε l - - - -			
Walloon		r ε - - s ε n -		
Friulian	- r a d r i: s - -			
Romanian		r ə d ə t̃ i n ə		
	BarkOfATree-Skortea	Flower-Primary	Grass-Primary	Grass-Gramen
Latin	- s k - o r t e a	f l o: r e m	- h e r b a	g r a: m e n
French	e - k - o ɤ s - -	f l œ ɤ - -	- - ε ɤ b -	g ɤ a m ε n
Spanish		f l o r - -	j - e r b a	g r a m a -
Italian	- s k - ɔ r t s - a	f j o r e -	- - ε r b a	
PortugueseBrazil		f l o ɤ - -	- - e ɤ v ɐ	g r ẽ m ɐ -
Portuguese		f l o r - -	- - ε r v ɐ	g r ɐ m ɐ -
Catalan	ə s k - ɔ r s - ə	f l ɔ - - -	- - e r b ə	g r a m - -
Walloon	- h - w ε - s - -	f l œ r - -	j - ε - p -	
Friulian	- s k w a r t̃ - e	f l o: r - -	j - e r b e	g r a m e -
Romanian	- s k - ɔ a r t s - ə	f l ɔ a r e -	j - a r b ə	
	Rope-Primary	Rope-Restis	Skin-Primary	Skin-Pellis
Latin	f u: n - e m	r e s t e m		p - e l l e m
French			k w a - - - n -	p - o - - -
Spanish		r - i s t a		p j e - l - -
Italian	f u n - e -	r - ε s t a	k - o t e n n a	p - e l l e -
PortugueseBrazil		ɤ - ε ʃ t̃ i	k - o d̃ i - - ɐ	p - ε - l i -
Portuguese		ɤ - e ʃ t̃ i	k - o d i - - ɐ	p - e - l i -
Catalan			k - o - - n n ə	p - e - ʎ - -
Walloon			k - o j i - n - -	p ε - - - -
Friulian		r j e s t e		p j ε - l - -
Romanian	f u n j e -			p j e - l e -
	Meat-Primary	Blood-Primary	Bone-Primary	FatNoun-Primary
Latin	k a r n e m	s a n g ^w - i n e m	- o s s u m	a d e p e m
French	ʃ ε ɤ - - -	s ã - - - - -	- ɔ - s - -	
Spanish	k a r n e -	s a ŋ g - - r e -	w e - s o -	
Italian	k a r n e -	s a n g w e - - -	- ɔ s s o -	a d i p e -
PortugueseBrazil	k a ɤ n i -	s ẽ - g - i - - -	- o - s u -	
Portuguese	k a r n i -	s ẽ - g - i - - -	- o - s u -	
Catalan	k a r n - -	s a ŋ - - - - -	- ɔ - s - -	
Walloon	t̃ a r - - -	s ɔ̃ - g - - - - -	- ɔ - h ε -	
Friulian	c a: r - - -	s a n k - - - - -	w ε - s - -	
Romanian	k a r n e -	s i n d̃ - e - - -	- o - s - -	

Appendix 3 - Concepts Used

FatNoun-Crassia		Egg-Primary	Horn-Primary	Tail-Primary
Latin		- o: w u m	k - o r n u:	k a d a
French	g ʁ ε s -	- œ f - -	k - ɔ ʁ n -	k ø - -
Spanish	g r a s a	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	g r a ʃ ə	- o v u -	k - o ʁ n u	k a d ə
Portuguese	g r a ʃ ə	- o v u -	k - o r n u	k a d ə
Catalan	g r e ʃ -	- ɔ w - -	k - ɔ r n -	k u - a
Walloon	k r ɔ h -	- u - - -	k w ε - n -	k ɔ w -
Friulian	g r a s -	- u: f - -	k w a r - -	k ɔ d ε
Romanian		- o w - -	k - o r n -	c ɔ a d ə
Feather-Primary		Feather-Penna	Hair-Primary	Hair-Capillus
Latin	p l u: m a	p e n n a	p - i l u s	k a p i l l u s
French	p l y m -	p ε - n -	p w a l - -	ʃ ə v ø - - -
Spanish	p l u m a	p e - ɲ a	p - e l o -	k a b e - j o -
Italian	p j u m a	p e n n a	p - e l o -	k a p e l l o -
PortugueseBrazil		p e - n ə	p - e l u -	k a b e - l u -
Portuguese		p e - n ə	p - i l u -	k ə β e - l u -
Catalan	p l o m ə	p ε - ɲ ə	p - ε l - -	k ə b ε - ʎ - -
Walloon	p l ɔ m -	p ε - n -		ɖ ʒ - v ε - - -
Friulian	p l u m ε	p ε - n e	p - e: l - -	c a v e l - - -
Romanian		p a - n ə	p - ə r - -	
Head-Primary		Head-Testa	Ear-Primary	Eye-Primary
Latin	k a p i - t i a	t e s t a	o: r i - k l a	- o - k u l u s
French	ʃ ə v ε - - -	t ε - t -	o ʁ ej - - -	- œ - j - - -
Spanish	k a β e - θ - a		o r e - x - a	- o - x - o - -
Italian	k a v e t t s a	t ε s t a	o r e k k j a	- ɔ k k - j o -
PortugueseBrazil	k a b e - s - ə	t ε s t ə	o r e - - ʎ ə	- o - - - ʎ u -
Portuguese	k ə β e - s - ə	t ε ʃ t ə	o r ʊ j - - ʎ ə	- o - - - ʎ u -
Catalan	k a p - - - -	t e s t ə	u r ε - - ʎ ə	
Walloon		ʦ ε s - -	ɔ r ej - - -	- u - j - - -
Friulian	c a v ε - ʦ - -	t ε s t e	o r e: - - l e	v o - - l i - -
Romanian	k a p - - - -	ts ɛ a s t ə	u r e - k - e	- o - kʲ - - -
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 - ʃ -	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 ʦ e	b o k k a	g o l a
PortugueseBrazil		n a r i s -	b o - k ə	
Portuguese		n ɐ r i ʃ -	b o - k ə	
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 3 - Concepts Used

	Tooth-Primary	Fingernail-Primary	Foot-Primary	Leg-Gamba
Latin	d - e n t e m	u n g - u l a	p - e - d e m	g a m b a
French	d - ã - - -	õ - g - - l -	p j e - - - -	ʒ ã - b -
Spanish	d j e n t e -	u n - - - a	p j e - - - -	g a m b a
Italian	d - ε n t e -	u n g j - - a	p j ε - d e -	g a m b a
PortugueseBrazil	d - ě - t̃ i -	u n - - - e	p - ε - - - -	
Portuguese	d - ě - t i -	u n - - - e	p - ε - - - -	
Catalan			p - ε w - - -	k a m b ə
Walloon	d - ě - - - -	õ - g - - - -	p - i - - - -	ɖ ã - p -
Friulian	d - i n t - -	ɔ n g - u l e	p - i: - t - -	ʃ a m b e
Romanian	d - i n t e -	u n g j - - e	p i e - z - -	g a m b ə
	Leg-Perna	Leg-Petiolus	Knee-Geniculum	Hand-Primary
Latin	p - e r n a	p e - t i o l u s	g - e n i - k u l u m	m a n u m
French			ʒ - ə n u - - - -	m ě - - -
Spanish	p j e r n a	p e - θ i o l o -	- - i n o - x o - -	m a n o -
Italian	p - ε r n o	p i t t̃ - ɔ l o -	ɖ - i n ɔ k k - j o	m a: n o -
PortugueseBrazil	p - ε ʁ n e		ʒ u e - - - - -	Λ u m ě - - -
				ũ
Portuguese	p - ε r n e		ʒ w e - - - - -	Λ u m ě - - -
				ũ
Catalan	p - ε r n ə		ʒ - ə n o - - - -	Λ - -
Walloon			n - - n ɔ - - - -	m ě - - -
Friulian		p ε - k - ɔ l - -	ɖ - e n o - - - l i	m a n - - -
Romanian		p i - t̃ j o r - -	ɖ - e n u n kʲ - - -	m i n ə -
	Wing-Primary	Belly-Primary	Belly-Pantex	Guts-Primary
Latin	a: l a	w - e n t r e m	p a n t i k e m	i n t e r a: n e a
French	e l -	v - ã - t ʁ - -	p ã - s - - - -	ã - t - ʁ a - j -
Spanish	a l a	b j e n t r e -	p a n θ - - a -	e n t - r a n - a
Italian	a l a		p a n t̃ - - a -	
PortugueseBrazil	a - -		p ě - s - - e -	ĩ - t - r ě n - e
Portuguese	a - -		p ě - s - - e -	ẽ - t - r e n - e
Catalan	a l ə	b - e n t r ə -	p a n ʃ - - ə -	ə n t - r a n - ə
Walloon	e l -	v - ě - t - - -	p ã - s - - - -	
Friulian	a l e	v - i n t r i -	p a n t s - - e -	
Romanian		v - i n t r e -	p i n t e t̃ e -	
	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 ě - - -
Spanish	k w e - j o -		e s p a l - d a	s e n o -
Italian	k - o l l o -	d - ɔ s s o -	- s p a l - l a	s e n o -
PortugueseBrazil	k - ɔ - l u -		i ʃ p a d w - e	s e j - u -
Portuguese	k - ɔ - l u -		i ʃ p a d w - e	s e j - u -
Catalan	k - ɔ - ʎ - -	d - o - s - -	ə s p a ʎ - ʎ ə	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 ε n - -
Romanian		d - o - - - -	- s p a t - - e	s a n - -

Appendix 3 - Concepts Used

	Breast-Pectus	Breast-Pectorina	Heart-Primary	Heart-Anima
Latin	p - e k t u s		k - o r -	a n i m a
French	p - i - - -	p w a t ɛ i n	k - œ ɛ -	ɑ - - m -
Spanish	p - e - ʎ o -			a l - m a
Italian	p - ε t t o -		k w ɔ r e	a l - m a
PortugueseBrazil	p - ej - t u -		k - ɔ ɛ -	a w - m e
Portuguese	p - øj - t u -		k - o r -	a l - m e
Catalan	p - i - t - -		k - ɔ r -	
Walloon		p w ε t r i n	k - u r -	ɑ - - m -
Friulian	p - ε - t - -		k - u: r -	
Romanian	p j e p t - -			i n i m ə
	Liver-Primary	Sun-Primary	Sun-Soliculus	Moon-Primary
Latin	f - i: k a: t u m	s o: l e m	s o l i k u l u s	l u: n a
French	f w ɑ - - - -		s ɔ l ɛ j - - - -	l y n -
Spanish	- i ɣ a ð o -	s o l - -		l u n a
Italian	f - e g a t o -	s o l e -		l u n a
PortugueseBrazil	f - i g ɐ d u -	s ɔ w - -		l u - ɐ
Portuguese	f - i ɣ ɐ ð u -	s ɔ ʎ - -		l u - ɐ
Catalan	f - e d͡ʒ ə - - -	s ɔ l - -		ʎ u n ə
Walloon	f - œ - - t - -		s ɔ l ɔ - - - -	l ø n -
Friulian	f - i - a: t - -		s o r e - - l i -	l u n e
Romanian	f - i k a t - - -	s ɔ a r e -		l u n ə
	Star-Primary	Water-Primary	Rain-Primary	River-Primary
Latin	- s t - e: l l a	a - k ^w - a	p l u - w i a	f l u: m e n
French	e - t w a - l -	o - - - -	p l ɥ - - i -	
Spanish	e s t r e - j a	a - ɣ w a	j - u - b j a	
Italian	- s t - e l l a	a k k w a	p j o d d͡ʒ - a	f j u m e -
PortugueseBrazil	i s t r e - l ɐ	a - g w ɐ	ʃ - u - v - ɐ	f l u m i -
Portuguese	i ʃ t r e - l ɐ	a - g w ɐ	ʃ - u - v - ɐ	f l u m i -
Catalan	ə s t - ε - l -	aj - ɣ w ə	p l u - ʒ - ə	
Walloon	- s t - œ - l -	ε - - w -	p l ε - f - -	
Friulian	- s t - ε - l e	a - g - e	p l o - - j e	f l u m - -
Romanian	- s t - ɛ a - - -	a - p - ə	p l ɔ a - - j e	
	River-Rivus	River-Riparia	Lake-Primary	Sea-Primary
Latin	r i: w u s	r i: p - a: r i a	l a k u m	m a r e
French	ɣ y - - -	ɣ i v j e ɣ - -	l a k - -	m ε ɣ -
Spanish	r i - o -		l a g o -	m a r -
Italian	r i - o -		l a g o -	m a r e
PortugueseBrazil	ɣ i - w -		l a g u -	m a ɣ -
Portuguese	ɣ i - u -		l a y u -	m a r -
Catalan	r i - w -		ʎ a k - -	m a r -
Walloon	r ε - - -	r i v i: - r - -	l a k - -	m e r -
Friulian	r i - u -		l a: t - -	m a: r -
Romanian	r i - w -		l a k - -	m a r e

Appendix 3 - Concepts Used

	Salt-Primary	Stone-Primary	Stone-Petra	Stone-Lapidem
Latin	s a: l e m	s a k s u m	p - e t r a	l a p i d e m
French	s ε l - -		p j e - ʁ -	
Spanish	s a l - -		p j e ð r a	l a u - d e -
Italian	s a l e -	s a s s o -	p j e t r a	
PortugueseBrazil	s a w - -	s e j - ʃ u -	p - e d r e	
Portuguese	s a l - -	s e j - ʃ u -	p - ε ð r e	
Catalan	s a l - -		p - e ð r ə	
Walloon	s e - - -		p - i - r -	
Friulian	s a: l - -	s a - s - -	p j e - r e	
Romanian	s a r e -		p j a t r ə	
	Sand-Primary	Sand-Sabulum	Sand-Sabulo	Dust-Primary
Latin	h a r e: n a	s a b u l u m	s a b u l o n e m	p u l w e r e m
French		s a b - l - -		p u d - - ʁ - -
Spanish	- a r e n a			
Italian	- - r ε n a			p o l v e r e -
PortugueseBrazil	- a r e j - e	s a j β - r u -		
Portuguese	- e r e j - e	s a j β - r u -		
Catalan	- ə r e n ə	s o - - r ə -		
Walloon	- a r ε n -		s a v - j ɔ̃ - - -	
Friulian	- - r ε n e		s a v a l ɔ̃ n - -	p ɔ l v a r - -
Romanian	- a r i n ə			p u l b e r e -
	Dust-Pulwus	Earth-Primary	Cloud-Primary	Cloud-Nubilus
Latin	p u l w u s	t - e r r a	n u: b e: s	n u: b i l u s
French		t - e - ʁ -	n y - - -	
Spanish	p o l b o -	t j e - r a	n u b e -	n u b - l o -
Italian		t - ε r r a	n u b e -	n u v o l a -
PortugueseBrazil	p ɔ - - - -	t - e - ʁ e	n u v ẽj -	
Portuguese	p ɔ - - - -	t - ε - ʁ e	n u v ẽj -	
Catalan	p o l - - s	t - ε - r ə		n u v o l - -
Walloon		t - e - r -		
Friulian		t j ε - r e		n u: - - l - -
Romanian		ts - a - r ə		n o - - r - -
	Fog-Primary	Fog-Nebula	Fog-Tenebras	Fog-Fumata
Latin	k a: l i: g i n e m	n - e - b u l a	t - e n - e: b r a: s	f u: m a: t a
French				f y m e - -
Spanish		n j e - b - l a	t - i n j e b l a s	f u m a t a
Italian		n - e b b - j a		f u m a: t a
PortugueseBrazil	k a l i ʒ ẽj - - -	n - ε - v w - e	t r - - - ε v - e s	f u m a s e
Portuguese	k e l i ʒ ẽj - - -	n - ε - v w - e	t r - - - ε v - e f	f u m a s e
Catalan		n - e - - w l ə	t - ə n - e b r ə s	
Walloon		n j y - - - l -		
Friulian				f u m a t e
Romanian		n - e - g u r ə		

Appendix 3 - Concepts Used

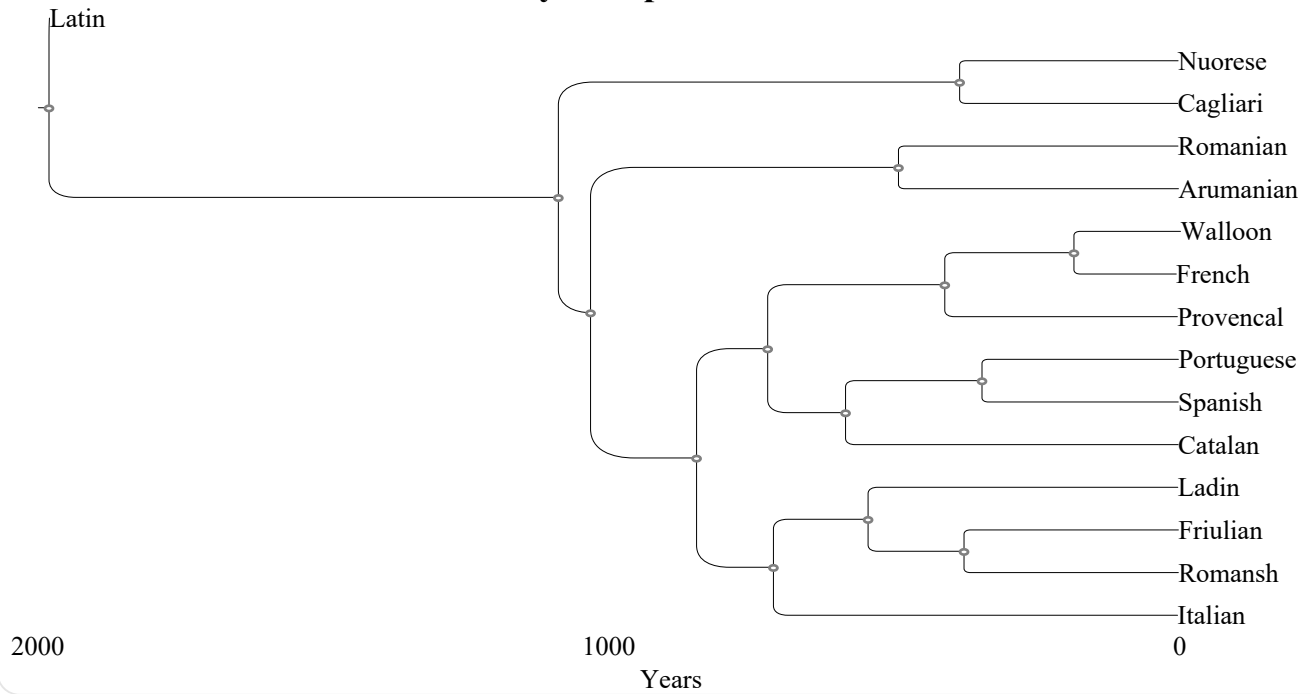
	Fog-Caecia	Sky-Primary	Wind-Primary	Snow-Primary
Latin	k a j k i a	k - a j l u m	w - e n t u m	n - i w e m
French		s j ε l -	v - ã - - -	
Spanish		θ j e l o -	b j e n t o -	n j e b e -
Italian		ʃ - ε l o -	v - ε n t o -	n - e v e -
PortugueseBrazil		s - ε w - -	v - ã - t u -	n - ε v i -
Portuguese		s - ε w - -	v - ã - t u -	n - ε v i -
Catalan		s - ε l - -	b - e n - - -	n - e w - -
Walloon		s - i r - -	v - ã - - - -	n - i v a j -
Friulian		ʃ - i : l - -	v - i n t - -	n - e : f - -
Romanian	ʃ ɛ a ʃ - ə	ʃ - e r - -	v - i n t - -	n - ɛ a - - -
	Ice-Primary	Ice-Glacies	Smoke-Primary	Fire-Focus
Latin	g e l u :		f u : m u s	f - o k u m
French	ʒ ε l -	g l a - s -		f - ø - - -
Spanish	j e l o		- u m o -	f w e g o -
Italian	dʒ ε l o	g j a t ʃ a	f u m o -	f w ɔ k o -
PortugueseBrazil			f u m u -	f - o g u -
Portuguese			f u m u -	f - o y u -
Catalan	ʒ ε l -	g l a - s -	f u m - -	f - ɔ k - -
Walloon		g l ε - s -		f - œ - - -
Friulian		g l a - ʃ e	f u m - -	f - u : k - -
Romanian	dʒ e r -	g - ɛ a - t s ə	f u m - -	f - o k - -
	Ash-Primary	Ash-Cinisia	Road-Primary	Road-Strata
Latin	k i n e - r e m		w - i a	- s t r a : t a
French	s ã - - d ʁ - -		v w - a	
Spanish		θ e n i θ a	b - i a	e s t r a d a
Italian	ʃ e n e - r e -		v - i a	- s t r a d a
PortugueseBrazil		s i - - z ɐ	v - i ɐ	i s t r a d ɐ
Portuguese		s i - - z ɐ	v - i ɐ	i f t r a d ɐ
Catalan	s ε n - d r ə -		b - i ə	
Walloon	s ɛ̃ - - t - - -		v - o j -	
Friulian		ʃ i n i s ε	v - i e	- s t r a d e
Romanian		ʃ e n u f ə		
	Road-Camminus	Mountain-Primary	Mountain-Montanea	Night-Primary
Latin	k a m m i : n u m	m o n t e m	m o n t a : - n e a	n - o c t e m
French	ʃ ə - m ɛ̃ - - -	m ɔ̃ - - - -	m ɔ̃ - t a - ɲ - -	n ɥ i - - - -
Spanish	k a - m i n o -	m o n t e -	m o n t a - ɲ - a	n - o - ʃ e -
Italian	k a m m i n o -	m o n t e -	m o n t a ɲ ɲ - a	n - ɔ t t e -
PortugueseBrazil	k a - m i ɲ u -	m ɔ̃ - ʃ i -	m ɔ̃ - t ɛ̃ - ɲ - ɐ	n - o j - t i -
Portuguese	k ɐ - m i ɲ u -	m ɔ̃ - t i -	m ɔ̃ - t ɐ - ɲ - ɐ	n - o j - t i -
Catalan	k ə - m i - - -	m u n - - -	m u n t a - ɲ - ə	n - i - t - -
Walloon	ʃ i - m ɛ̃ - - -	m ɔ̃ - - - -	m ɔ̃ - t a - ɲ - -	n - y - t - -
Friulian	c a m i n - - -	m ɔ n t - -	m o n t a - ɲ e -	ɲ - ɔ - t - -
Romanian		m u n t ε -		n - ɔ a p t e -

Appendix 3 - Concepts Used

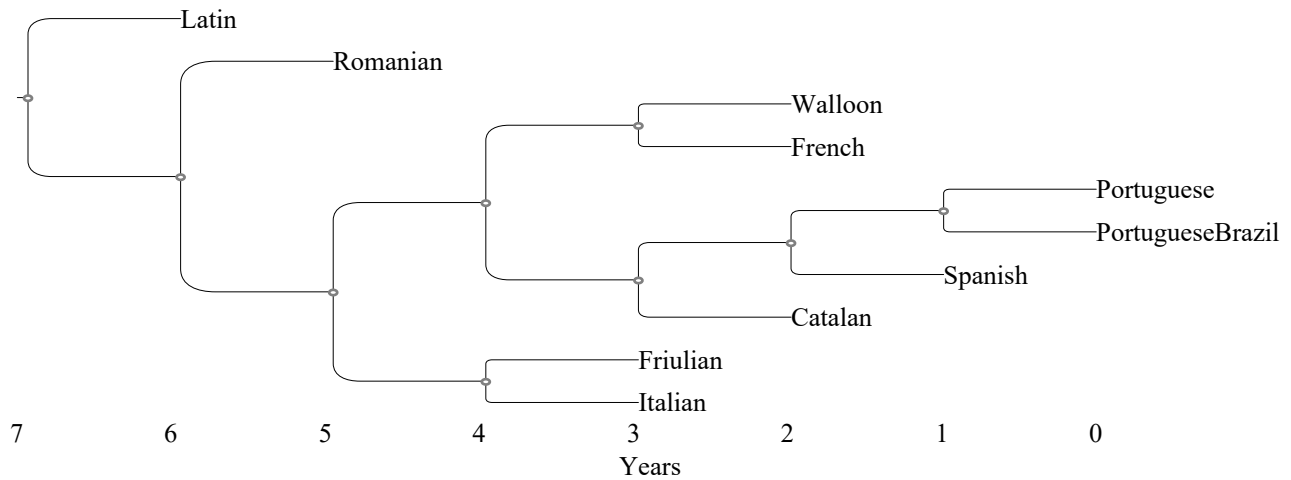
	Day-Primary	Day-Diurnus	Day-Diurna	Day-Diurnata
Latin	d i e: s	d i u r n u m		d i u r n a: t a
French		ʒ - u ʁ - -		ʒ - u ʁ n e - -
Spanish	d i a -	d j u r n o -		x - o r n a d a
Italian	d i - -	ɖʒ - o r n o -		ɖʒ - o r n a t a
PortugueseBrazil	d i ɐ -		ʒ ɔ ʁ n a	
Portuguese	d i ɐ -		ʒ ɔ ʁ n a	
Catalan	d i ə -	ʒ - o r n - -		
Walloon		ɖʒ - u - - -		
Friulian	d i - -			ɖʒ - o r n a d e
Romanian	z i - -			
	Year-Primary	Name-Nomen	Name-Nominem	Tongue-Primary
Latin	a n n u m	n o: m e n	n o: m i n - e m	l i n g ^w - a
French	ã - - -	n ɔ̃ - - -		l ã - g - -
Spanish	a - ɲ o -		n o m - b r e -	l e ɲ g w a
Italian	a n n o -	n o: m e -		l i n g w a
PortugueseBrazil	ɐ - n u -	n o m i -		l ã - g w ɐ
Portuguese	ɐ - n u -	n o m i -		l ã - g w ɐ
Catalan	a - ɲ - -	n ɔ m - -		ʎ ε ɲ g w ə
Walloon	ã - - -	n ɔ̃ - - -		l ẽ - - v -
Friulian	a - n - -	n ɔ n - -		l ε n g - e
Romanian	a n - - -	n u m e -		l i m b - ə

Appendix 4 - Results

Commonly Accepted Romance Tree



Priors



Appendix 4 - Results

