Issue 1: What is a reasonable margin of harmony for a winning candidate?
Issue 2: What is a reasonable lower bound for the weight of a constraint (e.g. 0.01 on Onset and 0.02 on Uniformity?)

μ was increased at the rate μ = 1/(1+i) where i is the iteration number. After 22 iterations we had μ=1/23 = .04. So Uniform
phrases. For now, we took everything not designated as medium or low frequency to be high frequency. For medium frequ

ə on le	t_1	z_1	n_1		z_{pl}	t_2	z_2	n_2	
	0.6	0.25	0.26	0.26		0.37	0.51	0.56	0.58

	Contrib to Max/Dep	Contrib of other features	*Complex	Integrity	Contig	Dep	AlignLV	AlignRC	NoCoda
			-1.5	-0.6	-0.65	-1.09	0.64	0.61	-0.47
l'ami									
[ᴹl(ε·ə$_1$)] [ᴹ(τ·t$_2$+ζ·z$_2$+ν·n$_2$)ami]									
lə.ami	0.6					-0.436			
☞ **la.mi**	1								
lə.na.mi	1.18					-0.8938			
lən.a.mi	1.18					-0.8938			-0.47
le hasard									
[ᴹl(ε·ə$_1$)] [ᴹ(τ·t$_2$+ζ·z$_2$+ν·n$_2$)azaʁ]									
☞**lə$_1$.a.zaʁ**	0.6					-0.436	0.64		
la.zaʁ	1								
le héros									
[ᴹl(ε·ə$_1$)] [ᴹe$_β$ʁo]									
☞**lə$_1$.e.ʁo**	0.6					-0.436	0.64		
lə.ʁo									

	Contrib to Max/Dep	Contrib of other features	*Complex	Integrity	Contig	Dep	AlignLV	AlignRC	NoCoda
			-1.5	-0.6	-0.65	-1.09	0.64	0.61	-0.47
quel ami									
[ᴹkɛl][M(τ·t$_2$+ζ·z$_2$+ν·n$_2$)ami]									
☞ **kɛ.la.mi**									
kɛl.ami								0.61	-0.47
kɛl.z$_2$a.mi	0.56					-0.4796		0.61	-0.47
kɛlz$_2$.a.mi	0.56		-1.5			-0.4796			-0.47
quel hasard									
[ᴹkɛl][ᴹazaʁ]									
☞**kɛl.azaʁ**							0.64	0.61	-0.47
kɛ.lazaʁ									
quel héros									
[ᴹkɛl][ᴹeʁo]									
☞**kɛl.e.ʁo**							0.64	0.61	-0.47
kɛ.lə.ʁo									

	Contrib to Max/Dep	Contrib of other features	*Complex	Integrity	Contig	Dep	AlignLV	AlignRC	NoCoda
			-1.5	-0.6	-0.65	-1.09	0.64	0.61	-0.47
petit ami									
[ᴹpəti(λ·t$_1$)] [ᴹ(τ·t$_2$+ζ·z$_2$+ν·n$_2$)ami]									
pə.ti.a.mi									
pə.tit$_1$.a.mi	0.25					-0.8175		0.61	-0.47
pə.ti.t$_1$a.mi	0.25					-0.8175			

pə.tit$_2$.a.mi	0.51			-0.5341	0.61	-0.47
pə.ti.t$_2$a.mi	0.51			-0.5341		
pə.tit$_{12}$.a.mi	0.76			-0.2616	0.61	-0.47
☞ **pə.ti.t$_{12}$a.mi**	0.76			-0.2616		
pə.tit$_1$.z$_2$a.mi	0.81			-1.2971	0.61	-0.47
pə.tiz$_2$.a.mi	0.56			-0.4796	0.61	-0.47
pə.ti.z$_2$a.mi	0.56			-0.4796		

joli ami t = 0.54

[ʒoliᴹ] [ᴹ(τ·t$_2$+ζ·z$_2$+ν·n$_2$)ami]

☞ **ʒo.li.a.mi**

ʒo.li.ta.mi	0.51			-0.5341		
ʒo.lit.a.mi	0.51			-0.5341		-0.47

petit copain

[ᴹpəti(λ·t$_1$)] [ᴹkopẽ]

pə.tit$_1$.ko.pẽ	0.25			-0.8175	0.61	-0.47
☞ **pə.ti.ko.pẽ**						

petite copine

[ᴹpətit$_f$] [ᴹkopin] (Here we take the final t on petite to be a fixed consonant with a learned value. Further below we consider

☞**pə.tit$_f$.ko.pin**	0.85			-0.1635	0.61	-0.47
pə.ti.ko.pin						

	Contrib to Max/Dep	Contrib of other features	*Complex	Integrity	Contig	Dep	AlignLV	AlignRC	NoCoda
			-1.5	-0.6	-0.65	-1.09	0.64	0.61	-0.47

petit héros

[ᴹpəti(λ·t$_1$)] [ᴹeʁo]

pə.tit$_1$.e.ʁo	0.25			-0.8175	0.64	0.61	-0.47
pə.ti.t$_1$e.ʁo	0.25			-0.8175			
☞**pə.ti.e.ʁo**					0.64		

joli héros

[ʒoliᴹ] [ᴹeʁo]

☞**jo.li.e.ʁo**					0.64		
jo.le.ʁo							
jo.li.te.ʁo	0			-1.09			
jo.lit.e.ʁo	0			-1.09			

cafés extras — Ignoring *Complex here since they all violate. — Ignoring the NoCoda in th

[ᴹkafe] [ᴹπ·z$_p$ᴾᴸ] [ᴹ(τ·t$_2$+ζ·z$_2$+ν·n$_2$)ɛkstʁa] [ᴹπ·z$_p$ᴾᴸ]

☞**ka.fe.z$_{p2}$ɛk.stʁa**	0.93			-0.0763		
ka.fe.z$_{p2}$ɛk.stʁaz	0.93	0.37		-0.763		-0.47
ka.fe.ɛk.stʁa						
ka.fe.z$_p$ɛk.stʁa	0.37			-0.6867		
ka.fe.z$_2$ɛk.stʁa	0.56			-0.4796		

	Contrib to Max/Dep	Contrib of other features	*Complex	Integrity	Contig	Dep	AlignLV	AlignRC	NoCoda
			-1.5	-0.6	-0.65	-1.09	0.64	0.61	-0.47

chers amis

[ʃɛʁᴹ] [ᴹπ·z$_p$ᴾᴸ] [ᴹ(τ·t$_2$+ζ·z$_2$+ν·n$_2$)ami] [ᴹπ·z$_p$ᴾᴸ]

☞**ʃɛʁ.z$_{p2}$a.mi**	0.93			-0.0763	0.61	-0.47

ʃɛ.ʁa.mi							
ʃɛʁ.a.mi						0.61	-0.47
ʃɛʁz_{p2}.a.mi	0.93		-1.5		-0.0763	0.61	-0.47
ʃz_{p2}.a.mi	0.93				-0.0763	0.61	-0.47
ʃɛʁ.z_{p2}a.miz_p	0.93	0.37			-0.763	0.61	-0.94
ʃɛʁ.z_pa.mi	0.37				-0.6867	0.61	-0.47
ʃɛʁ.n_2a.mi	0.58				-0.4578	0.61	-0.47
ʃɛʁ.z_2a.mi	0.56				-0.4796	0.61	-0.47
ʃz_{p2}.n_2a.mi	0.93	0.58			-0.5341	-0.61	-0.47

	Contrib to Max/Dep	Contrib of other features	*Complex	Integrity	Contig	Dep	AlignLV	AlignRC	NoCoda
			-1.5	-0.6	-0.65	-1.09	0.64	0.61	-0.47
petits amis	The second candidate violates Integrity because input (t_2,z_2,n_2) gets split into two segments. It also v								
[ᴹpəti(λ·t_1)] [ᴹπ·z_pᴾᴸ] [M(τ·t_2+ζ·z_2+ν·n_2)$a_β$mi] [ᴹπ·z_pᴾᴸ]									
☞**pɘ.ti.z_{p2}a.mi**	0.93					-0.0763			
pɘ.tit$_{12}$.z_{p2}a.mi	0.76	0.93		-0.6	-0.65	-0.3379		0.61	-0.47
pɘ.tit$_{12}$.z_pa.mi	0.76	0.37			-0.65	-0.9483		0.61	-0.47
pɘ.ti.t$_{12}$a.mi	0.76					-0.2616			
pɘ.tiz_{p2}.a.mi	0.93					-0.0763		0.61	-0.47
pɘ.tit$_{12}$.a.mi	0.76					-0.2616		0.61	-0.47
pɘ.ti.z_pa.mi	0.37					-0.6867			
pɘ.tit$_1$.z_{p2}a.mi	0.25	0.93				-0.8938		0.61	-0.47
pɘ.ti.t$_1$a.mi	0.25					-0.8175			
pɘ.ti.t$_2$a.mi	0.51					-0.5341			
pɘ.ti.z_{p2}t$_2$a.mi	0.93	0.51	-1.5			-0.0763			-0.47
pɘ.tit$_1$.z_pa.mi	0.25	0.37				-1.5042		0.61	-0.47
pɘ.tit$_1$.t$_2$a.mi	0.25	0.51				-1.3516		0.61	-0.47
pɘ.ti.z_pt$_2$a.mi	0.37	0.51	-1.5			-1.2208			
pɘ.ti.z_{p2}t$_2$a.mi	0.93	0.51	-1.5	-0.6		-0.6104			-0.47
pɘ.tit$_1$.z_pt$_2$a.mi	0.25	0.37	-1.5			-2.0383		0.61	-0.47
	0.51								
pɘ.tiz_p.t$_2$a.mi	0.37	0.51				-0.90034		0.61	-0.47
pe.ti.a.mi									

	Contrib to Max/Dep	Contrib of other features	*Complex	Integroty	Contig	Dep	AlignLV	AlignRC	NoCoda
			-1.5	-0.6	-0.65	-1.09	0.64	0.61	-0.47
petits chats									
[ᴹpəti(λ·t_1)] [ᴹπ·z_pᴾᴸ] [ᴹʃa] [ᴹπ·z_pᴾᴸ]									
☞**pɘ.ti.ʃa**									
pɘ.ti.z_pa	0.37					-0.6867			
pɘ.ti.t$_1$ʃa	0.25		-1.5			-0.8175			
pɘ.tit$_1$.ʃa	0.25					-0.8175		0.61	-0.47
pɘ.tiz_p.ʃa	0.37					-0.6867		0.61	-0.47
pɘ.ti.z_pʃa	0.37		-1.5			-0.6867			
pɘ.tit$_1$.z_pʃa	0.33	0.37	-1.5			-1.417		0.61	-0.47
pɘ.tit$_1$$z_p$.ʃa	0.25	0.37	-1.5			-1.5042		0.61	-0.47
chers chats									
[ʃɛʁᴹ] [ᴹπ·z_pᴾᴸ] [ᴹʃa] [ᴹπ·z_pᴾᴸ]									
☞**ʃɛʁ.ʃa**								0.61	-0.47
ʃɛʁ.ʃaz_p	0.37					-0.6867		0.61	-0.47
ʃɛʁz_p.ʃa	0.37		-1.5			-0.6867		0.61	-0.47

ʃɛz$_p$.ʃa	0.37				-0.6867	0.61	-0.47
ʃɛʁ.z$_p$ʃa	0.37		-1.5		-0.6867	0.61	-0.47
ʃɛ.z$_p$ʃa	0.37				-0.6867		
ʃɛʁz$_p$.ʃaz$_p$	0.37	0.37	-1.5		-1.3734	0.61	-0.94

	Contrib to Max/Dep	Contrib of other features	*Complex	Integrity	Contig	Dep	AlignLV	AlignRC	NoCoda
			-1.5	-0.6	-0.65	-1.09	0.64	0.61	-0.47
amis									
[M(τ·t$_2$+ζ·z$_2$+ν·n$_2$)a$_β$mi] [^{M}π·z$_p$^{PL}]									
☞**a.mi**									
a.miz$_p$	0.37					-0.6867		0.61	-0.47
ta.mi	0.51					-0.5341			

est agé should behave the same as petit ami

serait agé: low frequency: μ=1.									
[^{M}səʁɛ(λ·t$_1$)] μ$_L$·|^{PWD} [^{M}(τ·t$_2$+ζ·z$_2$+ν·n$_2$)aʒe]									
☞**sə.ʁɛ.a.ʒe**									
sə.ʁɛ.t$_1$a.ʒe	0.25					-0.8175			
sə.ʁɛ.t$_2$a.ʒe	0.51					-0.5341			
sə.ʁɛ.t$_{12}$a.ʒe	0.76					-0.2616			
sə.ʁɛt$_{12}$.a.ʒe	0.76					-0.2616		0.61	-0.47

tamis énorme: medium frequency: μ=0.8									
[^{M}tami(λ·z$_1$)] μ$_l$·|^{PWD} [^{M}(τ·t$_2$+ζ·z$_2$+ν·$_n$2)enɔʁm]									
☞**ta.mi.e.noʁm**									
ta.mi.z$_1$e.noʁm	0.26					-0.8066			
ta.mi.z$_2$e.noʁm	0.56					-0.4796			
ta.mi.z$_{12}$e.noʁm	0.82					-0.1962			
ta.miz$_{12}$.e.noʁm	0.82					-0.1962		0.61	-0.47

	Contrib to Max/Dep	Contrib of other features	*Complex	Integrity	Contig	Dep	AlignLV	AlignRC	NoCoda
			-1.5	-0.6	-0.65	-1.09	0.64	0.61	-0.47
momies énormes: medium frequency: μ=0.8 but with stronger activation on plural z$_{pl}$.									They all violate NoCo They all respect Aligr
[^{M}momi(λ·z$_1$)] [^{M}π·z$_p$^{PL}] μ$_l$·\|^{PWD} [^{M}(τ·t$_2$+ζ·z$_2$+ν·$_n$2)enɔʁm] [^{M}π·z$_p$^{PL}]									
mo.mi.e.noʁm									
mo.mi.z$_p$e.noʁm	0.37					-0.6867			
mo.mi.z$_2$e.noʁm	0.56					-0.4796			
☞**mo.mi.z$_{p2}$e.noʁm**	0.93					-0.0763			
mo.mi.z$_{p2}$e.noʁmz$_p$	0.93	0.37				-0.763			
mo.miz$_{p2}$.e.noʁm	0.93					-0.0763			-0.47
mo.miz$_{p2}$.e.noʁmz$_p$	0.93	0.37				-0.763			-0.47

bel/belle/beau alternations: These values of β, ω and φ were learned at a second stage of learning after all the above.

	β	ω	φ						
b$_0$(β·ε$_1$)(ω·{o$_2$l$_3$})kopɛ	0.4	0.7	0.65						
beau copain									
☞**bo$_ω$.ko.pɛ**	0.7				-0.65	-0.327			
bɛ$_β$o$_ω$.ko.pɛ	1.1		-1.5			0			
bɛ$_β$.o$_ω$.ko.pɛ	0.4	0.7				-0.981			
bɛ$_β$l$_ω$.ko.pɛ	0.4	0.7				-0.981		0.61	-0.47

beaux copains

$b_0(\beta\cdot\varepsilon_1)(\omega\cdot\{o_2l_3\})[^M\pi\cdot z_5^{PL}]kop\varepsilon[^M\pi\cdot z_5^{PL}]$

☞**bo_ω.ko.pɛ**	0.7			-0.65	-0.327		
$bo_\omega z_p$.ko.pɛ	0.7	0.37		-0.65	-1.0137	0.61	-0.47
$b\varepsilon_\beta o_\omega$.ko.pɛ	0.4	0.7			-0.981		
$b\varepsilon_\beta l_\omega$.ko.pɛ	0.4	0.7			-0.981	0.61	-0.47
$b\varepsilon_\beta l_\omega z_p$.ko.pɛ	0.4	0.7 0.37	-1.5		-1.6677	0.61	-0.47

	Contrib to Max/Dep	Contrib of other features	*Complex	Integrity	Contig	Dep	AlignLV	AlignRC	NoCoda
			-1.5	-0.6	-0.65	-1.09	0.64	0.61	-0.47

I can't find a reason why the feminine (ϕ·φ) can't attach to o as well as ε to increase its activation.
The only way I could think of to prevent beau copine from surfacing was to invoke a Contiguity constraint, where the b followed by o output is not contiguous in the input /b_0 (β · ε_1) (ω · {o_2l_3 })/
We take the collocation belle/beau + feminine to have high frequency so Uniformity is reduced by multiplying by μ.
To get this to work, we have to add feminine activation φ to ε rather than to o. This does not seem to violate contiguity or lir
I am taking the addition of feminine activation to a feature to be a violation of Uniformity here, as suggested by note on line

belle copine

$b_0(\beta\cdot\varepsilon_1)(\omega\cdot\{o_2l_3\})\ (\phi\cdot\varphi)kopin$

bo_ω.ko.pin	0.7			-0.65	-0.327		
$bo_{\omega\varphi}$.ko.pin	1.35			-0.65	0		
$b\varepsilon_\beta o_\omega$.ko.pin	1.1		-1.5		0		
$b\varepsilon_\beta o_{\omega\varphi}$.ko.pin	1.75		-1.5		0		
$b\varepsilon_\beta o_\omega$.ko.pin	0.4	0.7			-0.981		
$b\varepsilon_\beta l_\omega$.ko.pin	0.4	0.7			-0.981	0.61	-0.47
☞**$b\varepsilon_{\beta\varphi} l_\omega$.ko.pin**	1.05	0.7			-0.327	0.61	-0.47

bel ami

$b_0(\beta\cdot\varepsilon_1)(\omega\cdot\{o_2l_3\})ami$

☞**$b\varepsilon_\beta l_\omega$a.mi**	0.4	0.7			-0.981		
$b\varepsilon_\beta l_\omega$.a.mi	0.4	0.7			-0.981	0.61	-0.47
bo_ω.a.mi	0.7			-0.65	-0.327		
$b\varepsilon_\beta o_\omega$.a.mi	1.1		-1.5		0		
$b\varepsilon_\beta o_\omega$.a.mi	0.4	0.7			-0.981		
bo_ω.t_2a.mi	0.7	0.51		-0.65	-0.8611		
$b\varepsilon_\beta o_\omega$.$t_2$a.mi	0.4	0.7 0.51			-1.5151		

	Contrib to Max/Dep	Contrib of other features	*Complex	Integrity	Contig	Dep	AlignLV	AlignRC	NoCoda
			-1.5	-0.6	-0.65	-1.09	0.64	0.61	-0.47

beaux amis

$b_0(\beta\cdot\varepsilon_1)(\omega\cdot\{o_2l_3\})[^M\pi\cdot z_5^{PL}]ami[^M\pi\cdot z_5^{PL}]$

$b\varepsilon_\beta l_\omega$a.mi	0.4	0.7			-0.981		
$b\varepsilon_\beta l_\omega$.a.mi	0.4	0.7			-0.981	0.61	-0.47
$b\varepsilon_\beta l_\omega z_p$.a.mi	0.4	0.7 0.37	-1.5		-1.6677	0.61	-0.47
$b\varepsilon_\beta l_\omega$.$z_p$a.mi	0.4	0.7 0.37			-1.6677	0.61	-0.47
$b\varepsilon_\beta l_\omega$.$z_{p2}$a.mi	0.4	0.7 0.93			-1.0573	0.61	-0.47
bo_ω.a.mi	0.7			-0.65	-0.327		
$b\varepsilon_\beta o_\omega$.a.mi	0.4	0.7			-0.981		
bo_ω.t_2a.mi	0.7	0.51		-0.65	-0.8611		
bo_ω.z_pa.mi	0.7	0.37		-0.65	-1.0137		
☞**bo_ω.z_{p2}a.mi**	0.7	0.93		-0.65	-0.4033		

belles amies

$b_0(\beta\cdot\varepsilon_1)(\omega\cdot\{o_2l_3\})(\phi\cdot\varphi)[^M\pi\cdot z_5^{PL}]ami(\phi\cdot\varphi)[^M\pi\cdot z_5^{PL}]$

$b\varepsilon_{\beta\varphi} l_\omega$.a.mi	1.05	0.7			-0.327		
$b\varepsilon_{\beta\varphi} l_\omega$.a.mi	1.05	0.7			-0.327	0.61	-0.47

bε$_{βφ}$l$_{ω}$z$_{p}$.a.mi	1.05	0.7 0.37	-1.5		-1.0137	0.61	-0.47
bε$_{βφ}$l$_{ω}$.z$_{p}$a.mi	1.05	0.7 0.37			-1.0137	0.61	-0.47
☞bε$_{βφ}$l$_{ω}$.z$_{p2}$a.mi	1.05	0.7 0.93			-0.4033	0.61	-0.47
bε$_{β}$.o$_{ω}$.a.mi	0.4	0.7			-0.981		
bo$_{ωφ}$.a.mi	1.35			-0.65	0		
bo$_{ωφ}$.t$_{2}$a.mi	1.35	0.51		-0.65	-0.5341		
bo$_{ωφ}$.z$_{p}$a.mi	1.35	0.37		-0.65	-0.6867		
bo$_{ωφ}$.z$_{p2}$a.mi	1.35	0.93		-0.65	-0.0763		

belle amie

b$_0$(β·ε$_1$)(ω·{o$_2$l$_3$})(ϕ·φ)ami(ϕ·φ)

☞bε$_{βφ}$.l$_{ω}$a.mi	1.05	0.7			-0.327		
bε$_{βφ}$l$_{ω}$.a.mi	1.05	0.7			-0.327	0.61	-0.47
bε$_{βφ}$.o$_{ω}$.a.mi	1.05	0.7			-0.327		
bo$_{ωφ}$.a.mi	1.35			-0.65	0		
bo$_{ωφ}$.t$_{2}$a.mi	1.35	0.51		-0.65	-0.5341		
bo$_{ω}$.t$_{2φ}$a.mi	0.7	1.16		-0.65	-0.327		
bo$_{ωφ}$.t$_{2φ}$a.mi (split phi)	1	0.81	-0.6	-0.65	-0.2071		

It doesn't seem to be a problem to allow phi to attach to a following segment. We consider a higher weight on uniformity in
Also splitting phi should be an integrity violation.

	Contrib to Max/Dep	Contrib of other features	*Complex	Integrity	Contig	Dep	AlignLV	AlignRC	NoCoda
			-1.5	-0.6	-0.65	-1.09	0.64	0.61	-0.47

The candidate with no enchainement is not far behind. To prevent enchainement with these weights we would need to invo

beau héros

b$_0$(β·ε$_1$)(ω·{o$_2$l$_3$})ero

bε$_{β}$l$_{ω}$.e.ʁo	0.4	0.7			-0.981	0.64	0.61	-0.47
bε$_{β}$.l$_{ω}$e.ʁo	0.4	0.7			-0.981			
☞bo$_{ω}$.e.ʁo	0.7			-0.65	-0.327	0.64		
bε$_{β}$o$_{ω}$.e.ʁo	1.1		-1.5		0	0.64		
bε$_{β}$.o$_{ω}$.e.ʁo	0.4	0.7			-0.981	0.64		

In the two tableaux above, bo.e.ro fares better than bo.a.mi because the former respects AlignLV. bo.a.mi does not because

And even though be.la.mi has the same harmony as be.le.ro, bo.a.mi provides much worse competition for it than bo.e.ro c

beaux héros

b$_0$(β·ε$_1$)(ω·{o$_2$l$_3$})[^{M}π·z$_5$^{PL}]ero[^{M}π·z$_5$^{PL}]

bε$_{β}$l$_{ω}$.e.ʁo	0.4	0.7				-0.981	0.64	0.61	-0.47
bε$_{β}$.l$_{ω}$e.ʁo	0.4	0.7				-0.981			
☞bo$_{ω}$.e.ʁo	0.7				-0.65	-0.327	0.64		
bε$_{β}$.o$_{ω}$.e.ʁo	0.4	0.7				-0.981	0.64		
bε$_{β}$l$_{ω}$z$_{p}$.e.ʁo	0.4	0.7 0.37	-1.5			-1.6677	0.64	0.61	-0.47
bε$_{β}$l$_{ω}$.z$_{p}$e.ʁo	0.4	0.7 0.37				-1.6677		0.61	-0.47
bo$_{ω}$.z$_{p}$e.ʁo	0.7	0.37			-0.65	-1.0137			
bε$_{β}$.o$_{ω}$.z$_{p}$e.ʁo	0.4	0.7 0.37				-1.6677			

	Contrib to Max/Dep	Contrib of other features	*Complex	Integrity	Contig	Dep	AlignLV	AlignRC	NoCoda
			-1.5	-0.6	-0.65	-1.09	0.64	0.61	-0.47

Feminine form derived by activation of liaison consonant plus phi instead of representing the final /t/ as a fixed consonant..

petites lunes

[^{W}[^{M}pəti([λ+φ]·t$_1$)][^{M}π·z$_{B}$^{PL}]] [^{W}[^{M}ly([1+φ]·n)][^{M}π·z^{PL}]]

pɘ.ti.lyn							
pɘ.ti.$t_{1φ}$lyn	0.9				-0.109		
☞**pɘ.tit$_{1φ}$.lyn**	0.9				-0.109	0.61	-0.47
pɘ.tit$_{1φ}$.lynz_p	0.9	0.37	-1.5		-0.7957	0.61	-0.47
pɘ.ti.z_p.lyn	0.37				-0.6867		
pɘ.tiz$_p$.lyn	0.37				-0.6867	0.61	-0.47
pɘ.tit$_{1φ}$z$_p$.lyn	0.9	0.37	-1.5		-0.7957	0.61	-0.47
pɘ.tit$_{1φ}$.z$_p$lyn	0.9	0.37	-1.5		-0.7957	0.61	-0.47

petites amies We could have a wider margin for the winner here if φ, the feminine activation were further increased

[^{M}pəti(λ·t1) φ·Ø$_6^{fem}$] [^{M}π·z$_5^{PL}$] [^{M}(τ·t$_2$+ζ·z$_3$+v·n$_4$)ami] [^{M}π·z^{PL}]

☞**pɘ.tit$_{1φ}$.z$_{p2}$a.mi**	0.9	0.93			-0.1853	0.61	-0.47
pɘ.tit$_{1φ}$.z$_{p2}$a.miz$_p$	0.9	0.93			-0.872	1.22	-0.94
		0.37					
pɘ.tit$_{1φ}$.z$_p$a.mi	0.9	0.37			-0.7957	0.61	-0.47
pɘ.tit$_{12}$.z$_p$a.mi	0.76	0.37		-0.65	-0.9483	0.61	-0.47
pɘ.tit$_{12}$.z$_{p2}$a.mi	0.76	0.93		-0.65	-0.3379	0.61	-0.47
pɘ.tit$_1$.z$_{p2}$a.mi	0.25	0.93			-0.8938	0.61	-0.47
pɘ.ti.z$_{p2}$a.mi	0.93				-0.0763		
pɘ.ti.z$_{p2φ}$a.mi	1.58				0		
pɘ.tiz$_{p2}$.a.mi	0.93				-0.0763	0.61	-0.47
pɘ.ti.a.mi							

	Contrib to Max/Dep	Contrib of other features	*Complex	Integrity	Contig	Dep	AlignLV	AlignRC	NoCoda
			-1.5	-0.6	-0.65	-1.09	0.64	0.61	-0.47

Adjectives that alternate between -al/-ale/aux behave somewhat similarly to bel/belle/beau except that [o] only occurs in m

I wondered if for the al/aux alternation, there needed to be two different omega values on the /l/ and /o/ but it seems to wor

	β$_2$	omega1 on l	omega2 on o				
	0.55	0.55	0.55				
un homme libéral							
libeʁ(β$_2$·a)(ω$_2$·(o,l))							
☞**libeʁal**	0.55	0.55			-0.981	0.61	-0.47
libeʁo	0.55			-0.65	-0.4905		
une femme libérale							
libeʁ(β$_2$·a)(ω$_2$·(o,l)) (φ·Φ)							
☞**libeʁal$_φ$**	1.2	0.55			-0.4905	0.61	-0.47
libeʁo	1.2			-0.65	0		

Would splitting phi be considered a violation of integrity if is isn't an actual segment that is being split?
I'm taking it to be an integrity violation, consistent with making the addition of phi to another feature activation a uniformit

libeʁal$_φ$ (split φ)	0.9	0.85		-0.6	-0.2725	0.61	-0.47

The -al/-aux alternation looks similar to the bel/belle/beau alternation except that here, it is only in the masculine plural tha
So we need different values of beta and omega to prevent the o from surfacing in the masculine singular with no feminine

In order to get -aux in the plural, we need some further activation on o. It won't work just to add further activation with no f
form.
Either the plural morpheme has an allomorph (ω$_3$·o)(ζ$_p$·z$_p$) or else (ω$_3$·o) always occurs underlyingly.

I wonder if (ω$_3$·o) needs to be a floating feature with no segmental material or if it just won't surface unless it is preceded b

	ω$_3$						
les hommes libéraux	0.6						
libeK(β$_2$·a)(ω$_2$·(o,l))(ω$_3$·o)(ζ$_2$·z$_p$)							
libeʁal	0.55	0.55			-0.981	0.61	-0.47
libeʁalo	0.55	0.55			-1.417		
		0.6					

☞**libeʁo$_{23}$**	1.15			-0.65	0		
libeʁalz	0.55	0.55	-1.5		-1.6677	0.61	-0.47
		0.37					
libeʁo$_{23}$z	1.15	0.37		-0.65	-0.6867	0.61	-0.47

	Contrib to Max/Dep	Contrib of other features	*Complex	Integrity	Contig	Dep	AlignLV	AlignRC	NoCoda
			-1.5	-0.6	-0.65	-1.09	0.64	0.61	-0.47
les femmes libérales	The -al form wins because of added activation from the feminine morpheme. This activation doesn't								
libeʁ(β$_2$·a)(ω$_2$·(o,l)) (φ·Φ)(ω$_3$·o)(ζ$_2$·z$_p$)									
☞**libeʁal**	1.2	0.55				-0.4905		0.61	-0.47
libeʁalo	1.2	0.55				-0.9265			
		0.6							
libeʁo$_{23}$	1.8				-0.65	0			
libeʁalz	1.2	0.55	-1.5			-1.1772		0.61	-0.47
		0.37							
libeʁo$_{23}$z	1.15	1.02			-0.65	0		0.61	-0.47

petits	Sanity check to make sure that a posited o in plural won't surface elsewhere.								
pəti(ω$_3$·o)(ζ$_2$·z$_p$)									
☞**pɔ.ti**									
pɔ.ti.z$_{1p}$	0.63					-0.4033		0.61	-0.47
pɔ.ti.z$_{1p}$o	0.37	0.6				-1.1227			

	Contrib to Max/Dep	Contrib of other features	*Complex	Integrity	Contig	Dep	AlignLV	AlignRC	NoCoda
			-1.5	-0.6	-0.65	-1.09	0.64	0.61	-0.47
l'amie	If /la/ is a clitic, can we then posit partial activation on the /a/ as long as there is enough for it to surf								
α = 0.8	0.8								
[^{M}l(α·a$_1$)] [^{M}(τ·t$_2$+ζ·z$_2$+ν·n$_2$)a$_2$mi]									
la$_1$.a$_2$mi	0.8					-0.218			
☞ **la$_2$.mi**	1								
la$_1$.na$_2$.mi	1.38					-0.6758			
la$_1$n.a$_2$.mi	1.38					-0.6758			-0.47
la hache									
[^{M}l(α·a$_1$)] [^{M}a$_2$ʒ]									
la$_1$.a$_2$ʒ	0.8					-0.218	0.64		
la$_2$ʒ									

Still to work on:
faux ami vs. fausse amie
mauvais ami vs. mauvaise ideé (different syllabification)
Where nasalization occurs or doesn't occur before n.
Add more explicit URs to tableaux. (Some are copied from gradient liaison spreadsheet so may have different indexing.)
Elision of /a/ in la before vowels. This may pose less of a problem for explaining no elision before h-aspiré if we are not posit

nity at -0.41 was effectively around -0.017 for high frequency
ency we took μ=0.8 and low frequency μ=1.0.

t_f	z_f	n_f	μ	$μ_{med}$
0.85	0.8	0.8	0.0435	0.8

Unif	Onset	AlignRV	Max	AlignLC	H
-0.41	-0.28	0.26	0.15	0.06	
	-0.28	0.26	0.09		-0.366
					0
		0.26	0.177	0.06	-0.3968
	-0.28		0.177		-1.4668
0	-0.28	0.26	0.09		0.274
0					0
	-0.28	0.26	0.09		0.274
					0

Unif	Onset	AlignRV	Max	AlignLC	H
-0.41	-0.28	0.26	0.15	0.06	
					0
	-0.28			0.06	-0.08
			0.084		-0.2556
	-0.28		0.084		-2.6456
	-0.28				0.5
					0
	-0.28				0.5
					0

Unif	Onset	AlignRV	Max	AlignLC	H
-0.41	-0.28	0.26	0.15	0.06	
	-0.28				-0.28
	-0.28		0.0375		-0.92
			0.0375	0.06	-0.72

	-0.28		0.0765		-0.5976
			0.0765	0.06	-0.3976
-0.01784	-0.28		0.114		-0.30544
-0.01784			0.114	0.06	-0.10544
			0.1215	0.06	-0.9756
	-0.28		0.084		-0.5356
			0.084	0.06	-0.3356
	-0.28	0.26			-0.02
		0.26	0.0765	0.06	-0.1376
	-0.28		0.0765		-1.2076
			0.0375	0.06	-0.58
				0.06	0.06

addition of phi activation to λ.

			0.1275	0.06	0.164
				0.06	0.06

Unif	Onset	AlignRV	Max	AlignLC	H
-0.41	-0.28	0.26	0.15	0.06	

	-0.28		0.0375		-0.28
			0.0375		-0.78
	-0.28				0.36
	-0.28	0.26			0.62
			-0.15		-0.15
		0.26			-0.83
				0.06	-1.03

ıe .ex. syllable since they all violate it.

-0.01784			0.1395	0.06	0.105365
-0.01784			0.279	0.06	-0.91184
	-0.28				-0.28
			0.0555		-0.6312
			0.084	0.06	-0.3356

Unif	Onset	AlignRV	Max	AlignLC	H
-0.41	-0.28	0.26	0.15	0.06	

-0.01784			0.1395	0.06	0.245365

					0
	-0.28				-0.14
-0.01784	-0.28		0.1395		-1.59464
-0.01784	-0.28		0.1395		-0.09464
-0.01784			0.195	0.06	-0.85584
			0.0555	0.06	-0.4312
			0.087	0.06	-0.1708
			0.084	0.06	-0.1956
-0.01784			0.1395	0.06	-1.43244

Unif	Onset	AlignRV	Max	AlignLC	H
-0.41	-0.28	0.26	0.15	0.06	

iolates contiguity since t_2 is no longer adjacent to a in ami.

-0.01784			0.1395	0.06	0.105365
-0.03567			0.2535	0.06	-1.17007
-0.01784			0.1695		-1.30664
-0.01784			0.114	0.06	-0.10544
-0.01784	-0.28		0.1395		-0.09464
-0.01784	-0.28		0.114		-0.30544
			0		-0.6867
-0.01784			0.177	0.06	-0.53464
			0		-0.8175
			0.0765	0.06	-0.3976
-0.01784			0.1395	0.06	-1.86464
			0.093		-1.2712
			0.114	0.06	-1.0376
			0.132	0.06	-2.5288
-0.01784			0.216	0.06	-2.92224
			0.093	0.06	-3.2453
			0.132	0.06	-0.56834
	-0.28				-0.28

Unif	Onset	AlignRV	Max	AlignLC	H
-0.41	-0.28	0.26	0.15	0.06	

				0.06	0.06
			0.0555		-0.6312
			0.0375		-2.28
			0.0375	0.06	-0.58
			0.0555	0.06	-0.4312
			0.0555		-2.1312
			0.0495		-2.7275
			0.093		-2.7712
				0.06	0.2
			0.0555	0.06	-0.4312
			0.0555	0.06	-1.9312

			0.0555	0.06	-0.4312
			0.0555		-1.9912
			0.0555		-0.6312
			0.111	0.06	-3.0324

Unif	Onset	AlignRV	Max	AlignLC	H
-0.41	-0.28	0.26	0.15	0.06	
	-0.28	0.26			-0.02
	-0.28		0.0555		-0.7712
		0.26	0.0765	0.06	-0.1376
	-0.28				-0.28
			0.0375		-0.78
			0.0765	0.06	-0.3976
-0.41			0.114	0.06	-0.4976
-0.41	-0.28		0.114		-0.6976
	-0.28				-0.28
			0.039		-0.7676
			0.084	0.06	-0.3356
-0.328			0.123	0.06	-0.3412
-0.328	-0.28		0.123		-0.5412

Unif	Onset	AlignRV	Max	AlignLC	H
-0.41	-0.28	0.26	0.15	0.06	

ıda and *Complex at the right edge.
ıRC either for the m on the stem or the z of the plural.

	-0.28	0.26			-0.02
		0.26	0.0555		-0.3712
		0.26	0.084	0.06	-0.0756
-0.328		0.26	0.1395	0.06	0.0552
-0.328		0.26	0.195	0.06	-0.576
-0.328	-0.28		0.1395		-1.0148
-0.328	-0.28		0.195		-1.646
		0.26	0.105		-0.612
-0.01784		0.26	0.15		-1.10784
	-0.28	0.26	0.165		-0.836
			0.165		-0.676

		0.26	0.105		-0.612
			0.105		-1.4187
	-0.28	0.26	0.165		-0.836
			0.165		-0.676
			0.2205		-2.8072

Unif	Onset	AlignRV	Max	AlignLC	H
-0.41	-0.28	0.26	0.15	0.06	

earity if the morphemes are not ordered in the input.
500 in the gradient_liaison spreadsheet.

		0.26	0.105		-0.612
-0.01784		0.26	0.15		-0.25784
-0.01784		0.26	0.15		-1.10784
-0.01784		0.26	0.15		-1.10784
	-0.28	0.26	0.165		-0.836
			0.165		-0.676
-0.01784			0.255		0.050165

			0.165		-0.816
	-0.28		0.165		-0.956
	-0.28	0.26	0.105		-0.892
-0.01784	-0.28	0.26	0.15		-1.38784
	-0.56	0.26	0.165		-1.116
			0.1815	0.06	-1.2696
	-0.28	0.26	0.2415	0.06	-1.2336

Unif	Onset	AlignRV	Max	AlignLC	H
-0.41	-0.28	0.26	0.15	0.06	

			0.165		-0.816
	-0.28		0.165		-0.956
	-0.28		0.2205		-3.0872
			0.2205		-1.3072
			0.3045	0.06	-0.5528
	-0.28	0.26	0.105		-0.892
	-0.56	0.26	0.165		-1.116
		0.26	0.1815	0.06	-1.0096
		0.26	0.1605		-1.2432
		0.26	0.2445	0.06	-0.4888
-0.01784			0.255		-0.08984
-0.01784	-0.28		0.255		-0.22984

-0.01784			0.3105		-2.08104
-0.01784			0.3105		-0.58104
-0.01784			0.3945	0.06	0.173365
	-0.56	0.26	0.165		-1.116
-0.01784	-0.28	0.26	0.15		-0.53784
-0.01784		0.26	0.2265	0.06	-0.65544
-0.01784		0.26	0.2055		-0.88904
-0.01784		0.26	0.2895	:w	-0.19464
-0.01784			0.255		-0.08984
-0.01784	-0.28		0.255		-0.22984
-0.01784	-0.56	0.26	0.255		-0.38984
-0.01784	-0.28	0.26	0.15		-0.53784
-0.01784		0.26	0.2265	0.06	-0.65544
-0.01784		0.26	0.255	0.06	-0.41984
-0.42784		0.26	0.2715	0.06	-1.29344

such a case, since it would be a less frequent collocation.

Unif	Onset	AlignRV	Max	AlignLC	H
-0.41	-0.28	0.26	0.15	0.06	

ke a split morpheme boundary.

	-0.28		0.165	-0.316
			0.165	-0.816
	-0.28	0.26	0.105	-0.252
-0.01784	-0.28	0.26	0.3	-0.59784
	-0.56	0.26	0.165	-0.476

of its liaison consonant.

loes for be.le.ro.

	-0.28		0.165	-0.316
			0.165	-0.816
	-0.28	0.26	0.105	-0.252
	-0.56	0.26	0.165	-0.476
	-0.28		0.2205	-2.4472
			0.2205	-1.3072
		0.26	0.1605	-1.2432
	-0.28	0.26	0.2205	-1.4672

Unif	Onset	AlignRV	Max	AlignLC	H
-0.41	-0.28	0.26	0.15	0.06	

				0.06	0.06
-0.01784			0.135		0.008165
-0.01784			0.135	0.06	0.208165
-0.01784			0.1905	0.06	-1.92304
			0.0555		-0.6312
			0.0555	0.06	-0.4312
-0.01784			0.1905	0.06	-1.92304
-0.01784			0.1905		-1.98304

d, which would not change the results for beau/bel/beau.

-0.42784			0.2745	0.06	-0.13864
-0.42784			0.33	0.06	-0.62984
-0.01784			0.1905	0.06	-0.42304
-0.41			0.1695	0.06	-1.6388
-0.82			0.2535	0.06	-1.3544
-0.41			0.177	0.06	-0.9268
-0.41			0.1395	0.06	-0.2868
-0.41			0.15	0.06	-0.2
-0.41	-0.28		0.1395		-0.4868
	-0.28				-0.28

Unif	Onset	AlignRV	Max	AlignLC	H
-0.41	-0.28	0.26	0.15	0.06	

asc.pl.

k keeping them the same.

			0.165		-0.676
		0.26	0.0825		-0.798

-0.01784			0.2325		-0.13584
-0.01784		0.26	0.15		-0.25784

y violation.

			0.2625		-0.47

t we get the o pattern.
activation to help -al.

featural content since that will also add activation to the -al

y an o just like a liaison consonant.

			0.165		-0.676
		0.26	0.255		-0.902

-0.01784		0.26	0.15	-0.25784
			0.2205	-2.8072
-0.01784			0.2055	-1.00904

Unif	Onset	AlignRV	Max	AlignLC	H
-0.41	-0.28	0.26	0.15	0.06	

help the -aux form which has already maxed out on the o.

			0.2325	-0.118
		0.26	0.3225	-0.344
-0.01784		0.26	0.15	-0.25784
			0.288	-2.2492
-0.42784			0.3	-0.63784

		0.26		0 0.26
			0.0945	-0.1688
		0.26	0.1455	-0.7172

Unif	Onset	AlignRV	Max	AlignLC	H
-0.41	-0.28	0.26	0.15	0.06	

ace before a consonant or h-aspiré?

	-0.28	0.26	0.12		-0.118
					0
		0.26	0.207	0.06	-0.1488
	-0.28		0.207		-1.2188
	-0.28	0.26	0.1656		0.5676
					0

ing left-edge schwa activation.