Phonology Assignment #4

Andrew Zito

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1 Part 1

1.1 Ranking A: Complete Neutralization

The phoneme $\langle c \rangle$ is "completely neutralized", that is, we do not expect to see it anywhere in the data.

/ka/	*Pal	*K_I	Ident		
\Rightarrow ka					
ca	*		*		
/ki/	*Pal	*K_I	IDENT		
⇒ ki		*			
ci	*		*		
/ca/	*Pal	*K_I	IDENT		
/ca/ ca	*Pal	*K_I	IDENT		
 ' ' 		*K_I	IDENT *		
ca		*K_I			
ca \Rightarrow ka	*		*		

1.2 Ranking B: Allophonic

The sounds /c/ and /k/ are in an allophonic distribution, that is, their distribution is predictable: /c/ appears only before /i/, while /k/ appears elsewhere.

/ka/	*K_I	*Pal	IDENT
\Rightarrow ka			
ca		*	*
/ki/	*K_I	*Pal	Ident
ki	*		
\Rightarrow ci		*	*
/ca/	*K_I	*Pal	IDENT
ca		*	
$\Rightarrow ka$			*
/ci/	*K_I	*Pal	IDENT
⇒ ci		*	
ki	*	*	

1.3 Ranking C: Contextually Limited Contrast

The phonemes /k/ and /c/ are mostly contrastive, except that in front of /i/ we only see /c/.

/ka/	*K_I	IDENT	*Pal
\Rightarrow ka			
ca		*	*
/ki/	*K_I	Ident	*Pal
ki	*		
\Rightarrow ci		*	*
/ca/	*K_I	IDENT	*Pal
\Rightarrow ca		*	
ka		*	
/ci/	*K_I	IDENT	*Pal
⇒ ci		*	
→ C1			

2 Part 2

a) Ranking B best accounts for the data here. The example velar and palatal consonants are in an allophonic distribution. The palatal consonants appear before high vowels, while the velars appear elsewhere.

	ittjifak	*K_I	*Pal	Ident	ittjifak-i	*K_I	*Pal	Ident
b) [\Rightarrow ittjifak				ittjifak-i	*		
	ittjifac		*	*	⇒ ittjifac-i		*	*

c) Even if we choose the other underlying representation for 'alliance', we will get the same result. Observe:

ittjifac	*K_I	*Pal	IDENT	ittjifac-i	*K_I	*Pal	IDENT
ittjifac		*		⇒ ittjifac-i		*	
\Rightarrow ittjifak			*	ittjifak-i	*		*

d) We do not need to choose a specific underlying form for 'dirt'; or, more accurately perhaps, it does not matter *which* underlying form we choose. As demonstrated above with 'alliance', either underlying representation will produce the same result when run through our OT constraint ranking.