

## Chapter 1

(1) A ranking argument

	C1	C2
a. $\text{Cand}_{\text{Opt}}$		*
b. $\text{Cand}_{\text{Comp}}$	*	

## Chapter 1

(2) a. C1 and C2 agree

	C1	C2
i.  Cand <sub>Opt</sub>		
ii. Cand <sub>Comp</sub>	*	*

b. C1 does not distinguish the candidates (both obey it)

	C1	C2
i.  Cand <sub>Opt</sub>		
ii. Cand <sub>Comp</sub>		*

c. C1 does not distinguish the candidates (both violate it)

	C1	C2
i.  Cand <sub>Opt</sub>	*	
ii. Cand <sub>Comp</sub>	*	*

(3) Basic OT architecture



## Chapter 1

(4) ALIGN( $Cat_1$ ,  $Cat_2$ , Edge)

The element standing at the *Edge* of any  $Cat_1$  also stands at the *Edge* of some  $Cat_2$  (where  $Cat_1$  and  $Cat_2$  are grammatical or prosodic constituents and *Edge* is left or right).

## Chapter 1

(5) A stringency relation

	C1	C2
Struc <sub>a</sub>		
Struc <sub>b</sub>		*
Struc <sub>c</sub>	*	*

## Chapter 1

(6) A fixed universal hierarchy

	C1	>	C2
Struc <sub>a</sub>			
Struc <sub>b</sub>			*
Struc <sub>c</sub>	*		

(7) Harmonic alignment

Given a binary dimension  $D_1$  with a scale  $X > Y$  and another dimension  $D_2$  with a scale  $a > b > \dots > z$ , the *harmonic alignment* of  $D_1$  and  $D_2$  is the following pair of harmony scales:

$$H_x = X/a > X/b > \dots > X/z$$

$$H_y = Y/z > \dots > Y/b > Y/a$$

The *constraint alignment* is the following pair of constraint hierarchies:

$$C_x = *X/z \gg \dots \gg *X/b \gg *X/a$$

$$C_y = *Y/a \gg *Y/b \gg \dots \gg *Y/z$$

Chapter 1

(8) a. Input /pata/ → Output *pa.ta*

/pata/	DEP	ONSET	Remarks
i. $\left[ \begin{smallmatrix} p \\ a \end{smallmatrix} \right] \text{pa.ta}$			Faithful
ii. a.pa.ta	*	*	Gratuitous epenthesis
iii. ?a.pa.ta	**		Ever more gratuitous epenthesis

b. Input /apata/ → Output *apata*

/apata/	DEP	ONSET	Remarks
i. $\left[ \begin{smallmatrix} a \\ p \\ a \end{smallmatrix} \right] \text{a.pa.ta}$		*	Faithful
ii. ?a.pa.ta	*		Epenthesis

(9) *Harmonic bounding*

The mapping  $/A/ \rightarrow B$  harmonically bounds the mapping  $/A/ \rightarrow C$  if and only if the  $/A/ \rightarrow B$  mapping incurs a proper subset of the constraint violations incurred by the  $/A/ \rightarrow C$  mapping.

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(10) Different Ranking: Input /apata/ → Output *ʔapata*

/apata/	ONSET	DEP	Remarks
a. <i>ʔapata</i>		*	Epenthesis
b. <i>apata</i>	*		Faithful

## Chapter 1


(11) Permuted rankings where ONSET dominates DEP and/or MAX

a.  $\text{ONSET} \gg \text{DEP} \gg \text{MAX}$   
 $\text{DEP} \gg \text{ONSET} \gg \text{MAX}$  }  $\text{ONSET, DEP} \gg \text{MAX}$


b.  $\text{ONSET} \gg \text{MAX} \gg \text{DEP}$   
 $\text{MAX} \gg \text{ONSET} \gg \text{DEP}$  }  $\text{ONSET, MAX} \gg \text{DEP}$

Chapter 1

(12) a. Input /apata/ → Output *pata*

/apata/	ONSET	DEP	MAX	Remarks
i.  pata			*	Deletion
ii. apata	*			Faithful
iii. ?apata		*		Epenthesis

b. Input /apata/ → Output *pata*

/apata/	DEP	ONSET	MAX	Remarks
i.  pata			*	Deletion
ii. apata		*		Faithful
iii. ?apata	*			Epenthesis

Chapter 1

(13) a. Input /fárao/ → Output *fa.ra.o*

/fárao/	C <sub>M</sub>	MAX	ONSET	DEP	Remarks
i. fá.ra.o			*		Faithful
ii. fá.ra.ʔo	*			*	Epenthesis
iii. fá.ra		*			Deletion

b. cf. Input /aórta/ → Output *.a.ʔór.ta*

/aórta/	C <sub>M</sub>	MAX	ONSET	DEP	Remarks
i. a.ór.ta			**		Faithful
ii. a.ʔór.ta			*	*	Epenthesis
iii. ór.ta		*	*		Deletion

Chapter 1

(14) Input /iŋ-koma-i/ → Output *iŋ.ko.ma.ti*

/iŋ-koma-i/	C <sub>F</sub>	MAX	ONSET	DEP	Remarks
a.  iŋ.ko.ma.ti			*	*	Medial epenthesis only
b. tiŋ.ko.ma.ti	*			**	Medial & initial epenthesis
c. ko.ma.ti		**		*	Deletion
d. iŋ.ko.ma.i			**		Faithful

## Chapter 1

(15) Cancellation/Domination Lemma (paraphrased)

Suppose two candidates  $A$  and  $B$  do not incur identical sets of violation-marks. Then  $A$  is more harmonic than  $B$  iff every uncanceled mark incurred by  $A$  is dominated by an uncanceled mark incurred by  $B$ .

## Chapter 1

(16) Mark cancellation

	$C_F$	MAX	ONSET	DEP
a. $\text{in}^{\text{H}}\text{komati}$			*	<del>*</del>
b. $\text{tin}^{\text{H}}\text{komati}$	*			<del>*</del> *

## Chapter 1

### (17) Practice tableaux

a.

/in/	B	C
i.  out1	*	
ii. out2	*	*

b.

/in/	B	C
i.  out1		
ii. out2	*	*

c.

/in/	B	C
i.  out1		*
ii. out2	*	*


d.

/in/	B	C
i.  out1	*****	*****
ii. out2	*****	*****


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(17) continued


e.

/in/	B	C
i.  out1		
ii. out2		*


f.

/in/	A	B	C
i.  out1			*
ii. out2	*	*	

g.

/in/	A	B	C
i.  out1	*		*
ii. out2	*	*	

h.

/in/	B	C	A
i.  out1		*	
ii. out2	*		*

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(18) Tableau (14) in comparative format

/iŋ-koma-i/	DEP <sub>INIT-σ</sub>	MAX	ONSET	DEP
b. iŋ.ko.ma.ti ~ tiŋ.ko.ma.ti	W		L	W
c. iŋ.ko.ma.ti ~ ko.ma.ti		W	L	
d. iŋ.ko.ma.ti ~ iŋ.ko.ma.i			W	L


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(19) Comparative format prior to ranking

	/iŋ-koma-i/	ONSET	MAX	DEP	DEP <sub>INIT-σ</sub>
b.	iŋkomati ~ tiŋkomati	L		W	W
c.	iŋkomati ~ komati	L	W		
d.	iŋkomati ~ iŋkoma.i	W		L	

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(20) = (14)

/iŋ-koma-i/	DEP <sub>INIT-σ</sub>	MAX	ONSET	DEP
a.  iŋkomati			*	*
b. iŋkomati	*			**
c. komati		**		*
d. iŋkoma.i			**	

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(21) Situations requiring an additional constraint

a.

/in/	A	B
i. out1	*	<i>anything</i>
ii. out2		<i>anything</i>

b.

/in/	A	B
i. out1		*
ii. out2		

c.

/in/	A	B
i. out1		*
ii. out2		*

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(22) Like (21), but with additional constraint supplied

a.

/in/	C	A	B
i.  out1		*	<i>anything</i>
ii. out2	*		<i>anything</i>

b.


/in/	A	C	B
i.  out1			*
ii. out2		*	

c.

/in/	A	B	C
i.  out1		*	
ii. out2		*	*

## Chapter 1

(23) Profligacy illustrated

/in/	A	B	C	D
a.  out1			*	*
b. out2	*	*		
c. out3		*	*	

(24) Distribution of *Pro*

a.  $Mary_i$  hopes  $Pro_i$  to see Bill.

\* $Mary_i$  hopes she<sub>j</sub>/her<sub>i</sub> to see Bill.

b. \* $Mary_i$  hopes  $Pro_i$  will see Bill.

$Mary_i$  hopes she<sub>i</sub> will see Bill.

## Chapter 1

(25) Some tentative constraints for *Pro*

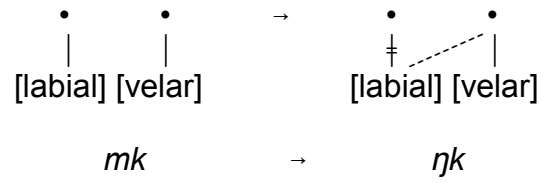
a. CONTROL

*Pro* is coindexed with something. Assign one violation-mark \* for every *Pro* that is not coindexed.

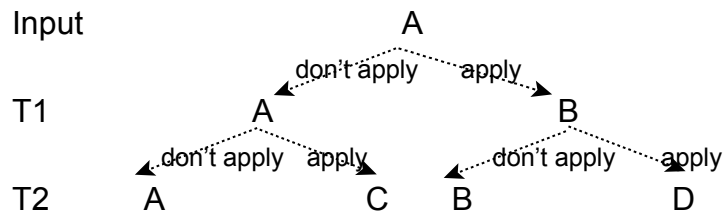
b. DOMAIN

If  $Pro_i$  is coindexed with  $A_i$ , assign one violation-mark "\*" for every  $XP_k$  that contains  $Pro_i$  and Tns and does not contain  $A_i$ .

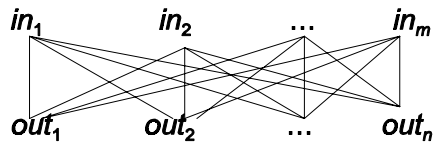
(1) Assimilation as autosegmental spreading



(2) Derivational choice-points



(3) A simple connectionist model



## Chapter 3

### (1) Conditions for an unfaithful mapping

Assume that CON supplies:

- (i) The markedness constraint \*ABC, which is violated by the output [abc].
- (ii) The faithfulness constraint F(B↗D) “don’t change B into D”, which is violated by any /b/ → [d] mapping.

*then,*

The unfaithful mapping /abc/ → [adc] will occur if and only if

- a. \*ABC dominates F(B↗D) and any other faithfulness constraint that would block the /b/ → [d] mapping.

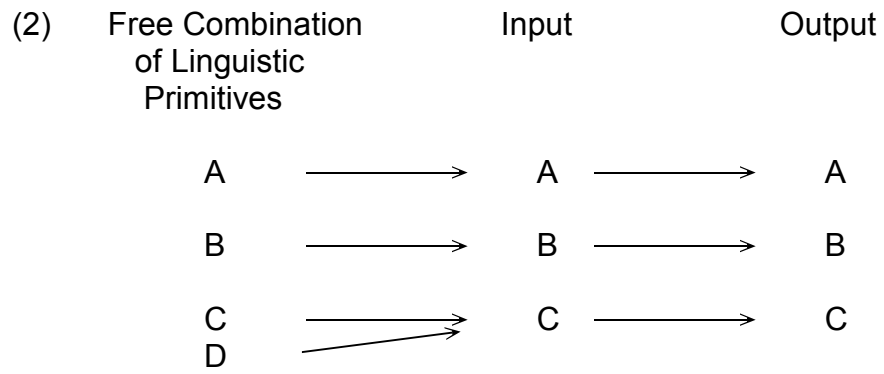
*and*

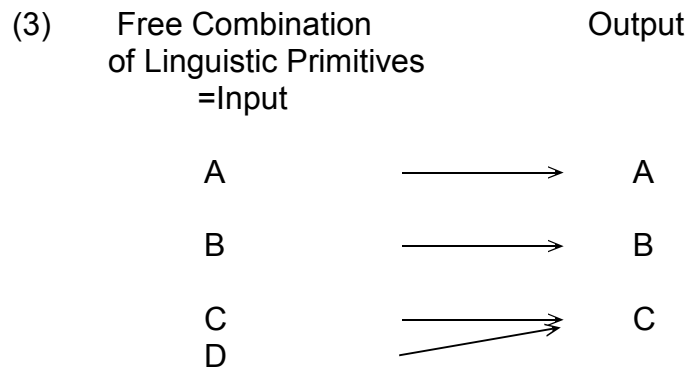
- b. No markedness constraint that favors [abc] over [adc] is ranked above \*ABC.

*and*

- c. And for all X≠[d], some faithfulness constraint F(B↗X) or some markedness constraint violated by aXc dominates F(B↗D).

### Chapter 3





## Chapter 3

(4) a. Lexical Redundancy Rule

if [-back], then [-round].

b. Fronting Rule Exemplified

/put+i/ → piti

/kop+i/ → kepi

c. Fronting Rule

V →  $\begin{bmatrix} \text{-back} \\ \text{-round} \end{bmatrix}$  / \_\_\_\_\_C<sub>0</sub> i


## Chapter 3

(5) FRT/\*RND, IDENT(round)  $\gg$  IDENT(back)

/tük/	FRT/*RND	IDENT(round)	IDENT(back)	Remarks
a. $\rightarrow$ tuk			*	Backing of /ü/
b. tük	*			Faithful
c. tik		*		Unrounding of /ü/


## Chapter 3

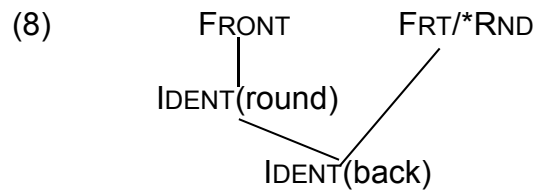
(6) FRONT  $\gg$  IDENT(back)

/put+i/	FRONT	IDENT(back)	Remarks
a.  piti		*	Fronting of /u/ before /i/
b. puti	*		Faithful

## Chapter 3

(7) FRONT  $\gg$  IDENT(round)

/put+i/	FRONT	FRT/*RND	IDENT(round)	IDENT(back)
a.  piti			*	*
b.              puti	*			
c.              püti		*	*	



## Chapter 3

(9) Blocking from IDENT(round)  $\gg$  FRONT

	/put+i/	FRT/*RND	IDENT(round)	FRONT	IDENT(back)
a.	piti		*		*
b.	puti			*	
c.	püti	*			*

## Chapter 3

(10) HEAD-LEFT  $\gg$  OB-HD

	HEAD-LEFT	OB-HD
a. $\text{I wonder}_{[CP} \text{ who he saw}$		*
b. $\text{I wonder}_{[CP} \text{ who that he saw}$	*	

Chapter 3

(11) /ŋaw/ → [naw]

/ŋaw/	*[ŋ]	IDENT(velar)
a.    ↖    naw		*
b.        ŋaw	*	

Chapter 3


(12) Tableau des Tableaux Showing /naw/ → [naw] > /ŋaw/ → [naw]

		*[ŋ]	IDENT(velar)
a.	↖ ↗ /naw/	↖ ↗ naw	
		ŋaw	*
b.	/ŋaw/	↖ ↗ naw	*
		ŋaw	*


Chapter 3

(13) IDENT(acc), HEAD(PWd)  $\gg$  ALIGN-R(PWD, Accent)

a.

/padót+a/	IDENT(acc)	HEAD(PWd)	ALIGN-R
i.  padóta			*
ii. padótá		*	
iii. padotá	*		

b.

/batuk+a/	IDENT(acc)	HEAD(PWd)	ALIGN-R
i.  batuká			
ii. batúká		*	
iii. batúka		*	*

## Chapter 3

### (14) Featural decomposition of some Spanish clitics

[3person, –plural, –feminine, –dative, –reflexive]	→	<i>lo</i>
[3person, –plural, +feminine, –dative, –reflexive]	→	<i>la</i>
[3person, +plural, –feminine, –dative, –reflexive]	→	<i>los</i>
[3person, +plural, +feminine, –dative, –reflexive]	→	<i>las</i>
[3person, –plural, –feminine, +dative, –reflexive]	↘	<i>le</i>
[3person, –plural, +feminine, +dative, –reflexive]	↗	
[3person, +plural, –feminine, +dative, –reflexive]	↘	<i>les</i>
[3person, +plural, +feminine, +dative, –reflexive]	↗	

## Chapter 3

### (15) Types of distributional restrictions

	Characterization	Description
a. Identical Distribution	$C_A = C_B$	A and B have identical distributions (except for accidental gaps). The A/B distinction is maintained in all contexts where they occur.
b. Complementary Distribution	$C_A \cap C_B = \emptyset$	A and B never occur in the same context. The A/B distinction is neutralized everywhere.
c. Contextual Neutralization	$C_A \subsetneq C_B$	There are contexts that permit both A and B, but there are also contexts that permit only B. The A/B distinction is neutralized contextually in favor of B.

Chapter 3

(16) Factorial typology of  $*V_{NAS}$ ,  $*NV_{ORAL}$ , and IDENT(nasal)

	Ranking	Inventory
a. Overlapping distribution	$IDENT(nasal) \gg *NV_{ORAL} \gg *V_{NAS}$ $IDENT(nasal) \gg *V_{NAS} \gg *NV_{ORAL}$	$\{ba, b\tilde{a}, a, \tilde{a}, ma, m\tilde{a}\}$
b. Complementary distribution	$*NV_{ORAL} \gg *V_{NAS} \gg IDENT(nasal)$	$\{ba, a, m\tilde{a}\}$
	$*V_{NAS} \gg *NV_{ORAL} \gg IDENT(nasal)$	$\{ba, a, ma\}$
	$*V_{NAS} \gg IDENT(nasal) \gg *NV_{ORAL}$	
c. Contextual neutralization	$*NV_{ORAL} \gg IDENT(nasal) \gg *V_{NAS}$	$\{ba, b\tilde{a}, a, \tilde{a}, m\tilde{a}\}$

## Chapter 3

### (17) Mappings for identical distribution

*/ba/* → *ba*

*/bã/* → *bã*

*/a/* → *a*

*/ã/* → *ã*

*/ma/* → *ma*

*/mã/* → *mã*

## Chapter 3

### (18) Mappings in Madurese


/ba/ ↘  
/bã/ ↗ *ba*

/a/ ↘  
/ã/ ↗ *a*


/ma/ ↘  
/mã/ ↗ *mã*

Chapter 3

(19) a.  $*V_{\text{NAS}} \gg \text{IDENT}(\text{nasal})$

	/bã/	$*V_{\text{NAS}}$	IDENT(nasal)
i.	 ba		*
ii.	bã	*	

b.  $*NV_{\text{ORAL}} \gg \text{IDENT}(\text{nasal})$

	/ma/	$*NV_{\text{ORAL}}$	IDENT(nasal)
i.	 mã		*
ii.	ma	*	

### Chapter 3

(20)  $*NV_{ORAL} \Rightarrow *V_{NAS}$

	$*NV_{ORAL}$	$*V_{NAS}$
/ma/		
a. <span style="font-size: 0.8em;">↖</span> mã		*
b. ma	*	

## Chapter 3

### (21) Mappings in Yoruba

/ba/ → *ba*

/bã/ → *bã*

/a/ → *a*

/ã/ → *ã*

/ma/ ↘ *mã*  
/mã/ ↗

### Chapter 3

(22) \*NV<sub>ORAL</sub> ⇒ IDENT(nasal)

	/ma/	*NV <sub>ORAL</sub>	IDENT(nasal)
i.	↖ mā		*
ii.	ma	*	

## Chapter 3

### (23) Mappings in Nancowry

/bata/ → *batá*

/batã/ → *batã*

/bata/ ↘ *batá*  
/bãta/ ↗

Chapter 3

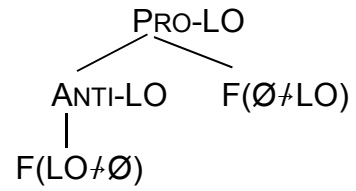
(24) a. /batǎ/ → batǎ

/batǎ/	IDENT <sub>ǎ</sub> (nasal)	*V <sub>NAS</sub>	IDENT(nasal)
a. batǎ		*	
b. batá	*		*

b. /bǎta/ → batá

/bǎta/	IDENT <sub>ǎ</sub> (nasal)	*V <sub>NAS</sub>	IDENT(nasal)
a. batá			*
b. bǎtá		*	

(25) Schematic ranking for “only when needed” distribution



### Chapter 3

(26) Application of OB-HD to English *do*-support

Candidates	OB-HD	Remarks
a. $\left[_{CP} wh \mathbf{do}_i \left[_{IP} DP \mathbf{e}_i \left[_{VP} V t \right] \right] \right]$		E.g., <i>What did Dana eat?</i> <i>Dř</i> is head of CP, and its trace is head of IP.
b. $\left[_{CP} wh \mathbf{e} \left[_{IP} DP \mathbf{e} \left[_{VP} V t \right] \right] \right]$	**	E.g., <i>*What Dana ate?</i> Neither CP nor IP is headed, because no <i>dř</i> -support or inversion. OB-HD is violated by both of the headless projections.
c. $\left[_{CP} wh \mathbf{e} \left[_{VP} DP V t \right] \right]$	*	E.g., <i>*What Dana ate?</i> Different structure, but CP is still headless.
d. $\left[_{CP} wh \mathbf{e} \left[_{IP} DP \mathbf{do} \left[_{VP} V t \right] \right] \right]$	*	E.g., <i>*What Dana did eat?</i> <i>Dř</i> is head of IP, but CP is headless, because no inversion.

### Chapter 3

(27) OB-HD  $\gg$  FULL-INT

	OB-HD	FULL-INT
a. $\rightarrow$ $[_{CP} wh do_i [_{IP} DP e_i [_{VP} V t ]]]$		*
b. $[_{CP} wh e [_{IP} DP e [_{VP} V t ]]]$	**	

## Chapter 3

(28) FULL-INT decisive

	OB- HD	FULL- INT
a. $\left[_{CP} wh \mathbf{will}_i \left[_{IP} DP \mathbf{e}_i \left[_{VP} V t \right] \right] \right]$		
b. $\left[_{CP} wh \mathbf{will}_i \left[_{IP} DP \mathbf{e}_i \left[_{XP} do \left[_{VP} V t \right] \right] \right] \right]$		*
c. $\left[_{CP} wh \mathbf{do}_i \left[_{IP} DP \mathbf{e}_i \left[_{XP} will \left[_{VP} V t \right] \right] \right] \right]$		*

## Chapter 3

(29) a. Toba Batak (Austronesian, Sumatra) (Hayes 1986)

Nasal consonant changes to oral.

/maŋinum tuak/ → maŋinup tuak 'drink palm wine'

/holom saotik/ → holop saotik 'somewhat dark'

b. Kelantan Malay (Austronesian, Malaysia) (Teoh 1988)

Nasal consonant deletes

/pintu/ → pitu 'door'

/hampas/ → hapax 'husk'

c. Japanese (Ito et al. 1995)

Voiceless consonant becomes voiced.

/sin-ta/ → šinda 'died'

/yom-ta/ → yonda 'read (past)'

## Chapter 3

(30) a. Toba Batak

\*NÇ, IDENT(voice), MAX ≫ IDENT(nasal)

b. Kelantan Malay

\*NÇ, IDENT(nasal), IDENT(voice) ≫ MAX

c. Japanese

\*NÇ, IDENT(nasal), MAX ≫ IDENT(voice)

d. English

IDENT(nasal), IDENT(voice), MAX ≫ \*NÇ

(31) Hiatus resolution in Emai

- a. If  $V_1$  is final in a functional morpheme and  $V_2$  is initial in a lexical morpheme,

delete  $V_1$ :

$$\begin{array}{c} \dots V_1 ]_{\text{Fnc}} [_{\text{Lex}} V_2 \dots \\ \downarrow \\ \emptyset \end{array}$$

- b. If  $V_1$  is final in a lexical morpheme and  $V_2$  is initial in a functional morpheme,

delete  $V_2$ :

$$\begin{array}{c} \dots V_1 ]_{\text{Lex}} [_{\text{Fnc}} V_2 \dots \\ \downarrow \\ \emptyset \end{array}$$

- c. If  $V_1$  and  $V_2$  are both in lexical morphemes or both in functional morphemes,

delete  $V_1$ :

$$\begin{array}{c} \dots V_1 ]_{\text{Lex}} [_{\text{Lex}} V_2 \dots \\ \downarrow \\ \emptyset \end{array} \qquad \begin{array}{c} \dots V_1 ]_{\text{Fnc}} [_{\text{Fnc}} V_2 \dots \\ \downarrow \\ \emptyset \end{array}$$

- d. But if  $V_1$  is high ( $i$  or  $u$ ) and in a lexical (though not functional) morpheme, it changes into the corresponding glide ( $y$  or  $w$ ):

$$\begin{array}{c} \dots i ]_{\text{Lex}} [_{\text{Lex}} V_2 \dots \\ \downarrow \\ y \end{array} \qquad \begin{array}{c} \dots u ]_{\text{Lex}} [_{\text{Lex}} V_2 \dots \\ \downarrow \\ w \end{array}$$

## Chapter 3

### (32) Emai informally

Don't delete segments in lexical morphemes.    ➤    Don't change a vowel into a glide.    ➤    Don't delete segments in morpheme-initial position.    ➤    Don't delete any segments.

Chapter 3

(33) Email:  $\text{MAX}_{\text{LEX}} \Rightarrow \text{IDENT}$

$/\dots\text{ku}]_{\text{lex}} [\text{lex a}\dots/$	ONSET	$\text{MAX}_{\text{LEX}}$	IDENT	$\text{MAX}_{\text{INIT}}$	MAX	Remarks
a. $\dots\text{kwa}\dots \sim \dots\text{ka}\dots$		W	L		W	$V_1$ deletes.
b. $\dots\text{kwa}\dots \sim \dots\text{ku}\dots$		W	L	W	W	$V_2$ deletes.
c. $\dots\text{kwa}\dots \sim \dots\text{ku.a}\dots$	W		L			Faithful

Chapter 3

(34) Emai II: IDENT  $\gg$  MAX

$/\dots\beta i ]_{\text{Fnc}} [_{\text{Lex}} \text{o}\dots/$	ONSET	MAX <sub>LEX</sub>	IDENT	MAX <sub>INIT</sub>	MAX	Description of failed candidate
a. $\dots\beta\text{o}\dots \sim \dots\beta\text{y}\text{o}\dots$			W		L	V <sub>1</sub> → glide.
b. $\dots\beta\text{o}\dots \sim \dots\beta\text{i}\dots$		W		W		V <sub>2</sub> deletes.
c. $\dots\beta\text{o}\dots \sim \dots\beta\text{i}\text{o}\dots$	W				L	Faithful

Chapter 3

(35) Emai III:  $MAX_{LEX} \gg MAX_{INIT}$

$/...be]_{Lex} [_{Fnc} \text{ɔ}.../$	ONSET	$MAX_{LEX}$	IDENT	$MAX_{INIT}$	MAX	Description of failed candidate
a. ...be... ~ ...bɔ...		W		L		$V_1$ deletes.
b. ...be... ~ ...be.ɔ...	W			L	L	Faithful

Chapter 3

(36) a. Both candidates violate  $MAX_{LEX}$

$/\dots k\sigma]_{Lex} [_{Lex} e\dots/$	ONSET	$MAX_{LEX}$	IDENT	$MAX_{INIT}$	MAX	Description of failed candidate
i. $\dots ke\dots \sim \dots k\sigma\dots$				W		$V_2$ deletes.
ii. $\dots ke\dots \sim \dots k\sigma.e\dots$	W	L			L	Faithful

b. Both candidates obey  $MAX_{LEX}$

$/\dots si]_{Fnc} [_{Fnc} \sigma\dots/$	ONSET	$MAX_{LEX}$	IDENT	$MAX_{INIT}$	MAX	Description of failed candidate
i. $\dots s\sigma\dots \sim \dots si\dots$				W		$V_2$ deletes.
ii. $\dots s\sigma\dots \sim \dots si.\sigma\dots$	W				L	Faithful

## Chapter 3

(37) Ranking for blocking in Southern Palestinian Arabic

ALIGN-L(RTR)  $\gg$  B  $\gg$  ALIGN-R(RTR)  $\gg$  IDENT(RTR)

## Chapter 3

(38) Ranking for limited process-specific blocking

B1  $\succ$  ALIGN-L(RTR)  $\succ$  B2  $\succ$  ALIGN-R(RTR)  $\succ$  IDENT(RTR)

## Chapter 3

(39) Ranking prerequisites for complete process-specificity

a. Two similar processes

$M1 \gg F$

$M2 \gg F$

b. B1 blocks  $[M1 \gg F]$  process, but not  $[M2 \gg F]$  process

$B1 \gg M1$

$M2 \gg B1$

c. B2 blocks  $[M2 \gg F]$  process, but not  $[M1 \gg F]$  process

$B2 \gg M2$

$M1 \gg B2$

## Chapter 3

(40) Hypothetical case of constraint-specific repairs

a. Syllable-final obstruent deletes

*/pat/* → *pa*

b. Syllable-final sonorant triggers epenthesis

*/pan/* → *panə*

Chapter 3

(41) a. /pat/ → pa (as in (40))

/pat/	No-CODA(son)	DEP	No-CODA(obst)	MAX
i. $\text{pa}$				*
ii. $\text{pat}\emptyset$		*		
iii. $\text{pat}$			*	

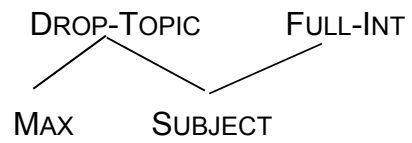
b. /pan/ → pa (but cf. (40))

/pan/	No-CODA(son)	DEP	No-CODA(obst)	MAX
i. $\text{pa}$				*
ii. $\text{pan}\emptyset$		*		
iii. $\text{pan}$	*			

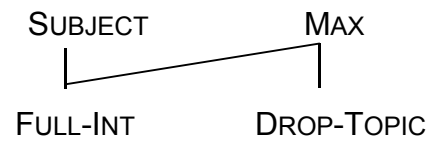
## Chapter 3

(42) Ranking for null subjects in Italian vs. English

a. Italian



b. English



## Chapter 3

(43) An overkill effect

/sin-ta/	*NC <sub>σ</sub>	MAX
a.                     sita		*
b.                    sia		**
c.                    sinta	*	

Chapter 3

(44) ]<sub>σ</sub>/\*VOICE ≫ IDENT(voice) (Example: German /bad/ → [bat] 'bath')

	/bad/	]σ/*VOICE	IDENT(voice)
a.	bat		*
b.	bad	*	

Chapter 3

(45) ]<sub>σ</sub>/\*VOICE, IDENT(voice) ≫ MAX

/bad/	] <sub>σ</sub> /*VOICE	IDENT(voice)	MAX
a.      ↗ ba			*
b.      bad	*		
c.      bat		*	

Chapter 3

(46) Unattested “devoicing” by deletion: /bad/ → \*ba

/bad/	]σ/*VOICE	MAX(voice)	MAX(segment)
a.       ba		*	*
b.       bad	*		
c.       bat		*	

### Chapter 3

(47) Reduplicative pre- and infixation in Timugon Murut (Austronesian, Malaysia)

a. Word begins with consonant ⇒ reduplicative prefix:

bulud            **bu**-bulud            'hill/ridge'

limo            **li**-limo            'five/about five'

b. Word begins with a vowel ⇒ reduplicative infix:


abalan            a-**ba**-balan            'bathes/often bathes'

ulampoy            u-**la**-lampoy            no gloss


### Chapter 3

(48) ONSET  $\gg$  ALIGN-PFX

a.

	ONSET	ALIGN-PFX
i.  <b>bu</b> -bulud		
ii. <b>bu-lu</b> -lud		**

b.

	ONSET	ALIGN-PFX
i.  <b>a-ba</b> -balan	*	*
ii. <b>a-abalan</b>	**	

Chapter 3

(49) Attempting PIOS distribution with a non-reduplicative CV prefix

a.

	ONSET	ALIGN-PFX
i. <b>ta</b> -bulud		
ii.    bu- <b>ta</b> -lud		**

b.

	ONSET	ALIGN-PFX
i.    a- <b>ta</b> -balan	*	*
ii. <b>ta</b> -abalan	*	


Chapter 3

(50) Attempting PIOS distribution with a non-reduplicative V prefix

a.

	ONSET	ALIGN-PFX
i.  a-bulud	*	
ii. bu-a-lud	*	**

b.

	ONSET	ALIGN-PFX
i. a-a-balan	**	*
ii.  a-abalan	**	

Chapter 3

(51) NO-HIATUS substituted for ONSET in (49)

a.

	NO-HIATUS	ALIGN-PFX
i. <b>ta</b> -bulud		
ii. bu- <b>ta</b> -lud		**

b.

	NO-HIATUS	ALIGN-PFX
i. <b>a-ta</b> -balan		*
ii. <b>ta</b> -abalan	*	

## Chapter 3

- (52) Person Scale (PS): 1st, 2nd > 3rd  
Grammatical Relation Scale (GRS): Subject > Non-Subject

## Chapter 3

(53) a. Harmonic alignment of GRS with PS

$H_{\text{Subj}} = \text{Subject/1st,2nd} \succ \text{Subject/3rd}$

$H_{\text{Obj}} = \text{Non-Subject/3rd} \succ \text{Non-Subject/1st,2nd}$

b. Constraint alignment of GRS with PS

$C_{\text{Subj}} = * \text{SUBJECT/3RD} \gg * \text{SUBJECT/1ST,2ND}$


$C_{\text{Obj}} = * \text{NON-SUBJ/1ST,2ND} \gg * \text{NON-SUBJ/3RD}$

Chapter 3


(54) Lummi person/voice relations

a. \*NON-SUBJ/1ST,2ND ➤ Faith, \*NON-SUBJ/3RD, \*SUBJECT/1ST,2ND

b.

	1st Agent Subj	3rd Patient Obj	*NON-SUBJ/ 1ST,2ND	Faith	*NON-SUBJ/ 3RD	*SUBJECT/ 1ST,2ND
i.  Active	1st Agent Subj	3rd Patient Obj			*	*
ii. Passive	1st Agent Obl	3rd Patient Subj	*	*		

c.

	3rd Agent Subj	2nd Patient Obj	*NON-SUBJ/ 1ST,2ND	Faith	*NON-SUBJ/ 3RD	*SUBJECT/ 1ST,2ND
i.  Passive	3rd Agent Obl	2nd Patient Subj		*	*	*
ii. Active	3rd Agent Subj	2nd Patient Obj	*			

## Chapter 3

(55) Ranking permutations from (53b)

a. \*SUBJECT/3RD  $\gg$  \*SUBJECT/1ST,2ND  $\gg$  \*NON-SUBJ/1ST,2ND  $\gg$  \*NON-SUBJ/3RD

b. \*SUBJECT/3RD  $\gg$  \*NON-SUBJ/1ST,2ND  $\gg$  \*SUBJECT/1ST,2ND  $\gg$  \*NON-SUBJ/3RD

c. \*SUBJECT/3RD  $\gg$  \*NON-SUBJ/1ST,2ND  $\gg$  \*NON-SUBJ/3RD  $\gg$  \*SUBJECT/1ST,2ND

d. \*NON-SUBJ/1ST,2ND  $\gg$  \*SUBJECT/3RD  $\gg$  \*SUBJECT/1ST,2ND  $\gg$  \*NON-SUBJ/3RD

e. \*NON-SUBJ/1ST,2ND  $\gg$  \*SUBJECT/3RD  $\gg$  \*NON-SUBJ/3RD  $\gg$  \*SUBJECT/1ST,2ND

f. \*NON-SUBJ/1ST,2ND  $\gg$  \*NON-SUBJ/3RD  $\gg$  \*SUBJECT/3RD  $\gg$  \*SUBJECT/1ST,2ND

### Chapter 3

(56) HEAD(PWd)  $\Rightarrow$  NON-FINALITY

	HEAD(PWd)	NON-FINALITY
a. $\rightarrow$ [ (lúx) <sub>Ft</sub> ] <sub>PWd</sub>		*
b. [ lux ] <sub>PWd</sub>	*	

### Chapter 3

(57) HEAD(PWd), FT-BIN  $\Rightarrow$  NON-FINALITY

	HEAD(PWd)	FT-BIN	NON-FINALITY
a. $\left[ \begin{array}{c} \text{p} \\ \text{é} \\ \text{d} \end{array} \right]_{\text{Ft}} ]_{\text{PWd}}$			*
b. $[ \text{pede} ]_{\text{PWd}}$	*		
c. $[ (\text{p}é)\text{de} ]_{\text{PWd}}$		*	

### Chapter 3

(58) HEAD(PWd), FT-BIN  $\Rightarrow$  NON-FINALITY

	HEAD(PWd)	FT-BIN	NON-FINALITY
a. <sup>135</sup> [ au (rícu) <sub>Ft</sub> la ] <sub>PWd</sub>			
b. [ aurícula ] <sub>PWd</sub>	*		
c. [ auri (cú) <sub>Ft</sub> la ] <sub>PWd</sub>		*	
d. [ auri (cúla) <sub>Ft</sub> ] <sub>PWd</sub>			*

Chapter 3

(59) NON-INITIALITY  $\gg$  ALIGN-L

	NON-INITIALITY	ALIGN-L
a. <i>Penka ja e dala ...</i>		***
b. <i>Penka ja dala e ...</i>		****
c. <i>Ja e Penka dala ...</i>	*	*
d. <i>Penka e ja dala ...</i>		***

## Chapter 3

(60) a. Madurese

Oral and nasal vowels are in complementary distribution (see §3.1.3.4), except in reduplicative affixes: **ỹāt-něỹāt** ‘intentions’, **wã-mõwã** ‘faces’. This breach of complementarity improves resemblance between the affix and the base word that it is copying.


b. Terena (Arawakan, Brazil)

Except for *m*, *n*, *ŋ*, all segments are predictably oral. But the characteristic morphology of the 1st singular is nasalization of the initial portion of the word up through the first oral obstruent (which becomes prenasalized):

owoku	õwõŋgu	‘house’/‘my house’
arine	ãrĩně	‘sickness’/‘my sickness’
nokone	nõŋgone	‘need’/‘I need’

Chapter 3

(61) ALIGN-R(Lex, PWd), EXH(PPh)  $\gg$  PWdCON

	ALIGN-R	EXH(PPh)	PWdCON
a.  [ [Bill] <sub>PWd</sub> [dões] <sub>PWd</sub> ] <sub>PPh</sub>			*
b. [ [Bill dões] <sub>PWd</sub> ] <sub>PPh</sub>	*		
c. [ [Bill] <sub>PWd</sub> dões ] <sub>PPh</sub>		*	

### Chapter 3

- (62) a. Focused phrase *before* clausal complement

neigon **nun** [ ka Aish watɔg Billiri ]

said **who** that Aisha went-to Billiri

'**Who** said that Aisha went to Billiri'

- b. Focused phrase *before* modifier of complex DP complement

ade shiruwoi **ngadlai** [ mə shee wura ] ane

ate fish-the **cat-the** that she fried up

'**The cat** ate up the fish that she fried.'

- c. Focused phrase *after* simplex DP complement

tui [worom mono] **shire**

ate bean my **she**

'**She** ate my beans'

Chapter 3

(63) CASE-ADJ, ECP  $\gg$  ALIGN-L(Focus, VP)  $\gg$  ALIGN-R(Focus, VP)

	CASE-ADJ	ECP	ALIGN-L (Focus, VP)	ALIGN-R (Focus, VP)
a. $\rightarrow$ tui [worom mono] <b>shire</b> ate bean my <b>she</b>			*	
b. tui <b>shire</b> [worom mono] ate <b>she</b> bean my	*			*
c. tui+worom <b>shire</b> [mono] ate+bean <b>she</b> my		*		*
d. <b>shire</b> tui [worom mono] <b>she</b> ate bean my			*	*

### Chapter 3

(64) Emergence of ALIGN-PFX

	ONSET	ALIGN-PFX
a. a- <b>ba</b> -balan ~ a-abalan	W	L
b. a- <b>ba</b> -balan ~ aba- <b>la</b> -lan		W

Chapter 3

(65) Emergence of ONSET and ALIGN-PFX

	MAX	DEP	ONSET	ALIGN-PFX
a. a- <b>ba</b> -balan ~ a-abalan			W	L
b. a- <b>ba</b> -balan ~ aba- <b>la</b> -lan				W
c. a- <b>ba</b> -balan ~ <b>ba</b> -balan	W		L	L
d. a- <b>ba</b> -balan ~ ?a-?abalan		W	L	L

## Chapter 3

(66) a. Violation tableau

	...	C
i. $\rightarrow$ Cand <sub>1</sub>		*
ii. Cand <sub>2</sub>		**
iii. Cand <sub>3</sub>		***

b. Comparative tableau

	...	C
i. Cand <sub>1</sub> ~ Cand <sub>2</sub>		W
ii. Cand <sub>1</sub> ~ Cand <sub>3</sub>		W

## Chapter 3

(67) OB-HD  $\gg$  FULL-INT

	OB-HD	FULL-INT
a. $\rightarrow$ [ <sub>CP</sub> <i>wh do</i> <sub>i</sub> [ <sub>IP</sub> DP <i>e</i> <sub>i</sub> [ <sub>VP</sub> V <i>t</i> ]]]		*
b. [ <sub>CP</sub> <i>wh e</i> [ <sub>IP</sub> DP <i>e</i> [ <sub>VP</sub> V <i>t</i> ]]]	**	
c. $\rightarrow$ [ <sub>CP</sub> <i>wh do</i> [ <sub>IP</sub> DP <i>do</i> [ <sub>VP</sub> V <i>t</i> ]]]		**

(68) OT architecture



(69) Nootka Rounding and Unrounding

a. Dorsals become rounded after round vowels

$K \rightarrow K^w / o\_\_\_\_$	$ʔo.k^wi:t$	‘making it’
	cf. $ki:t$	‘making’

b. Syllable-final dorsals become unrounded

$K^w \rightarrow K / \_\_\_\_.$	$ʔa:k.ʃi\lambda$	‘to take pity on’
	cf. $ʔa:k^wiqnak$	‘pitiful’

c. Interaction: Unrounding “wins”

$m\acute{o}:q.$	‘throwing off sparks’
cf. $m\acute{o}.q^wak$	‘phosphorescent’

## Chapter 3

### (70) Serial Derivation for Nootka

Underlying	/m̥o:q/	cf.	/ʔoki:ʔ/	/ʔa:k <sup>w</sup> šiλ/
Rounding	m̥o:q <sup>w</sup> .		ʔo.k <sup>w</sup> i:ʔ	—
Unrounding	m̥o:q.		—	ʔa:k.šiλ

(71) Markedness Constraints for Nootka

a. "ROUNDING"

\*oK

b. "UNROUNDING"

\*K<sup>w</sup>.

Chapter 3

(72) a. “ROUNDING”  $\gg$  IDENT(round)

	/ʔoki:ɬ/	“ROUNDING”	IDENT(round)
i.	☞ ʔo.k <sup>w</sup> i:ɬ		*
ii.	ʔo.ki:ɬ	*	

b. “UNROUNDING”  $\gg$  IDENT(round)

	/ɬa:k <sup>w</sup> ši(λ)/	“UNROUNDING”	IDENT(round)
i.	☞ ɬa:k.ši(λ)		*
ii.	ɬa:k <sup>w</sup> .ši(λ)	*	

Chapter 3

(73) “UNROUNDING”  $\gg$  “ROUNDING”  $\gg$  IDENT(round)

	/mɔ:q/	“UNROUNDING”	“ROUNDING”	IDENT(round)
a.	$\text{m}^{\text{u}}\text{ɔ:q}$		*	
b.	$\text{m}^{\text{w}}\text{ɔ:q}^{\text{w}}$	*		*

Chapter 3

(74) a. SPEC-LEFT  $\gg$  HEAD-LEFT

		SPEC-LEFT	HEAD-LEFT
i.	☞ Spec-Hd-YP		*
ii.	Hd-Spec-YP	*	
iii.	Spec-YP-Hd		**

b. HEAD-LEFT  $\gg$  SPEC-LEFT

		HEAD-LEFT	SPEC-LEFT
i.	Spec-Hd-YP	*	
ii.	☞ Hd-Spec-YP		*
ii.	Hd-YP-Spec	*	**

(75) Consequences of parallelism

- a. *Chicken-egg effects*. The application of process A depends on knowing the output of process B, and the application of process B depends on knowing the output of process A. Under parallelism, the effects of both processes can and must be considered simultaneously.
- b. *Top-down effects (non-compositionality)*. Constituent X dominates constituent Y, and the well-formedness of X properly depends on Y (bottom-up), but the well-formedness of Y is also influenced by X (top-down). Under parallelism, there is no distinction between top-down and bottom-up effects, because various candidate parsings into X and Y constituents are evaluated.
- c. *Remote interaction*. Because fully formed output candidates are evaluated by the whole grammar, remote interactions are expected. “Remoteness” refers here not only to structural or string-wise distance, but also derivational remoteness, when two competing candidates differ in substantial ways from one another.
- d. *Globality effects*. Some further consequences of globality also depend on parallelism. This will be shown by examining the predictions of a global but serial implementation of OT.

Chapter 3

(76) Southern Paiute serially

a. Underlying representation	/Redup+pinti/	/Redup+winni/
Reduplication	<b>pi</b> -pinti	<b>wi</b> -winni
Nasal assimilation	<i>does not apply</i>	<i>does not apply</i>
Output	* <b>pi</b> -pinti	<b>wi</b> -winni
b. Underlying representation	/Redup+pinti/	/Redup+winni/
Nasal assimilation	does not apply	<i>does not apply</i>
Reduplication	<b>pi</b> -pinti	<b>wi</b> -winni
Output	* <b>pi</b> -pinti	<b>wi</b> -winni

Chapter 3

(77) a. /Redup+pinti/ → *pim-pinti*

		CODA-COND	MAX <sub>BR</sub>
i.	☞ pim-pinti		**
ii.	pin-pinti	*	**
iii.	pi-pinti		***

b. /Redup+winni/ → *wi-winni*

		CODA-COND	MAX <sub>BR</sub>
i.	☞ wi-winni		***
ii.	win-winni	*	**
iii.	wim-winni	*	**

## Chapter 3

(78) a. Reduced *t*ǒ

I gave the book **tǒ** Bill.

I went **tǒ** Boston.

**Tǒ** add **tǒ** his troubles ...

b. Stressed *t*ó

Who did you give the book **tó**?

I talked **tó**, and eventually persuaded, my most skeptical colleagues.

I went **tó** — and here I must dispense with modesty — *tǒ* very great lengths indeed assisting him in his search for employment. Alas, *tǒ* no avail.

### Chapter 3

(79) ALIGN-R(Lex, PWd)  $\Rightarrow$  PWdCON  $\Rightarrow$  ALIGN-L(Lex, PWd)

	ALIGN-R	PWdCON	ALIGN-L
a.                    I gave the book [ tǒ Bill ] <sub>PWd</sub>			*
b.                    I gave the [book tǒ ] <sub>PWd</sub> Bill	*		
c.                    I gave the [ tǒ ] <sub>PWd</sub> Bill		*	
x.                    I talked [ tǒ ] <sub>PWd</sub> ] <sub>IPh</sub> and eventually ...		*	
y.                    I [talked tǒ ] <sub>PWd</sub> ] <sub>IPh</sub> and eventually ...	*		

### Chapter 3

(80) Serial derivation of reduced and unreduced function words

PWd-level analysis	$[t\acute{o}]_{PWd} [Boston]_{PWd}$	$[where]_{PWd} [t\acute{o}]_{PWd}$
Phrase-level analysis	$\llbracket [t\acute{o}]_{PWd} [Boston]_{PWd} \rrbracket_{IPh}$	$\llbracket [where]_{PWd} [t\acute{o}]_{PWd} \rrbracket_{IPh}$
“Destressing”	$\llbracket [t\check{o} Boston]_{PWd} \rrbracket_{IPh}$	<i>Blocked</i>

## Chapter 3

(81) a. Trochaic Rhythm

(gáliŋ)

(gúda)(gágu)

(wúŋa)(bá:jin)

(májin)(dáŋal)(ñúnda)

b. Iambic Rhythm

(galbí:)

(bargán)(dají:ñ)

(magí)(riŋál)(dañú:n)da

### Chapter 3


(82) LONG/STR  $\gg$  ALIGN-L(Ft, Hd(Ft))

	LONG/STR	ALIGN-L(Ft, Hd(Ft))
a.  (galbí:)		*
b. (gálbi:)	*	


## Chapter 3

(83) Trochaic default

a. No long vowels

	LONG/STR	ALIGN-L(Ft, Hd(Ft))
i.  (gúda)(gágu)		
ii. (gudá)(gagú)		**

b. Long vowel in even syllable

	LONG/STR	ALIGN-L(Ft, Hd(Ft))
i.  (wúŋa)(bá:jín)		
ii. (wuŋá)(ba:jín)	*	**

### Chapter 3

(84) A Global Effect

	LONG/STR	ALIGN-L(Ft, Hd(Ft))
a. (magí)(ríṅal)(dañú:n)da		***
b. (mági)(ríṅal)(dáñu:n)da	*	
c. (mági)(ríṅal)(dañú:n)da		*
d. (magí)(ríṅal)(dañú:n)da		**
e. (mági)(ríṅal)(dañú:n)da		**

Chapter 3

(85) Global Effect Obtained with \*LAPSE

	LONG/STR	*LAPSE	ALIGN-L(Ft, Hd(Ft))
a. <sup>1</sup> (mági)(ríŋal)(dañú:n)da			***
b. (mági)(ríŋal)(dáñu:n)da	*		
c. (mági)(ríŋal)(dañú:n)da		*	*
d. (mági)(ríŋal)(dañú:n)da		*	**
e. (mági)(ríŋal)(dañú:n)da		*	**

## Chapter 3

(86) a. *en* before consonants

en Wittgenstein

b. *l'* before vowels

l'Einstein

### Chapter 3

(87) Emergence of ONSET

/{en, l} + Einstein/	ONSET
a.                    ↗ l'Einstein	
b.                    en Einstein	*

### Chapter 3

(88) a. Lexicon supplies free *ndí* and combining *na*

mkángó uwu ndinapítá **nawó** ku msika  
lion this I-went with-it to market  
'This lion, I went with it to market'

vs.

?\*mkángó uwu ndinapítá **ndí íwó** ku msika  
lion this I-went with it to market

b. Lexicon supplies only free *kwá*

mfúmú iyi ndikákúnenêza **kwá íyo**  
chief this I'm-going-to-tell-on-you to him  
'This chief, I'm going to tell on you to him'

vs.

\*mfúmú iyi ndikákúnenêza **kwâyo**  
chief this I'm-going-to-tell-on-you to-him

## Chapter 3

### (89) Prothesis in Shona

/pá/ → [(i pá)] 'give!' (cf. *ku-pá* 'to give')

/bʷá/ → [(i bʷá)] 'leave!' (cf. *ku-bʷá* 'to leave')


### Chapter 3

(90) FT-BIN, HEAD(PWd)  $\Rightarrow$  DEP

/pá/	FT-BIN	HEAD(PWd)	DEP
a. <span style="font-size: small;">↖</span> [(i pá)]			*
b. [(pá)]	*		
c. [pa]		*	

## Chapter 3

(91) FT-BIN, PARSE-SYLL  $\Rightarrow$  DEP (hypothetical example)

/tasidu/	FT-BIN	PARSE-SYLL	DEP
a.  [(i ta)(sídu)]			*
b. [(tá)(sídu)]	*		
c. [ta(sídu)]		*	

Chapter 3

(92) Three-pass convergence in harmonic serialism

a. Pass 1

/A/	F1	M	F2	F3	Remarks
[A]		**			[A] does worst on M.
☞ [E]		*	*		[E] performs better on M, violating only low-ranking F2.
[I]	*				[I] incurs no marks from M, but violates top-ranked F1.

b. Pass 2

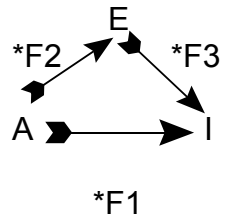
/E/	F1	M	F2	F3	Remarks
[A]		**			Markedness violations are the same at each iteration.
[E]		*			Faithfulness violations change, because input is different.
☞ [I]				*	Now [I], which is least marked, obeys top-ranked F1.

c. Pass 3

/I/	F1	M	F2	F3	Remarks
[A]		**			Can't go back because can't become more marked.
[E]		*			
☞ [I]					Convergence. [I] is fully faithful and least marked.

## Chapter 3

(93) Parallel and serial derivational paths compared



### Chapter 3

(94) a. /a/ → [e]

/gat+u/ → gétu 'cat (m. sg.)' (cf. *gáta* 'cat (f. sg.)')

/blank+u/ → blénku 'white (m. sg.)' (cf. *blánka* 'white (f. sg.)')

b. /e/ → [i]

/nen+u/ → nínu 'child (m. sg.)' (cf. *néna* 'child (f. sg.)')

/sek+u/ → síku 'dry (m. sg.)' (cf. *séka* 'dry (f. sg.)')

### Chapter 3

(95) Analyzing chain-shifts with local conjunction

/CaCi/	[IDENT(low)& IDENT(high)] <sub>Seq</sub>	M	IDENT(low)	IDENT(high)
CaCi		**		
☞ CeCi		*	*	
CiCi	*!		*	*
/CeCi/				
CaCi		**	*	
CeCi		*		
☞ CiCi				*

## Chapter 3


(96) Opacity (after Kiparsky 1973c: 79)

A phonological rule  $\mathcal{P}$  of the form  $A \rightarrow B / C\_D$  is **opaque** if there are surface structures with either of the following characteristics:

- a. instances of  $A$  in the environment  $C\_D$ .
- b. instances of  $B$  derived by  $\mathcal{P}$  that occur in environments other than  $C\_D$ .

## Chapter 3

(97) Background to opaque interaction

/paka+i/	MAX	ONSET	DEP
a.  pakati			*
b.       paka paki	*		
c.       paka.i		*	

## Chapter 3

(98) Opaque interaction

/mapuh+i/	*VhV	MAX	ONSET	DEP
a.      maputi		*		*
b.      mapuhi	*			
c.      mapu.i		*	*	

### Chapter 3

(99) Opaque interaction via rule ordering

Underlying	/mapuh+i/	/paka+i/
$\emptyset \rightarrow t / V\_V$	—	pakati
$h \rightarrow \emptyset / V\_V$	mapu.i	—

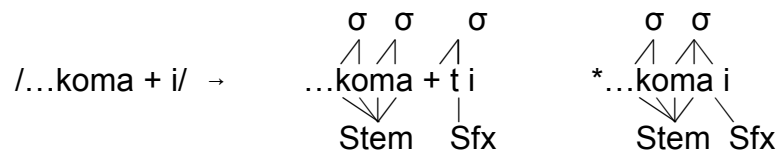
## Chapter 3

(100) Attempt at opaque interaction with harmonic serialism

Underlying	/mapuh+i/	/paka+i/
<i>Pass 1</i>		
GEN receives	mapuhi	pakai
GEN emits	{mapuhi, mapui}	{pakai, pakati, paka}
EVAL selects	mapui	pakati
<i>Pass 2</i>		
GEN receives	mapui	pakati
GEN emits	{maputi, mapui, mapi}	{pakati, pakat, pakai}
EVAL selects	maputi	pakati <i>Convergence</i>
<i>Pass 3</i>		
GEN receives	maputi	
GEN emits	{maputi, maput, mapui}	
EVAL selects	*maputi <i>Convergence</i>	

## Chapter 3

(101) Morphology affects syllabification



### Chapter 3

(102) Sea Dayak derivationally

Underlying	/naŋgaʔ/	
V → [+nasal] / N__	nãŋgaʔ	Nasal spreading (cf. (19b))
b, d, g → Ø / N__	nãŋaʔ	Deletion

### Chapter 3

(103) An Account of opacity using local conjunction

	<i>*VhV</i>	$[MAX\&DEP]_{\delta}$	MAX	ONSET	DEP
a.  maputi		*	*		*
b. mapuhi	*				
c. mapu.i		*	*	*	

## Chapter 4

- (1) Some controversial questions in OT syntax
  - a. What is the input?
  - b. What are the candidates?
  - c. What are the faithfulness constraints like?
  - d. How is absolute ill-formedness obtained? (E.g., \**John arrived surprised me*).
  - e. How is optionality obtained? (E.g., *I believe (that) she likes me.*)

## Chapter 4

(2) FULL-INT decisive

	OB-HD	FULL-INT
a. $\text{[}_{CP} \text{wh will}_i \text{[}_{IP} \text{DP e}_i \text{[}_{VP} \text{V t }]]]$		
b. $\text{[}_{CP} \text{wh will}_i \text{[}_{IP} \text{DP e}_i \text{[}_{XP} \text{do [}_{VP} \text{V t }]]}]$		*
c. $\text{[}_{CP} \text{wh do}_i \text{[}_{IP} \text{DP e}_i \text{[}_{XP} \text{will [}_{VP} \text{V t }]]}]$		*

## Chapter 4

(3) Null output as occulting body for supererogatory *do*-support

	OB-HD	FULL-INT	M-PARSE
a. <span style="float: right;">⌂ ☰</span>			*
b. $[_{CP} \textit{wh} \textit{will}_i [_{IP} \textit{DP} \textit{e}_i [_{XP} \textit{do} [_{VP} \textit{V} \textit{t} ]]]]]$		*	

## Chapter 4

(4) Input-output mappings in Bakovic and Keer (2001)

a. /I think that the coat won't fit him/       $\longrightarrow$       *I think that the coat won't fit him.*

b. /I think the coat won't fit him/       $\longrightarrow$       *I think the coat won't fit him.*

c. /You know *wh*-coat won't fit him/       $\longrightarrow$       *Which coat do you know won't fit him?*

d. /You know that *wh*-coat won't fit him/

## Chapter 4

(5) RCD learning: Before first pass

	ONSET	MAX	DEP	DEP <sub>INIT-g</sub>
a. iŋ.ko.ma.ti ~ tiŋ.ko.ma.ti	L		W	W
b. iŋ.ko.ma.ti ~ ko.ma.ti	L	W		
c. iŋ.ko.ma.ti ~ iŋ.ko.ma.i	W		L	
d. iŋ.ko.ma.ti ~ iŋ.ko.ma		W	L	
e. iŋ.ko.ma.ti ~ tiŋ.ko.ma	L	W		W

Chapter 4

(6) RCD learning: Before second pass

	MAX	DEP <sub>INIT-g</sub>	ONSET	DEP
a. inkomati ~ tinjomati		W	L	W
b. inkomati ~ komati	W		L	
c. inkomati ~ inkomati			W	L
d. inkomati ~ inkomati	W			L
e. inkomati ~ tinjomati	W	W	L	

Chapter 4

(7) An  $[[M \gg F]]$  ranking in the initial state

	/kni/	*STOP+NASAL	MAX
a.	ni		*
b.	kni	*	

## Chapter 4

(8) Truncation in child phonology

	/spa(ghétti)/	PARSE- $\sigma$	MAX
a.	ɾə́ '(ghétti)		***
b.	spa(ghétti)	*	

## Chapter 4

### (9) Gita's disposition of initial clusters

- a. If one of the consonants is a labial, coalesce to form a labial consonant with the manner features of the least sonorous member of the cluster:

<i>tree</i>	[pi]	[t] is less sonorous + [r] is labial → [p]
<i>smell</i>	[fɛw]	[s] is less sonorous + [m] is labial → [f]
<i>squeeze</i>	[biz]	[k] is least sonorous + [w] is labial → [b]

- b. But not if a round vowel follows:


<i>draw</i>	[dɔ]	*[bɔ]
<i>straw</i>	[dɔ]	*[bɔ]

- c. Otherwise, delete all consonants in the cluster except its least sonorous member:

<i>please</i>	[piz]	[p] is less sonorous than [l]
<i>friend</i>	[fɛn]	[f] is less sonorous than [r]
<i>spoon</i>	[bun]	[p] is less sonorous than [s] <sup>21</sup>
<i>snow</i>	[so]	[s] is less sonorous than [n]
<i>sleep</i>	[sip]	[s] is less sonorous than [l]

Chapter 4

(10) Tableau des tableaux for perceived [kæt]

Candidate Inputs	Perceived Output	No-CODA	MAX
a.  /kæt/	[kæt]	*	
b. /kæ/		*	*
c. /æ/		*	**
d. /dɔg/		*	***

## Chapter 4

### (11) Collective harmonic bounding

/A/	C1	C2
B	**	
C	*	*
D		**

Chapter 4

(12) Partial typology of lenition with LAZY

a. Faith  $\Rightarrow$  LAZY<sub>aba</sub>  $\Rightarrow$  LAZY<sub>aβa</sub> — No lenition

/taba/	Faith	LAZY <sub>aba</sub>	LAZY <sub>aβa</sub>
i. $\rightarrow$ taba		*	*
ii. taβa	*		*

b. LAZY<sub>aba</sub>  $\Rightarrow$  Faith  $\Rightarrow$  LAZY<sub>aβa</sub> — Lenition

/taba/	LAZY <sub>aba</sub>	Faith	LAZY <sub>aβa</sub>
i. $\rightarrow$ taβa		*	*
ii. taba	*		*

Chapter 4

(13) Dispersion Theory evaluating competing systems with two high vowels

	MINDIST(F2) <sub>2</sub>	MINDIST(F2) <sub>3</sub>
a. $i-u$		
b. $i-ü$	*	*
c. $i-w$		*
d. $ü-w$	*	*
e. $ü-u$		*
f. $w-u$	*	*

(14) A continuous ranking scale

