Chapter 4

Making the form fit



Introduction

- Loanwords: words borrowed from one language into another
 - how?
 - what counts as a loanword?
 - street, 马虎 把 (?)
 - nativization; adaptation
 - feeling French [fi'liŋ]
 - → loanwords (generally) adopt the <u>sounds</u> of the "host" language, and follow its <u>rules</u>

Example

- Hawaiian: syllable adaptation
 - only very simple syllables: CV(V)
 - simple consonant and vowel inventory:

	V			(
i		u	p	k	?
e		0			h
	a		m	n	
			W	1	

English	Hawaiian		English	Hawaiian	
ælbət	7alapaki	'Albert'	wain	waina	'wine'
trkrt	kikiki	'ticket'	rais	laiki	'rice'
səup	kopa	'soap'	bεl	pele	'bell'
pie	pia	'beer'	flauə	palaoa	'flour'
kılt	kiliki	'kilt'	'zəudiæk	kokiaka	'zodiac'
brn	palaki	'brush'	θaʊzənd	kaukani	'thousand'
sto:ri	kole	'story'	pa:m	paama	'palm'
sku:l	kola	'school'	Eləfənt	?elepani	'elephant'

Loanword adaptation "rules"

- English /t/ → Hawaiian /k/
- English /o:/ → Hawaiian /o/
- English CC-clusters \rightarrow Haw. CVC (or C)
- The Hawaiian form is "derived" from the English form (<u>pattern</u>; <u>regular</u> <u>relation</u>)

Chinese

- Think about loanwords from English that have been adopted into Chinese
 - examples?
 - what changes from original?
 - cultural aspects?
- How about loanwords in English from Chinese? Other languages?

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Phonological rules

- The changes in the loanwords can be described as "rules"
- Approach:
 - one "basic" form and one or more rules
 - e.g. "insert a vowel into consonant clusters'
 - replace a 'th-sound by [s]
 - etc.
- These rules: also in morphology

Rules

 Change the phonological form into its phonetic shape by applying a number of rules:

> / phonological form / [phonetic output]

Works for (Hawaiian) loanwords, morphològy: English plurals

Rules

- back + $\langle z \rangle$ = [bæks], kis + $\langle z \rangle$ = [kisiz]
 - change the z into an s after k
 - insert /I/ if needed
 - "generative phonology", SPE (1968)
- I-INSERTION: Insert |I| between two adjacent sibilants in the same word.
- DEVOICING: A voiced obstruent becomes voiceless after a voiceless obstruent.

Input representations Rule (6)	bæk-z (n.a.)	kis(-Z)	a(-z) (n.a.)
Rule (7)	5	(n.a.)	(n.a.)
Output representations	bæks	kisiz	aız

Other rules

- E.g. aspiration
 - rule: voiceless stops are aspirated in syllable-initial position in a stressed syllable
 - phonology: no aspiration /ti:/ 'tea'
 - phonetics: aspiration, assigned by rule
 - rule: "connects" the phonology with the phonetics

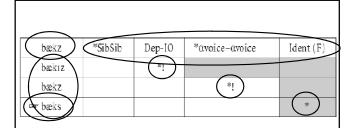
Constraints (optional)

- Another way of doing the same thing
- More recent theory:
 - constraints tell you what is **NOT** permitted, e.g.
 - a voiced z after a voiceless k
 - two sibilant sounds following each other
 - "Optimality Theory" 1990s till now
- *SibSib: Sequences of sibilants are prohibited within the word.
- (10) *ανοιοπ-ανοιοπ: Sequences of obstruents within the syllable must agree for voicing.

Optimality Theory

- Grammar also relates inputs to outputs.
 - Input: e.g. /bæk/+/z/
 - Possible outputs: [bækz], [bæks], [bækiz], etc etc etc etc etc etc
 - The output that satisfies constraints like (9) and (10) best, is the output that is selected
 - The <u>optimal</u> form

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- input form
- possible candidates
- constraint ranking
- violations of constraints
- winner (= output form)

Rules or constraints?

 Rule approach also needs constraints, <u>maybe</u> the constraint approach doesn't need rules



• so constraint approach is more "economic"

 loanword phonology shows constraints are active, while rules are not needed (Hawaiian)

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Further reading

- Pages 56-60 of book (optional!)
- Constraint approach very popular at the moment
 - many different variations of the original (1993) theory
 - also applied to language acquisition (learning a grammar)
 - relations to psycholinguistics, computation

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Conclusion

- Input forms to output forms
 - in loanwords
 - in native words
 - phonological adjustments / "adaptations"
 - series of rules
- Rules define the relation between phonology (abstract) and phonetics (concrete): /A/ → [B]

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Homework

- Study this chapter carefully!!
- Please do Qs 25, 27-31, 33
- Thank you

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