

**Chamorro (from Odden book, p. 80): What underlying forms and rules are necessary to account for the alternations seen here? Consider two hypotheses.** (note in IPA ' means that there is primary stress on the following syllable)

'gwi <span>h</span> ə <span>n</span>	fish	i 'gwi <span>h</span> ə <span>n</span>	the fish	
'gumə <span>ʔ</span>	house	i 'gimə <span>ʔ</span>	the house	
'katta	letter	yo <span>ʔ</span> 'katta	a letter (object)	i 'kæt <span>t</span> a the letter
't <span>s</span> upa	cigarettes	i 't <span>s</span> ipa	the cigarettes	
'fino <span>ʔ</span>	talk	mi 'fino <span>ʔ</span>	lots of talk	
'tunu <span>ʔ</span>	to know	en 'tinu <span>ʔ</span>	you know	
't <span>s</span> ugo <span>ʔ</span>	juice	mi 't <span>s</span> igo <span>ʔ</span>	lots of juice	
'so <span>ŋ</span> su <span>ŋ</span>	village	i 'se <span>ŋ</span> su <span>ŋ</span>	the village	
'hulu <span>ʔ</span>	up	sə <span>n</span> 'hilu <span>ʔ</span>	upward	
'pet <span>s</span> u	chest	i 'pet <span>s</span> u	the chest	
'tomu	knee	i 'temu	the knee	
'otd <span>u</span> t	ant	mi 'etd <span>u</span> t	lots of ants	
'oksu <span>ʔ</span>	hill	gi 'eksu <span>ʔ</span>	at the hill	
'dæ <span>ŋ</span> kulu	big one	i 'dæ <span>ŋ</span> kulu	the big one	
'lahi	male	i 'læhi	the male	
'lagu	north	sə <span>n</span> 'lægu	toward north	
pu'lon <span>n</span> un	trigger fish	i pu'lon <span>n</span> un	the trigger fish	
mun'do <span>ŋ</span> gu	cow's stomach	i mun'do <span>ŋ</span> gu	the cow's stomach	
putamo'neda	wallet	iputamo'neda	the wallet	

**Some rules we have seen (name the process and formalize the rule)**

- English: voiceless stops become aspirated word-initially
- voiceless alveolar stops are flaps in between two vowels
- Arabela (p. 57): vocoids are nasalized after nasal consonants
- Mohawk (p. 59): stressed vowels become long if followed by CV
- Kuria (p. 61): fricatives become stops after nasals
- Greek (p. 62) k and x are palatalized before i,e
- Quechua (p. 64-65):k and q are fricativized syllable finally OR
- x and χ become stops before vowels
- Russian (p. 68-69): obstruents are voiceless word-finally
- Finnish (p. 73-76): word finally, e is produced as i
- Chamorro: fill this in yourself!
- Samoan (p. 86-87): a word-final consonant is deleted
- Palauan (p88): unstressed vowels are pronounced as schwa
- Tonkawa: a vowel is deleted after an open syllable at the beginning of the word