

Phonology



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Phonology is the study of **the sound system of a language**. It focuses on how sounds **function** in a particular language and how they are **organized** within it.



The different distribution of English and Thai sounds

/ŋ/

- English

song → /sɒŋ/ , /sɔ:ŋ/

hang → /hæŋ/

- Thai

work → /ŋā:n/

busy → /juŋ/

/l/

- English

land → /lænd/

feel → /f*i:l*/

- Thai

and → /lɛ/

play → /le:n/

A **phoneme** is the **smallest unit** of sound that can **change meaning**.

Therefore, a phoneme can not be subdivided into a smaller unit. For example;

'Can' can be broken to /k/+/æ/+/n/

but **phonemes** /k/+/æ/+/n/

can not be further **broken into smaller units**.

An allophone is a **variation** of a phoneme that **does not change** the meaning.

- In English:

[p^h] appears at the **beginning** of a syllable, as in 'pin'

[p] typically **follows /s/**, as in 'spin' → [spɪn]

Both **[p^h]** and **[p]** are **allophones of the phoneme /p/**.

- In Thai:

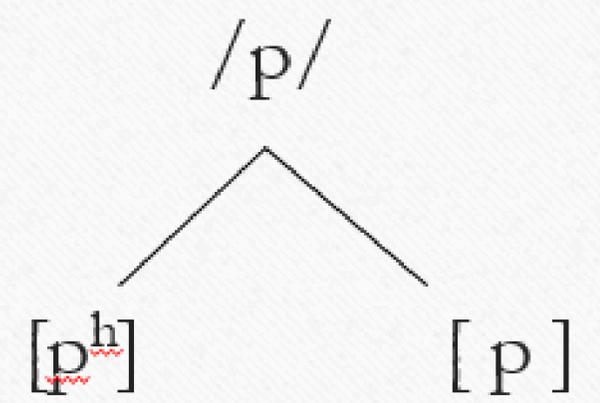
- Aspiration does change meaning. For example:
 - ปฏ /paː/ = throw (unaspirated)
 - พฏ /p^haː/ = bring (aspirated)
- These are different phonemes because changing aspiration changes the meaning of the word.

[p^h] is an allophone of the phoneme /p^h/.

[p] is an allophone of the phoneme /p/.

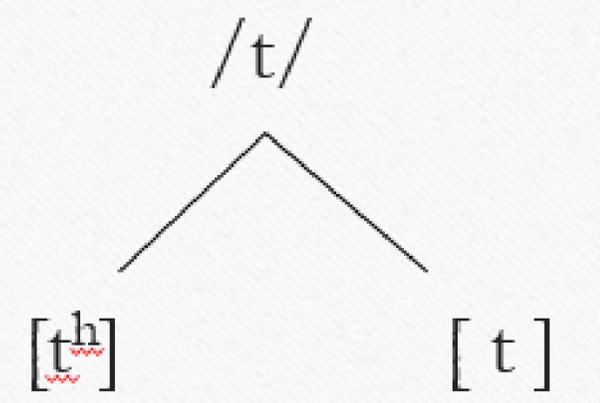


- Phoneme



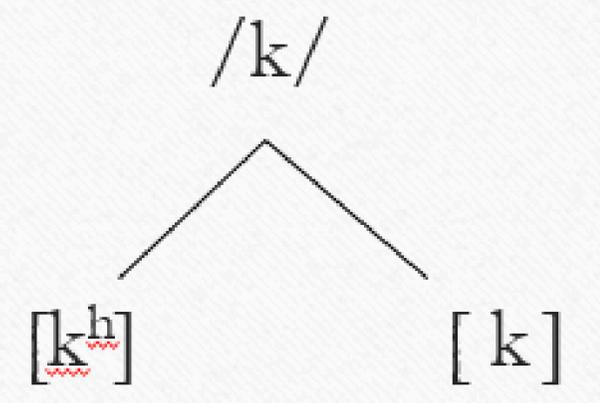
- Allophones

- Phoneme



- Allophones

- Phoneme



- Allophones



- Phoneme

/p/

/p^h/

|

|

- Allophones

[p]

[p^h]

- Phoneme

/t/

/t^h/

|

|

- Allophones

[t]

[t^h]

- Phoneme

/k/

/k^h/

|

|

- Allophones

[k]

[k^h]

Minimal pairs are beneficial in identifying the phonemes of a language.

If two sounds occur in a **minimal pair**, two sounds to be **contrastive**, replacing one with the other in a word can **change the meaning of the word**.

a. **k**ick [kɪk] : **p**ick [pɪk]

b. **c**at [kæt] : **c**ap [kæp]

c. **s**tray [streɪ] : **s**pray [spreɪ]

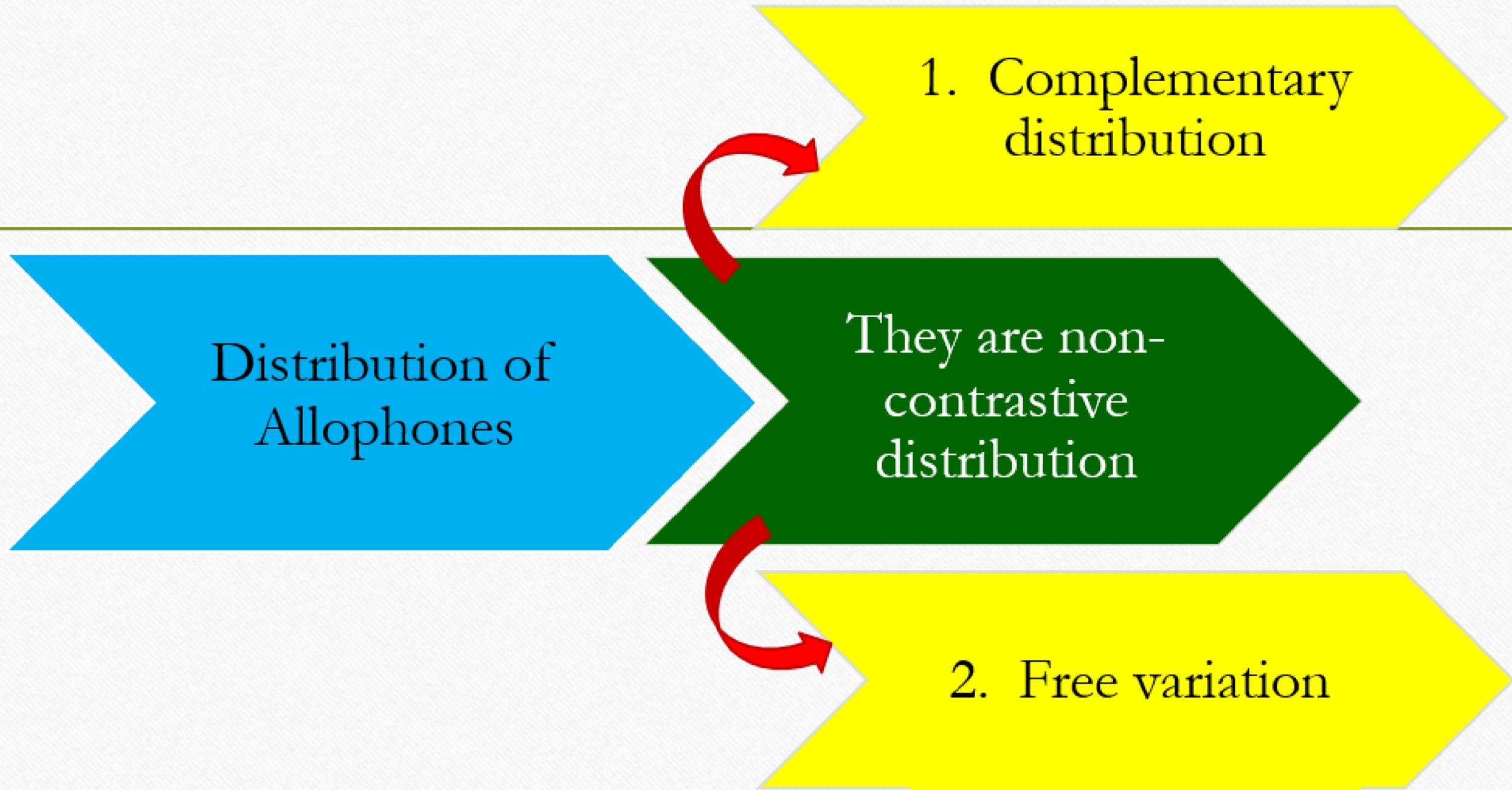


Distribution of
Allophones

1. Complementary
distribution

They are non-
contrastive
distribution

2. Free variation



1. Complementary distribution

Allophones of a single phoneme **do not** appear in the same phonetic environment.

a. **t**ill [**t**ɪl]
b. **t**ea [**t**i:]
c. **t**ick [**t**ɪk]

a. **s**till [**s**tɪl]
b. **s**t**r**ong [**s**trɒŋgə(r)] , [**s**trɔ:ŋgər]
c. **s**tick [**s**tɪk]

Three allophones are the different ways of pronouncing the phoneme /t/ in different phonetic environments

Phoneme	Allophones	Distribution	Examples
/t/	[t ^h]	in word-initial position	tea, till, tick
	[t]	after /s/	still, strong, stamp, stick
	[d]	between a stressed vowel and an unstressed vowel	water, little, bitter, letter

Allophones of a single phoneme may appear in the same phonetic environment but they do not cause a difference in a word's meaning.

2. Free variation

eg.	English	/r/	→	[ɹ]	alveolar approximant
				[ɹ̥]	voiceless alveolar approximant (after voiceless sounds)
				[ɻ]	retroflex approximant (West England)
				[ɾ]	alveolar flap (Scottish) eg. [grɪn]
				[ʀ]	uvular fricative (<u>Tyneside</u>)

Phoneme (contrastive sound)

- **Contrastive distribution**
Replacing **one phoneme** with another in a word can **change the word's meaning**. In other words, phonemes can **appear in minimal pairs**.

Allophone (non-contrastive sound)

- **Complementary distribution**
Allophones usually **appear in different phonetic contexts**. Their appearance in a particular phonetic environment is predictable.
- **Free variation**
Allophones may sometimes **appear in the same phonetic environment** but they do not cause a difference in a word's meaning.



THANK YOU

