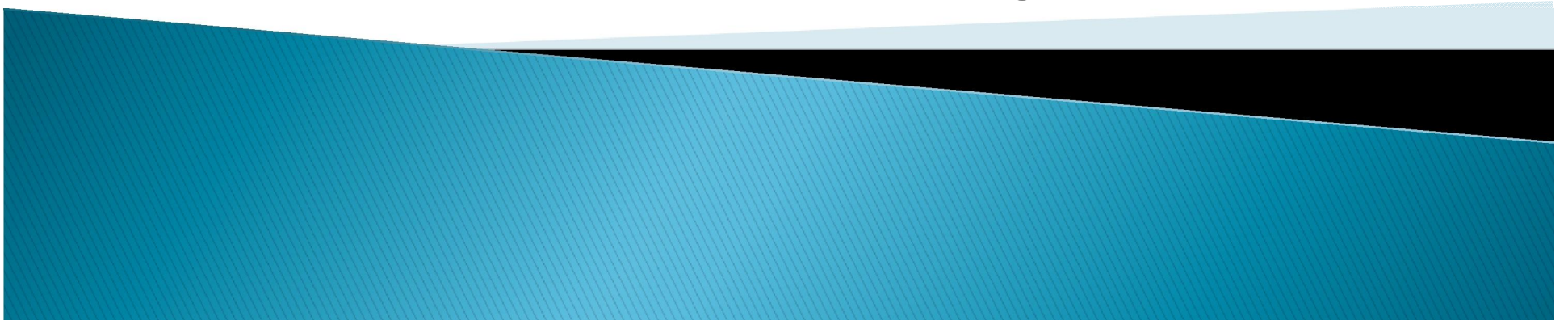


# PHONEMES, PHONES & ALLOPHONES

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## What are the differences between the broad transcription and narrow transcription?

Symbols used:

phonemic transcription (broad transcription)

an abstraction of the phonetic transcription,  
specific to a particular language (differs among  
languages)

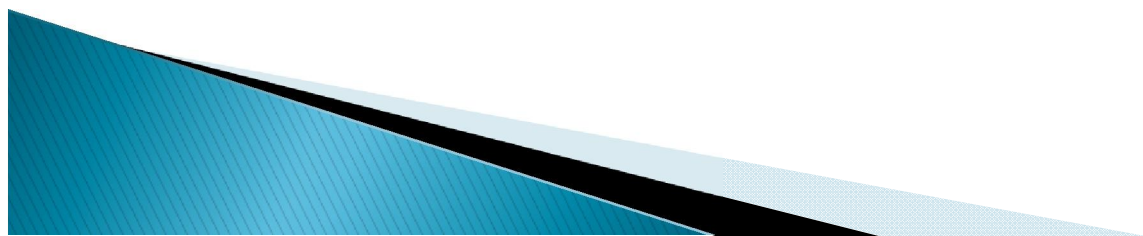
Symbols used: //

phonetic transcription (narrow transcription)

‘the reality of phonemes’, as each speaker said it.

Gives detailed information of the speech  
produced, e.g. (un/as)pirated, nasalized, etc.

Symbols used: [ ]



▶ Pill

Broad transcription: /pil/

Narrow transcription: [p<sup>h</sup>il]

Spill

Broad T: /spil/

Narrow T: [spil]

Ten

Broad T: /ten/

Narrow T: [t<sup>h</sup>en]



# Phonemes

Smallest discrete units of sound

The underlying mental representation (abstract representation) of the phonological units of a language

- → the abstraction of phones

Symbol: slant lines (broad transcription)

- ▶ Examples:

English: *pan* and *ban*

Indonesian: *Tanah* and *panah*

Javanese: tutuk (mouth) and thuthuk (hit)

- ▶ Are the sounds in the Javanese example above also phonemes in English?

# Phones

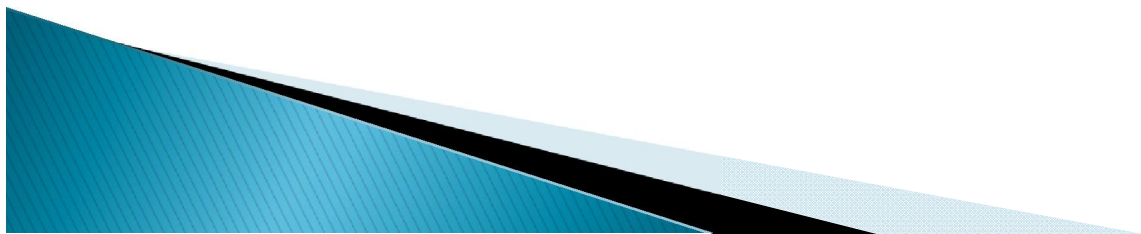
\*A phoneme–token, a single instance of the utterance of a phoneme of a particular occasion by a particular speaker.

\* A phonetic unit

•→ the realization of a phoneme

Symbols: using narrow transcription.

Example:[p], [p<sup>h</sup>] are the realization/phones of  
/p/

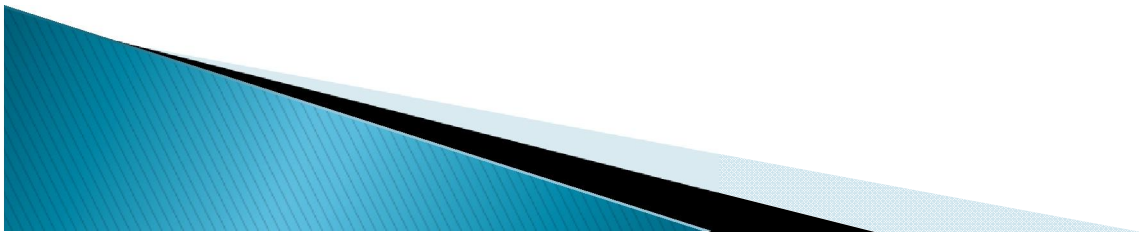


# Allophones

- Different phones that ‘represented’ or derived from one phoneme; a predictable phonetic variants of a phoneme
- Any different forms of a phoneme, but they do not change the meaning when we make substitution. They are never contrast in identical of analogous environments (complementary distribution)

/l/ → a. /'l'/ after voiceless stops  
b. /l/ elsewhere

- aspirated and unaspirated /t/ in *top* and *stop*
- /e/ and *schwa* in Indonesian word ‘*Peta*’



Phoneme	Phone	Allophone
Abstract sound stored in our memory	Concrete phonetic segments	The different phones that are the realization of one phoneme
Contrastive phonological segments, distinctive sound	Non contrastive	No difference in meaning, no minimal pairs
Represented between slashes by convention Example: /b/, /m/	Represented between brackets by convention Example: [b], [m]	Represented between brackets by convention Example: [b], [m]
Phonemes vary from language to language		

# Phonemic analysis–minimal pair test

- ▶ If the two segments contrast, they are members of different phonemes.

e.g.

Pig–big

paku–baku

tampa–tamba

Bee–tea

batu–satu

panah–nanah

- ▶ yet, the contrast is language–specific.

- \* Every language has its own system of phonemes

- \* A phoneme in one language may not be a phoneme in another

e.g. glottal stop in Arabic, r and l in Japanese

English

/bu'e(r)/ or /bute(r)/

Javanese

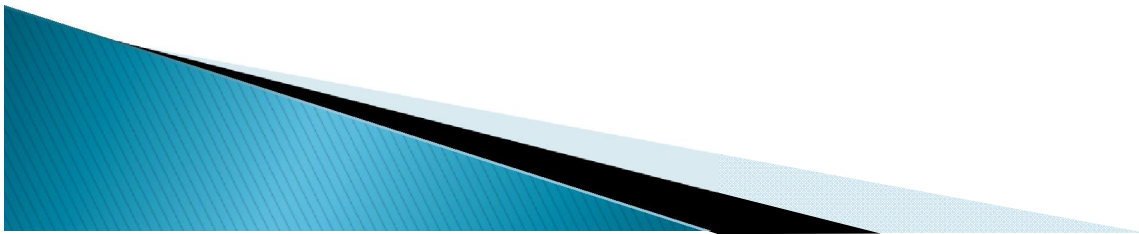
/suʔon/ and /sukon/





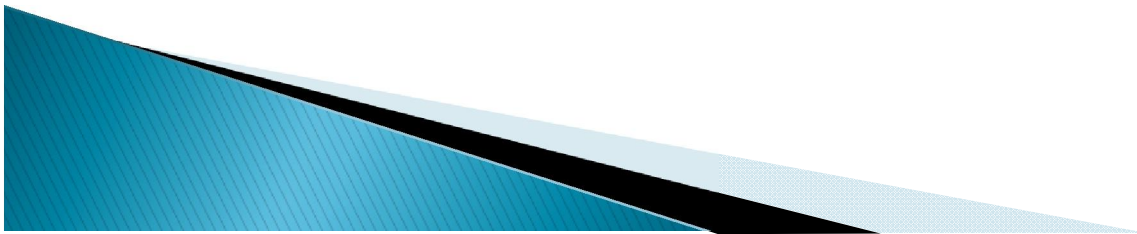
# Phonemic analysis– Complementary distribution test

- ▶ If certain phonetically similar sounds are non-contrastive and in complementary distribution, they may be considered as allophones of one phoneme.
- ▶ Superman–Clark Kent illustration
- ▶ Exception:  $\eta$  and h

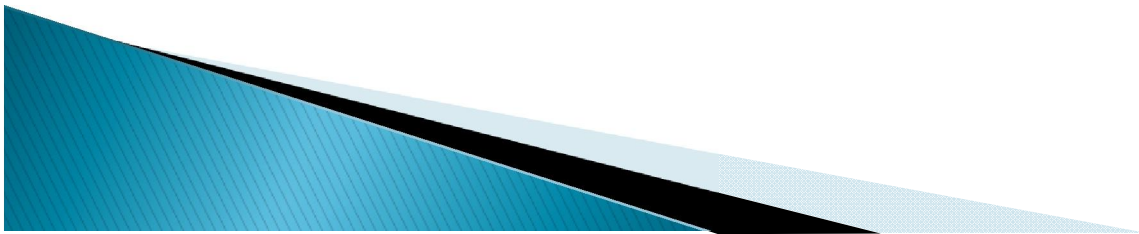


**Complementary distribution** means that where one sound of the pair occurs, the other does not.

**Free Variation** occurs when sounds are merely variations in pronunciation of the same phoneme and do not change the meaning of the word.



How many (a) phones (b) phonemes, and (c) allophones in the words **pin** and **spin**?



pin and spin

Broad T: /pin/ /spin/

Narrow T: [p<sup>h</sup>in] [spin]

- a. Phones: 7
- b. Phonemes: 4
- c. Allophones: 2

