What is phonology?
What is phonology?

Linguistics?
What is phonology?

Linguistics?

(Scientific study of Language structure)
What is phonology?

Linguistics?

(Scientific study of Language structure)

Study of Sentence Structure

Syntax
What is phonology?

Linguistics?
(Scientific study of Language structure)

Study of Sentence Structure
Syntax

Study of Word Structure
Morphology
What is phonology?

Linguistics?
(Scientific study of Language structure)

Study of Sentence Structure
Syntax

Study of Word Structure
Morphology

Study of sound structure
Phonology
What do we mean by *study of sound structure*?
What do we mean by *study of sound structure*?

- The set of sounds that occur in a given language.
- The permissible arrangements of these sounds in words.
- The process of adding, deleting, or changing sounds.
What do we mean by *study of sound structure*?

- The set of sounds that occur in a given language.
- The permissible arrangements of these sounds in words.
- The process of adding, deleting, or changing sounds.

Let's understand these points comparing your language (English) with mine (Nepali)...
The set of sounds that occur in a given language
The set of sounds that occur in a given language

- Listen to me pronouncing the following words:
  sip
  ship
The set of sounds that occur in a given language

- Listen to me pronouncing the following words:
  sip
  ship
(Nepali doesn’t have *sh* sound)
The set of sounds that occur in a given language

- Listen to me pronouncing the following words:
  sip
  ship
  (Nepali doesn’t have \textit{sh} sound)

- Try pronouncing after me.
  Dhoka ‘\textit{door}’
The set of sounds that occur in a given language

- Listen to me pronouncing the following words:
  sip
  ship
  (Nepali doesn’t have $sh$ sound)

- Try pronouncing after me.
  Dhoka ‘$door$’
  (English doesn’t have aspirated [d])
The set of sounds that occur in a given language

- Listen to me pronouncing the following words:
  sip
  ship
  (Nepali doesn’t have sh sound)

- Try pronouncing after me.
  Dhoka ‘door’
  (English doesn’t have aspirated [d])

Conclusion: Speech sound inventories of English and Nepali are not the same.
The permissible arrangements of these sounds in words

- Nepali doesn’t allow consonant clusters
e.g. English [triple] is changed into [tiripal] when borrowed into Nepali.
The permissible arrangements of these sounds in words

- Nepali doesn’t allow consonant clusters
e.g. English [triple] is changed into [tiripal] when borrowed into Nepali.

Conclusion: The permissible arrangements of the speech sounds in these languages are different.
The process of adding, deleting, or changing sounds

**Rule:** Insert [i] in between consonant clusters (Not the exact rule in Nepali)

tripal -> tiripal
The process of adding, deleting, or changing sounds

**Rule:** Insert [i] in between consonant clusters (Not the exact rule in Nepali)

tripal -> tiripal

**Conclusion:** The rules of sound changes are different in the two languages.
So the *study of sound structure involves*...

- The set of sounds that occur in a given language.
- The permissible arrangements of these sounds in words.
- The process of adding, deleting, or changing sounds.
So the *study of sound structure involves*...

- The set of sounds that occur in a given language.
- The permissible arrangements of these sounds in words.
- The process of adding, deleting, or changing sounds.
So the study of sound structure involves...

- The set of sounds that occur in a given language.
- The permissible arrangements of these sounds in words.
- The process of adding, deleting, or changing sounds.

**Phonology**: Study of speech sounds and sound patterns.
Phonology is not Phonetics.
Phonology is not Phonetics.

- Phonetics is concerned with how speech sounds are produced in the vocal tract.
- Phoneticians study articulatory and acoustic properties of speech sounds.
- Phoneticians are also concerned with the perception of the speech sounds.
Phonology is not Phonetics.

- Phonologists are less concerned with how sounds are produced, transmitted or received. They are primarily concerned with what sounds are used in a language and how they are used in that language.
**Let's look at an example...**

In Korean data below [s] and [ʃ] do not occur in the same environment. Find those environments.

<table>
<thead>
<tr>
<th>[son]</th>
<th>‘hand’</th>
<th>[ʃihap]</th>
<th>‘game’</th>
</tr>
</thead>
<tbody>
<tr>
<td>[som]</td>
<td>‘cotton’</td>
<td>[ʃilsu]</td>
<td>‘mistake’</td>
</tr>
<tr>
<td>[sosɬ]</td>
<td>‘novel’</td>
<td>[ʃipsam]</td>
<td>‘thirteen’</td>
</tr>
<tr>
<td>[sɛk]</td>
<td>‘color’</td>
<td>[ʃinho]</td>
<td>‘signal’</td>
</tr>
<tr>
<td>[isa]</td>
<td>‘moving’</td>
<td>[maʃita]</td>
<td>‘is delicious’</td>
</tr>
<tr>
<td>[sal]</td>
<td>‘flesh’</td>
<td>[oʃip]</td>
<td>‘fifty’</td>
</tr>
</tbody>
</table>
Let's look at an example...

What did we just do?
What did we just do?

We described the following for Korean:

- [s] and [ʃ] occur in Korean inventory
- They are in complementary distribution
- The rule that applies in Korean is: [s] -> [ʃ] / _ [i]
What did we just do?

We described the following for Korean:

- [s] and [ʃ] occur in Korean inventory
- They are in complementary distribution
- The rule that applies in Korean is: [s] -> [ʃ] / _ [i]

An example of Korean Phonology
Why study Phonology?

Cognitive scientists?
Why study Phonology?

Cognitive scientists?

- Phonology of a language constitutes a highly organized system of knowledge. It is useful for anyone interested in how learners acquire such knowledge.

- General principles of phonology, then, linguistics might ultimately lead to understanding of how human brain functions.
Why study Phonology?

Speech Pathologists?

- Insights from phonological models can be applied to speech data collected by speech-language pathologists to aid in analysis, diagnosis and remediation.