

## Lecture 3: Languages Change, but How? And Why?

- **Family Trees and Family Relationships. Cognates.**
- **How Language Changes**
- **Spread of Change Within a Language**
- **Causes of Language Change**
- **Natural Tendencies**
- **Therapeutic Changes**
- **‘Chain-Reaction’ Changes**
- **Interacting Changes**

### 3.1 Family Trees and Family Relationships. Cognates.

#### Family Trees

We already know that during the 19<sup>th</sup> century, when the historical and comparative study of languages (more generally described as *philology*) was the major preoccupation of linguists, the term **Proto-Indo-European** came into use to refer to the ‘great-grandmother’ of all Indo-European languages. Years of comparative work have finally traced the branches of her family tree, showing the lineage of many modern languages (See Fig. 1 on the page 13).

Of course, this diagram shows only one family tree comprising a small number of the languages of the world. There are about 30 such language families, and they have produced over 6,000 offspring! Scientists believe that man – *Homo sapiens* - originated in East Africa hundreds of thousands of years ago, at which stage there were no ‘language barriers’ amongst us. In the millennia that followed, human populations spread out around the world and diversified in terms of race and language. Explaining this diversity, Prof. John McWhorter of the University of California at Berkeley said in a recent NewsHour interview:

‘...it’s the nature of language to evolve in any number of different directions in the various parts of whatever our language is. And so each word, each grammatical structure, each sound, there are all sorts of directions that it might go. If all human beings lived as this great teeming mass of humanity out in some parking lot or some forest, then presumably that wouldn’t happen, and we would still all have one language. But once you get an offshoot population, then the changes that happen in the language go in different directions, and the changes that are going on back in the homeland. As a result, after a while, you’ve got two different languages. Multiply that by all the different peoples that have you in the world, and you see that today we have 6,000 languages. Many would say that at other points in human history there were a great many more languages at any given time.’

In answer to a question about the possibility of us ending up with one, or just a handful of languages as a result of increased travel and communication, which tend to simplify, and to collapse languages into each other, McWhorter said:

‘Well, it looks like we are going to wind up with a handful, depending on what you call a handful. By many estimates, we are going to have 500 out of today’s 6,000 languages alive after 100 years. Basically the big bad Berlitz languages like English, and French and Portuguese and Russian and Arabic and Chinese are gobbling up most of the other languages. It’s the linguistic consequence of what you might call globalisation. And so many linguists are involved in either trying to keep these languages alive or at least to write down what they were like. So certainly there was a time when probably there were about 100,000 languages in the world, and we are going to get to a point where

we will have lost 90% of the ones that are alive today. Some people say that we lose a language every two weeks, for example. ...

... You cannot revive it [language]. And it's even worse, because if that language was not written down, there is no such thing as a fossil. You know, language... an individual language is not in our DNA, and most languages around the world are only spoken. Only about 200 are written and read on a regular basis. And so that means that if a language dies without being recorded, it is most certainly unrecoverable forever.'

Online NewsHour: 'The Power of Babel' – February 22, 2002.

Wysiwyg://38/http://pbs.org/newshour/conversation//jan-june02/babel\_2-22.html

Whatever the number of existing languages in the world today, only 10 of them are spoken by over 90% of the world's population. In terms of numbers of speakers, Chinese has the most native speakers (close to one billion: 1,000,000,000!), while English (about 350 million) is more widely used around the world. Spanish has close to 33 million native speakers, Hindi – 200 million, and Arabic and Russian – about 150 million each.

Other languages are spoken by relatively small populations – indigenous groups who find themselves incorporated into larger nations and are rapidly losing their traditional ways of life and their languages. A recent survey claims that 'half the known languages of the world have vanished in the past 500 years,' and that 'probably half the remaining languages will disappear in the next 50 years.'

\*For these estimates see Nettle & Romaine (2000:3) and Krauss (1992) respectively.

The bell curve of the rise and fall in the number of existing languages throughout human history (Fig. 2 on page 12) reflects the process of human migration and subsequent long-term isolation, when the number of languages had reached its peak, and the following 'blending' of existing cultures, which began with the birth of great empires and accelerated particularly with current globalisation of world economies:

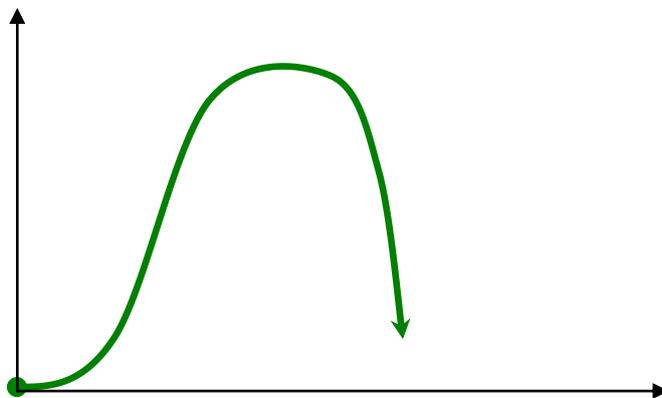


Fig. 2: The bell curve of language diversification through history.

As a few languages spread and smaller languages disappear, there is a great need to analyse these dynamic linguistic processes and to document the languages themselves. Why? Because each language is another expression of human ingenuity, and each language contains secrets about our past – the past that we want to learn about.

### Family Relationships

Let us go back to the Indo-European family tree in Fig. 1 (p. 3) and look at the numerous 'daughters.' How can it be that such different language groups as Germanic and Persian are related? What has English in common with Hindi, or Urdu?

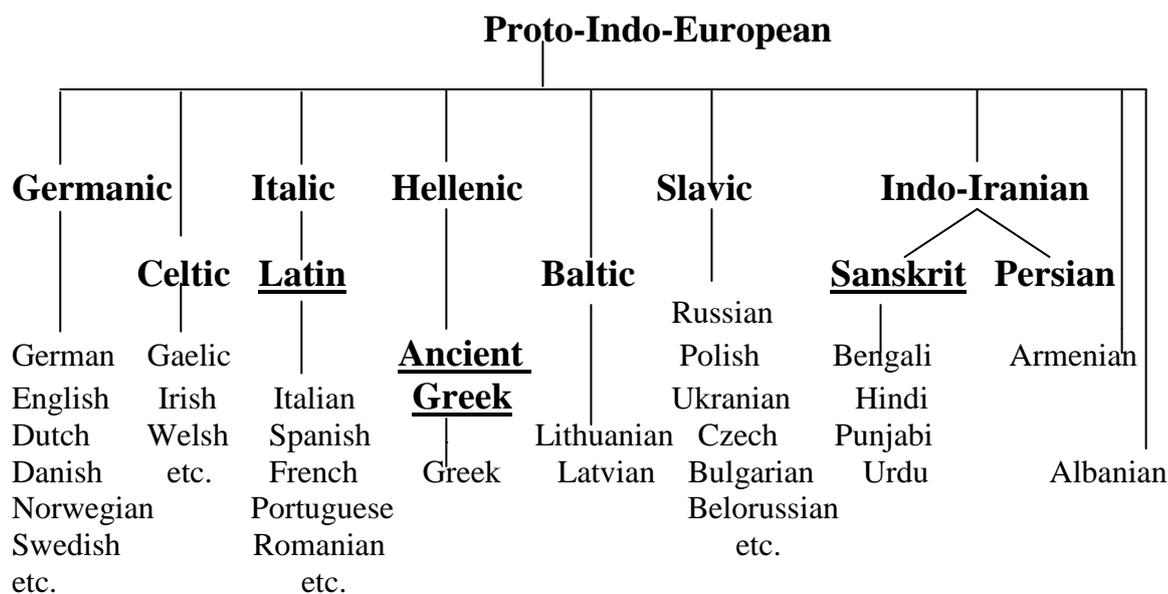
One way to see the relationships more clearly is by looking at records of an older generation of family members, such as Latin and Sanskrit, from which the modern languages developed. For example, if we use familiar letters to write out the words for *father* and *brother* in Sanskrit, Latin, and Ancient Greek, we shall notice some common features:

English	Sanskrit	Latin	Greek
father	[pitar]	[pater]	[pate:r]
brother	[bhra:tar]	[fra:ter]	[phra:ter]

Even though such striking similarities are not entirely regular, the extent to which they do occur points to a family connection.

### Cognates

The process which we have just employed to establish some possible family connection between different languages involved comparing *cognates*. A **cognate** of a word in one language (i.e., English) is a word in another language (i.e., German), which has a similar form and is/was used with a similar meaning. Thus, the English words *mother*, *father* and *friend* are cognates of the German forms *Mutter*, *Vater*, und *Freund*. On the basis of these **cognate sets** we can conclude that English and German probably had a common ancestor in the Germanic branch of Indo-European.



**Fig. 1: Diagram of the Indo-European family of languages.**

Another example:

Spanish	Italian
Madre	Madre
Padre	Padre
amigo	amico

Conclusion: these close cognates also point to a common ancestor in the Italic branch.

### 3.2 How Language Changes

Until relatively recently, language change mystified people. Like the movement of the stars, it was thought to be undetectable by unaided human senses. However, advances in sociolinguistics have

deepened our understanding of the mechanism of language change, both in terms of its spread from person to person, and its dissemination through a language.

The American sociolinguist William Labov was one of the first people to investigate how a change spreads through a population. He noted a new pronunciation of the diphthongs /ai/ and /aʊ/ creeping in among the residents of Martha's Vinyard, an island off the coast of Massachusetts – characterized by a much closer vowel quality. Through a lot of research and interviewing, he came to the conclusion that this change was caused by social attitudes: islanders wanted to speak like the highly respected members of an old fishing community on the island. So even the newcomers, especially those in the 30-45 age bracket, who had decided to settle on the island, and wanting to sound like 'true islanders,' consciously or subconsciously imitated their non-standard speech. At first, the adopted non-standard vowels alternated with their existing more standard ones, but then gradually the new ones took over. At this point, the change started to spread to others who came into contact with this second group, and so on.

Other examples: [naiðə] and [ni:ðər] [ja:] vs [jea] [ɔ:səm] [asəm], etc.

The point here is that **linguistic change may be infectious**: humans, particularly children, imitate those they admire, consciously or unconsciously. Fuelled by social attitudes, some of these changes take root and spread further, 'infecting' other groups of people.

Whether the changes come from conscious or subconscious imitation, the mechanism of spread remains the same: alternatives creep in, usually copied from those around us, and then gradually replace the existing pronunciation. Change always involves variant forms while it is in progress, so speech variation is often a sign of an ongoing change.

### 3.3 Spread of Change within a Language

From the overview of the achievements of the 'founding fathers' of comparative linguistics we remember that linguists like Sir William Jones, Jacob Grimm, Karl Verner, Franz Bopp, Rasmus Rask, and others recorded and analysed many regular sound changes that had occurred in many European languages, distinguishing them from Ancient Greek, Latin, Sanskrit – and from each other. Their efforts culminated in the conclusions drawn by the 'Young Grammarians' in the last quarter of the 19<sup>th</sup> century, who claimed that *language change followed strict phonetic 'laws' which operated without exception and were determined by strictly phonetic factors* (Re: page 6 of these notes).

This means that if one sound changes, the change does not occur in an isolated word – it affects all words with a similar combination of sounds, i.e.: In English, *wyf* became *wife*, just as *lyf* became *life*, and *bryd* became *bride*, all showing a change from [i:] to [ai].

'Die Junggrammatiker' claimed that sound changes were 'laws' which worked 'with blind necessity,' sweeping all before them, like tanks. They, however, could not find explanation to all the exceptions, the odd words left behind - every language has those! For example, British English [æ] normally changes into [aɪ] before [s], as in *pass*, *fast*, *disaster*, *mask*, or *task*. So why do we get *gas*, *aster*, *tassel*, and often even *flask*? ☺

It is puzzling - why these 'phonetic laws' would sweep through a language, yet leave some words intact?

One suggested explanation put it down to 'external influence': for example, the British [&] in words such as *gas* might be the influence of American English. This feeble attempt to avoid the problem was not really convincing, so here is a better explanation: sound changes do not occur simultaneously in all words at once. They go across the language, moving from one word to

another: much like mangoes on the mango tree, words ‘mature,’ or change, round about the same time, but not all simultaneously. Linguistic change, when it occurs, is best represented by an S-curve shown below (Fig. 3):

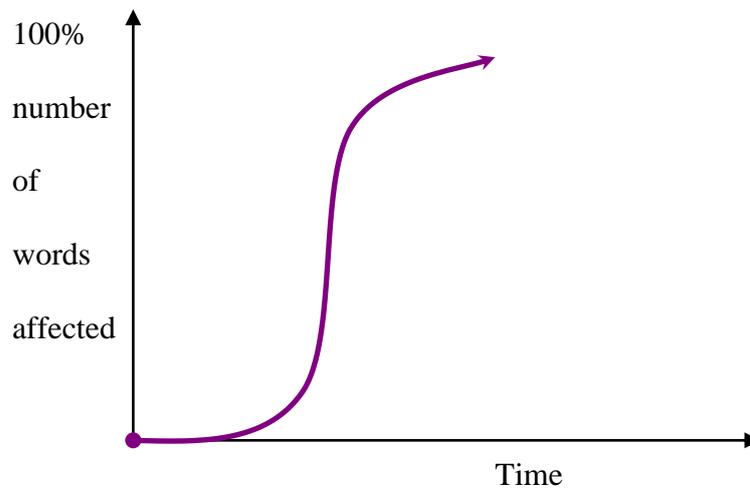


Fig. 3: The Curve of Linguistic Change

First the change touches relatively few words, and affects them variably, meaning that new pronunciation is likely to exist alongside the old. At this point the change is just a mild tendency, still reversible. The words affected at this early stage are usually those that are commonest and are characterized by similar phonetic shapes. For example, in the Martha’s Vineyard case, words beginning with vowels tended to be the most affected: so *I* and *out* were changed early partly because they are in common use, and partly because of their linguistic shape.

This early stage of a change, with just a few words intermittently affected may last a long time. But at some point the change may ‘catch on’: it then spreads fairly fast to a considerable amount of vocabulary (the steep part of our S-shaped graph). After some time, the change tends to lose its impetus and peter out, so there may be some words it never reaches. This hypothesis of change creeping from word to word explains why changes are for the most part regular, but why some words can get left out. This process is known as **lexical diffusion**. The words affected by the change fluctuate at first, with the new and old pronunciation coexisting, but if the change really catches on, the newer pronunciation usually displaces the older one.

### 3.4 Causes of Linguistic Change

Some linguists claim that language change occurs spontaneously, triggered off by accidental, social factors. This view cannot be correct, for two reasons:

- First, similar changes recur the world over: there are certain tendencies inherent in language – these may be triggered off by social factors, but they are there in the first place. These natural tendencies form the underlying causes of language change, which may be set off by social or other reasons. Linguistic change is just like a landslide: heavy rains usually set them off, but the mountainous relief and unstable masses of land are really the underlying causes of landslides.
- Second, language patterning never breaks down: the patterns within language enable the mind to handle large amounts of linguistic information without short-circuiting. If changes were random, language structures would collapse. Our brains would not be able to process haphazard data, and communication would become impossible.

So language change is conditioned by 2 sets of factors: on the one hand, there are underlying natural tendencies in language, which can be triggered off by social factors. On the other hand, there is a therapeutic tendency to preserve existing patterns and to make readjustments in order to restore broken structures. Before going into the details of the various types of linguistic change, let us briefly look at some natural phonological tendencies which usually ‘set the ball rolling.’

### 3.5 Natural Tendencies

There are many natural tendencies – remember McWhorter talking about ‘each word, each grammatical structure, each sound’ being able to go every which way? Well, some of these tendencies are stronger than others in different languages. When and if triggered by social factors, the ‘landslide’ can then go where the forces of change take it, depending on the language. Because these tendencies, and the balance of ‘forces of change,’ vary from language to language, that is why we have such diversity in language evolution.

A widespread tendency is for the ends of words to disappear. In cases where this has largely happened already, as in the Polynesian languages, Italian, and French, many English speakers think the language ‘sounds beautiful, has flowing rhythm.’ When, however, it happens in English, and people leave [t] off the end of words such as *hot*, *what* and replace it with the glottal stop [ʔ], then many people start grumbling about ‘sloppiness’ and ‘barbaric mutilation of words.’ This, however, could not be sloppiness, since producing a glottal stop requires as much, if not more, muscular tension as for the production of [t]. Moreover, the change is creeping in inexorably: even the critics are likely to replace [t] with a glottal stop in *football*, *hot milk*, *a bit more*, *tit-bits*, etc. In some areas the change has affected [k] as well, and also, to a lesser extent, [p]. At the rate at which it seems to be spreading, [p], [t], and [k] may have disappeared from the end of British English words by the middle of this century.

Not all tendencies are easily noticed: some affect only one sound in a particular position, i.e., [e] → [i] in front of [ŋ], as in *England*, etc.

Phonological changes, as we have noted, often have repercussions throughout the language, affecting word ‘anatomy’ (morphology) and syntax. As a result of the loss of the plural ending, French, for example, had to devise an alternative way of expressing ‘plural’ – through placing the determiner ‘*les*’ in front of plural nouns, as in ‘*les chats*’ [le ʃaː], ‘*the cats*’, since by itself the word *chat* [ʃaː] ‘cat’ is pronounced the same in both singular and plural.

We shall discuss the types of phonological change in more detail next week – here I just want you to note that there do exist these ‘natural tendencies’ to change in every language.

### 3.6 Therapeutic Changes

Therapeutic changes restore damaged patterns – they work to preserve the characteristic structures of the language. The use of **analogy**, or the ability to draw parallels between similar events, is a fundamental feature of the logic of human language, which, in turn, is the expression of human reasoning. It is the driving force of therapeutic changes, which target all unruly exceptions and try to make them conform to the existing language patterns and structures.

Examples:

- child language: take – taked, drink – drinked – and why not? ☺
- old – elder – older
- more and more verbs joining the ranks of ‘regular’ verbs: *learn*, *burn*, etc.

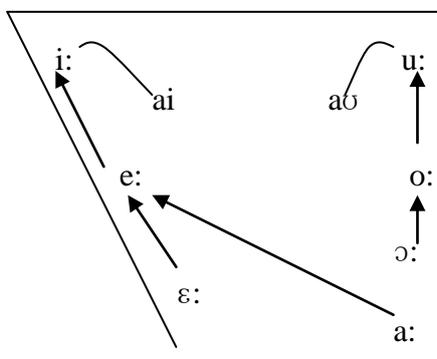
However, it is a mistake to regard analogy purely as a restorer of broken patterns: there are different types of analogy, and unexpected analogies may lead to unexpected results. So it is misleading to make general statements about analogy, unless the statement can be narrowed down.

### 3.7 ‘Chain-Reaction’ Changes

**Chain shifts** – that is, changes which seem to occur in linked sequences – are a particularly interesting therapeutic phenomenon. For example, in Chaucer’s time (around 1340-1400 AD), the word *lyf* ‘life’ was pronounced [li:f]. Then [I:] changed to [ei] and later to [ai]. But this was not an isolated change. At around the same time, all the other long vowels shifted: [e:] became [i:], [ɛ:] became [e:], and [a:] became [ɛ:]. This was the beginning of the **Great Vowel Shift** (1400-1600): a major change marking the transition from Middle English to Modern English that resulted in new phonemic forms of words and morphemes. All seven long vowels of Middle English underwent the following change:

Shift		Example		
Middle Eng.	Modern Eng.	Middle English	Modern English	
[i:]	[ai]	[mi:s]	[mais]	<i>mice</i>
[u:]	[aʊ]	[mu:s]	[maʊs]	<i>mouse</i>
[e:]	[i:]	[ge:s]	[gi:s]	<i>geese</i>
[o:]	[u:]	[go:s]	[gu:s]	<i>goose</i>
[ɛ:]	[e:]	[brɛ:kən]	[bre:k]	<i>break</i>
[ɔ:]	[o:]	[brɔ:kən]	[bro:k]	<i>broke</i>
[a:]	[e:]	[na:mə]	[ne:m]	<i>name</i>

By diagramming the Great Vowel Shift on a vowel chart, we can see that the highest vowels [i:] and [u:] ‘fell off’ to become diphthongs [ai] and [aʊ], [a:] was ‘fronted,’ while the long vowels became higher, as if to fill in the space left when the highest vowels became diphthongs (‘fell off’):



Quite often, however, several sounds move simultaneously, making it difficult to say whether one sound is being dragged into an empty space, or whether it is being pushed out of its place.

These changes are among the most dramatic examples of regular sound shift. The phonic representation of many thousands of words changed. We can see the traces of the Great Vowel Shift in the alternating forms of morphemes in current English:

Please	pleasant
Serene	serenity
Sane	sanity
Crime	criminal
Sign	signal, etc.

In each of these pairs, the first word had a long vowel in Middle English, and is therefore pronounced differently today. The Great Vowel Shift is the major cause of the ‘crazy’ English spelling, because English spelling system still reflects the way words were spelled before the Great Vowel Shift took place.

The actual mechanism by which sounds affect one another is not quite clear, even though we shall discuss the major types of phonological conditioning this week. The only thing seems certain, however: that **changes seem to occur in linked sequences, and in so doing, preserve the basic sound patterning of the language.**

Recently, linguists have suggested that chain shifts occur not only in the sounds of a language, but also in the syntax. For example, some languages have Adjective clauses (introduced by *which*, *who*, or *that*) placed before the noun they describe, so that the English ‘the cat, which sat on the mat’ would be structured as ‘which sat on the mat, cat.’

Such languages also tend to have objects preceding the verbs, so the English

‘Peter fed the cat which sat on the mat’ would be

‘Peter [which sat on the mat cat] fed.’

If, however, a change occurs so that Adjective clauses move to a position after the noun they describe, then the verb and object are likely to change places also.

Most people agree that the changes are linked in some way, though the precise mechanism of that trigger is still not clear.

### 3.8 Interacting Changes

We have already noted that linguistic changes occur on different levels (phonological, morphological, syntactic, lexical and semantic), and that ‘chain-reaction’ changes occur on all these levels.

The point I want to make now is that *changes on different levels interact with each other*: changes on one level may produce a ‘ripple effect’ on another, and new changes may come about through the interface of changes on both levels (the system functions as a whole, constantly changing and self-regulating!). Language is such a complex, fluid system, and its potential for change is almost infinite. Let us look at an example where loss of word endings has combined with changes in word order and resulted in both the disappearance of a construction and a change of meaning:

The early form of the English word *like* was *lician*, a verb which meant ‘to give pleasure to.’ This verb was in common use in English when objects normally preceded the verb, and the subject of the sentence did not necessarily come at the beginning of a sentence (Cf. with ‘nexus’, or S/V/C pattern). So a typical sentence might be:

*Tham cyngre licodon peran.*

To the king gave pleasure pears, ‘Pears pleased the king.’

Then, over the course of several centuries, two things happened:

- First, the noun and verb endings were dropped, so *the king* became the standard, and the verb lost its plural ending.
- These phonological and morphological changes gradually led to the emergence of a more rigid basic sentence structure (a syntactic change): it became normal to put the subject before the

verb, and the object after the verb. So the sentence ‘*The king liked pears*’ (originally meaning, ‘to the king gave pleasure pears’) was reinterpreted as ‘The king took pleasure in pears.’

Therefore, loss of word endings and a word order change triggered off two further changes: the loss of the construction-type ‘to sb. sth. is a pleasure,’ and a change of meaning (semantic change) in the word *like* from ‘to give pleasure to’ to ‘to take pleasure in.’

This example shows the ‘ripple effect’ of phonological change on other linguistic systems.

The moral here is:

**Language is a closed elastic system of interlocking subsystems, all related to each other in particular ways and on different levels, and these different levels are, in turn, related in various ways to each other.**

**Therefore, changes in any of language ‘subsystems’ usually cause chain reactions in the others. Languages evolution is based on the interface of changes on all levels with the ‘rebound’ action of the so-called ‘therapeutic changes,’ working to preserve basic language patterns.**

Before we go on to examine the various types of language change in more detail, let us try to understand the basics of the methods used in studying linguistic change.

### Summary:

- Indo-European language family is just one out of about 30 families in the world, numbering over 6000 ‘descendants.’
- The current views on language diversification hold that:
  - language change takes place in all directions, and these will be different in ‘offshoot’ populations
  - there must have been many more languages in the past, because of geographical isolation of fragmented populations
  - currently the number of world languages is shrinking as a result of globalisation
  - we cannot revive a language, if it dies; if there are no written records of it, then it goes forever (only 200 out of 6000 world languages are written languages)
  - only 10 languages are currently spoken by over 90% of the world’s population
  - linguists predict that over 3000 languages will die within the next 50 years
- one way of establishing **family relationships** between languages is to look at records of an older generation of family members, such as Latin, Greek, and Sanskrit (**comparing cognates**)
- A **cognate** of a word in one language is a word in another language which has a similar form and is/was used with a similar meaning.
- Sociolinguistics helped us understand the mechanism of linguistic change, both in terms of its spread from person to person (conscious/subconscious imitation), and its spread through a language.
- Change always involves variant forms while it is in progress, so speech variation is often a sign of an ongoing change.
- The curve of linguistic change is S-shaped, which explains the existence of ‘exceptions’ to the ‘rule’
- Language change cannot be just a random, spontaneous response to accidental social factors, for 2 reasons:
  - Similar changes occur the world over: **natural tendencies**
  - **Language patterning never breaks down** thanks to therapeutic changes, driven by **analogy**
- Linguistic change usually triggers off chain reactions (chain shifts), because all linguistic subsystems are so closely intertwined, i.e., the Great Vowel Shift (1400 – 1600).

- **Linguistic changes seem to occur in linked sequences, but preserving the basic sound patterning of the language.**
- **Chain shifts** may occur not only in the sounds of a language, but **also in its syntax**.
- Linguistic changes have a ‘ripple effect’ in all other language ‘subsystems,’ because language is a closed elastic system of interlocking subsystems, all related to each other in particular ways and on different levels.

### Questions:

- Q 1 Who are the ‘Founding Fathers’ of comparative linguistics? What were their achievements?
- Q 2 What was Grimm’s Law all about?
- Q 3 What is Comparative Linguistics?
- Q 4 What are the two approaches to the study of languages that up until recently were considered to be radically different?
- Q 5 Why is it important to approach language study from both these perspectives?
- Q 6 What are the three main areas of comparative linguistic enquiry?
- Q 7 What are our objectives this term?
- Q 8 Briefly state the current theory of language diversification through history.
- Q 9 What are cognates? Give examples.
- Q 10 How can we establish genetic links between languages and build the family tree of a group of languages?
- Q 11 How do changes spread from person to person?
- Q 12 How do changes spread within a language?
- Q 13 State two types of causes in linguistic change.
- Q 14 What is *analogy*?
- Q 15 What is a *chain shift*?