

Important questions and answers on the course « Introduction à la Phonétique et à la Phonologie »

Linguistics is the scientific study of language and its structure. It encompasses the analysis of the form, meaning, and context of languages and their components, including phonetics, phonology, morphology, syntax, semantics, and pragmatics. Linguistics seeks to understand the principles and processes that underlie human language in all its aspects.

Key areas within linguistics include:

1. **Phonetics and Phonology:** These fields study the sounds of speech (phonetics) and the organization of sounds in particular languages (phonology).
2. **Morphology:** Morphology deals with the structure of words and the formation of words from morphemes, which are the smallest units of meaning.
3. **Syntax:** Syntax is the study of sentence structure and the rules governing the combination of words to form grammatically correct sentences.
4. **Semantics:** Semantics examines the meaning of words, phrases, and sentences in language, including the relationships between words and how they contribute to overall meaning.
5. **Pragmatics:** Pragmatics focuses on the use of language in context and the ways in which context influences the interpretation of meaning. It considers how language is used to achieve particular goals in communication.

Linguistics also delves into the study of language variation, language acquisition, historical linguistics, sociolinguistics, psycholinguistics, and computational linguistics, among other subfields. It is an interdisciplinary field that draws on insights from psychology, anthropology, sociology, computer science, and philosophy to understand the complex nature of human language.

Synchronic linguistics Vs diachronic linguistics or difference between Synchronic linguistics and diachronic linguistics

Synchronic linguistics and diachronic linguistics are two complementary approaches to the study of language that focus on different aspects of language structure and development.

1. **Synchronic linguistics** : Synchronic linguistics is concerned with the study of a language at a specific point in time, without considering its historical development. It examines the structure of a language as it exists in the present, including its phonology, morphology, syntax, semantics, and pragmatics. Synchronic linguistics analyzes the language system as it is used by a speech community at a particular moment, providing insights into the structure and organization of a language at a given time.

2. **Diachronic linguistics** : Diachronic linguistics, on the other hand, focuses on the historical development and changes in a language over time. It investigates how languages evolve, tracing the historical processes that have shaped the structure and vocabulary of a language from its earlier stages to its current form. Diachronic linguistics examines language change, language families, language contact, and the factors that influence the evolution of languages, providing a historical perspective on the development of linguistic systems.

Both synchronic and diachronic perspectives are crucial for a comprehensive understanding of language. Synchronic analysis helps linguists understand the current structure and function of a language, while diachronic analysis allows them to trace the historical origins and development of linguistic phenomena, offering insights into the evolution and relationships between different languages and language families.

In the field of linguistics, the concept of the linguistic sign is a fundamental notion introduced by Ferdinand de Saussure, a Swiss linguist, in his work "Course in General Linguistics" published posthumously in 1916. Saussure's theory of the linguistic sign forms the basis of modern structuralist linguistics and semiotics.

The linguistic sign ?

According to Saussure, the linguistic sign is composed of two inseparable components:

1. **Signifier** : The signifier is the perceptible or acoustic form of the sign, such as a sound pattern, a written word, or a gesture. It is the physical manifestation or expression of the sign.

2. **Signified** : The signified is the mental concept or meaning that the signifier represents. It is the cognitive or abstract meaning associated with the signifier.

Saussure emphasized the arbitrary nature of the relationship between the signifier and the signified. In other words, there is no inherent or necessary connection between the form of a linguistic sign and its meaning; the association between the two is established by convention within a particular linguistic community.

Saussure's distinction between the signifier and the signified paved the way for the study of the structural relationships within language, focusing on the interplay between sound and meaning. This concept has been influential not only in linguistics but also in various fields, such as semiotics, literary theory, and cultural studies, where the relationship between signs and their meanings is a central area of investigation.

Difference between linguistic competence and linguistic performance ?

Linguistic competence and linguistic performance are two key concepts in linguistics that were introduced by Noam Chomsky, an American linguist, in his theory of generative grammar. These concepts help to distinguish between an individual's internalized knowledge of a language and their actual use of that knowledge in real-life communication.

1. ***Linguistic competence :*** Linguistic competence refers to an individual's implicit knowledge of the grammar, rules, and principles that underlie a language. It is the subconscious understanding of the structure and organization of a language, including its phonology, morphology, syntax, semantics, and pragmatics. Linguistic competence enables individuals to generate and understand an infinite number of grammatically correct sentences in their language, even if they have never encountered those specific sentences before. It represents the abstract knowledge of a language that speakers possess, regardless of whether they actively use that knowledge in everyday communication.
2. ***Linguistic performance :*** Linguistic performance, on the other hand, refers to the actual use of language in real-world communicative situations. It encompasses the observable and practical application of linguistic knowledge in speech production and comprehension. Linguistic performance may vary depending on factors such as context, social norms, memory limitations, and other non-linguistic constraints. It can include instances of hesitation, errors, and other phenomena that may deviate from the idealized grammatical structures of a language.

Chomsky's distinction between linguistic competence and linguistic performance highlights the difference between the underlying knowledge of a language that speakers possess and their ability to use that knowledge effectively in everyday communication. This differentiation has significantly influenced the study of language acquisition, language processing, and the nature of human language.

What is Language ?

Language can be defined as a system of communication that uses symbols, such as words, sounds, and gestures, to convey meaning and facilitate interaction between individuals. It is a complex, rule-governed system that enables the expression of thoughts, ideas, emotions, and information. Languages are central to human society and culture, serving as a means of expressing identity, transmitting knowledge, and fostering social connections.

The distinction between the first language (L1) and the second language (L2) ?

The distinction between the first language (L1) and the second language (L2) is as follows:

1. **First language (L1) :** The first language, also known as **the native language or mother tongue, is the language that a person learns from birth or in early childhood within their family or community.** It is **the primary language** through which an individual initially develops their cognitive and linguistic abilities. Proficiency in the first language is typically characterized by a deep understanding of its grammar, vocabulary, and cultural nuances, as well as a natural and intuitive use of the language in various contexts.
2. **Second language (L2) :** A second language is **a language that an individual learns after acquiring their first language.** It is **often learned in an educational or social setting**, as a result of migration, or for the purpose of cultural or professional advancement. Proficiency in a second language may vary, ranging from basic communication skills to a high level of fluency and accuracy, depending on the individual's exposure, practice, and learning environment.

The key distinction between the first language and the second language lies in the developmental sequence of acquisition. The first language is acquired naturally during early childhood, whereas the second language is typically acquired later in life through formal instruction or immersion in a different linguistic environment. The process of learning a second language often involves conscious effort, formal instruction, and exposure to the language in various social and cultural contexts.

"Langue" (Language) Vs "Parole" Vs "Langage"

In the field of linguistics, particularly in the structuralist tradition, **the concepts of "langue," "parole," and "langage" were introduced by Ferdinand de Saussure** and later elaborated upon by other linguists. These concepts help to distinguish different aspects of language and its use within a speech community.

1. **Langue :** Langue refers to the underlying system or structure of a language, including its grammar, vocabulary, and rules, which are shared among the members of a particular speech community. It represents the abstract, systematic, and formalized aspects of a language that exist independently of individual speakers. Langue is the collective, idealized, and rule-governed aspect of language that allows for communication and understanding within a community.
2. **Parole :** Parole, in contrast, refers to the actual use or instances of language in real-life communicative situations by individual speakers. It encompasses the concrete, observable, and contextualized manifestations of language as it is produced or used by speakers in specific contexts. Parole represents the individual and variable application of the rules and structures of a language in speech and writing, reflecting the diversity and creativity of language use by speakers.
3. **Langage :** Langage is a broader term that encompasses both langue and parole, referring to the general faculty or capacity for language and communication possessed by human beings. It denotes the overall ability of individuals to use language for expression, comprehension, and interaction, encompassing both the systematic structure of language and its practical, contextualized usage in speech and communication.

Understanding the distinctions between langue, parole, and langage helps to analyze the interplay between the formalized system of language, its actual usage by speakers, and the broader human capacity for language and communication. These concepts contribute to the study of language structure, variation, and usage in different social and cultural contexts.

Characteristics of language ?

Language is a complex and multifaceted system that exhibits several key characteristics that distinguish it from other forms of communication. Some of ***the fundamental characteristics of language*** include:

1. **Arbitrariness :** Language is characterized by the arbitrary relationship between linguistic signs (words, symbols, or sounds) and their meanings. There is no inherent connection between the form of a word or sound and its associated concept or meaning. This arbitrariness is a fundamental feature of human language.
2. **Productivity :** Language is highly productive, allowing speakers to generate and comprehend an infinite number of novel utterances and expressions. Speakers can create

and understand new sentences by combining words and rules in a systematic and creative manner, enabling communication of an unlimited range of ideas and concepts.

3. **Discreteness** : Language is composed of discrete units, such as phonemes, morphemes, and words, which can be combined and recombined to create meaningful messages. These discrete units can be manipulated and organized to convey specific meanings and to differentiate between different linguistic elements.
4. **Duality** : Language exhibits duality of patterning, meaning that it consists of both meaningful elements (such as words and morphemes) and meaningless elements (such as phonemes). This dual structure allows for the creation of meaningful messages through the combination of discrete, meaningless units into larger meaningful units.
5. **Cultural Transmission** : Language is learned and transmitted through social and cultural interactions within a community. It is passed down from one generation to the next through socialization and language acquisition, allowing for the preservation and evolution of language within a speech community.
6. **Displacement** : Language enables communication about things that are not present in the immediate context, allowing speakers to refer to past and future events, distant locations, and abstract ideas. This capacity for displacement distinguishes human language from other forms of animal communication, which are often limited to the immediate context.
7. **Reflexivity** : Language allows speakers to talk about language itself, enabling metalinguistic awareness and the ability to reflect on and discuss the structure, usage, and rules of language. This feature supports the analysis and study of language as a formal system.

These characteristics collectively contribute to the complexity, versatility, and richness of human language, making it a powerful tool for communication, expression, and the transmission of knowledge and culture.

What is Phonetics ?

Phonetics is a branch of linguistics that deals with the study of the sounds of human speech. It is concerned with the physical properties of speech sounds (phones), their physiological production, acoustic properties, auditory perception, and how they are perceived and processed by the human brain.

Phonetics can be **divided** into **three main subfields** :

1-Articulatory phonetics : This subfield deals with **the study of the way speech sounds are produced or articulated by the human vocal apparatus**. It focuses on the movements of the tongue, lips, vocal cords, and other speech organs during the production of speech sounds.

2-Acoustic phonetics : Acoustic phonetics is concerned **with the physical properties of speech sounds, such as their frequency, amplitude, and duration**. It **analyzes the transmission of speech sounds as waves and how these waves interact with one another in producing speech**.

3-Auditory phonetics : This subfield focuses **on how speech sounds are perceived by the human ear and processed by the brain**. It studies **the way in which the human auditory system receives and interprets speech sounds, including the perception of pitch, loudness, and other auditory cues**.

Phonetics is crucial in understanding the production and perception of speech sounds in different languages, dialects, and accents, and it plays a significant role in fields such as language acquisition, speech pathology, and computational linguistics.

Speech Organs ?

Human speech is produced through the coordinated action of various speech organs, which work together to create the sounds and articulations necessary for speech production. These speech organs include the following:

1. **Lungs** : The lungs provide the airflow and breath support necessary for speech. Air is expelled from the lungs through the trachea, or windpipe, to produce sound.
2. **Trachea (Windpipe)** : The trachea serves as the passageway for the airflow from the lungs to the larynx.
3. **Larynx (Voice Box)** : The larynx contains the vocal cords, which can be manipulated to create sounds through vibration. It plays a crucial role in voice production and phonation.

4. **Pharynx** : The pharynx is the cavity behind the mouth and nasal cavity. It serves as a passage for both food and air and plays a role in the resonance of sound during speech production.

5. **Oral Cavity** : The oral cavity includes the mouth, tongue, and palate. It plays a crucial role in articulating various speech sounds, especially consonants and vowels.

6. **Nasal Cavity** : The nasal cavity is responsible for the production of nasal sounds and assists in the resonance of certain speech sounds.

7. **Tongue** : The tongue is a crucial speech organ responsible for shaping sounds during speech production. It helps in articulating various consonant and vowel sounds and plays a significant role in the production of complex speech sounds. **Differents parts of the tongue :**

1. **Tip of the Tongue** : The tip of the tongue is responsible for producing **specific sounds, including alveolar consonants like /t/, /d/, /n/, /l/, and the interdental consonants /θ/ and /ð/. It makes contact with the alveolar ridge or the upper front teeth to create these sounds.**

2. **Blade of the Tongue** : The blade of the tongue, which refers to the area just behind the tip of the tongue, is involved in the production of sounds **like the alveolar fricatives /s/ and /z/, as well as the alveopalatal fricatives /ʃ/ and /ʒ/.**

3. **Dorsum of the Tongue** : The dorsum of the tongue, or the main body of the tongue, is crucial for producing various vowel sounds and certain consonant sounds. It is involved in the articulation of sounds like **/k/, /g/, /tʃ/, and /dʒ/,** among others.

By using these different parts of the tongue and coordinating their movements with the lips and other speech organs, individuals can produce a diverse range of speech sounds, allowing for the expression of a wide variety of words and utterances in a given language.

8. **Teeth and Alveolar Ridge** : The teeth and the alveolar ridge, which is the bony ridge behind the upper front teeth, are important for producing specific speech sounds, particularly certain consonants like **/t/, /d/, /s/, and /z/.**

9. **Hard and Soft Palate :** The hard palate, located in the front part of the roof of the mouth, and the soft palate, or velum, at the back of the roof of the mouth, are important for the production of sounds. ***The soft palate can be raised or lowered to control the airflow through the nasal cavity, allowing for the production of nasal and oral sounds***

Certainly, in the context of speech production, the lips and different parts of the tongue play crucial roles. Here's a more detailed overview:

9. **Lips :** The lips are essential for shaping various sounds during speech production, ***particularly bilabial consonants such as /p/, /b/, and /m/.*** They can be used to create different articulatory configurations in conjunction with other speech organs to produce a wide range of sounds.

10. **Glottis :** The glottis is a part of the larynx and consists of the vocal folds and the space between them. It plays a crucial role in phonation, the production of sound by the vocal folds coming together and vibrating as air passes through them. The glottis can adjust its size and shape to modify the pitch and intensity of the voice, allowing for the production of a wide range of speech sounds.

11. **Epiglottis :** The epiglottis is a flap of cartilage located at the base of the tongue, just above the larynx. Its primary function is to prevent food and liquids from entering the trachea during swallowing. When swallowing, the epiglottis folds over the glottis, covering the entrance to the larynx and redirecting food and liquids down the esophagus. It helps protect the airway and ensures that ingested materials go into the digestive system rather than the respiratory system.

The glottis and epiglottis are critical structures that contribute to both the production of speech sounds and the protection of the respiratory system during swallowing. They work in coordination with other speech organs to facilitate effective communication and the safe passage of food and air through the throat.

The coordinated movements and interactions of these speech organs enable the precise articulation of the sounds and phonemes that constitute human speech.

Description and classification of speech sounds ?

Speech sounds can be described and classified based on various linguistic features such as their manner of articulation, place of articulation, voicing, and airstream mechanism. Here is an overview of the different types of speech sounds:

1. **Vowels** : Vowels are produced with a relatively open vocal tract, allowing for the free passage of air. They are characterized by the absence of constriction in the oral cavity and are produced without any significant blockage of the airstream. *Vowels are classified based on the position of the tongue, the position of the lips, and the tension of the vocal cords.*
2. **Consonants** : Consonants are speech sounds that involve some degree of constriction or closure of the vocal tract. They can be classified based on *these 3 three articulatory features*:
 - a. **Manner of Articulation** : Consonants can be classified based on how the airstream is obstructed. Common manners of articulation include stops, fricatives, affricates, nasals, liquids, and glides.
 - b. **Place of Articulation** : Consonants can also be classified based on where in the vocal tract the obstruction or constriction occurs. This includes the bilabial, labiodental, dental, alveolar, postalveolar, retroflex, palatal, velar, and glottal places of articulation.
 - c. **Voicing** : Consonants can be either voiced or voiceless. Voiced consonants are produced with vibration of the vocal cords, while voiceless consonants are produced without vocal cord vibration.
3. **Semi-vowels** : Semi-vowels, also known as glides, are speech sounds that function as both consonants and vowels. They have a smooth transition from a consonantal position to a vowel-like position. Common examples include *the sounds /j/ as in "yes" and /w/ as in "we."*
4. **Diphthongs** : Diphthongs are complex speech sounds that consist of a combination of two vowel sounds within the same syllable. They involve a smooth and quick movement from one vowel to another within a single syllable. Examples include the sound in the word "coin" and the sound in the word "loud."

This classification system helps linguists and language professionals understand the production and articulation of different speech sounds and their role in the structure of languages. It serves as a foundation for the study of phonetics and phonology, contributing to the analysis of speech patterns and the diversity of sounds across languages.

Here is a simplified English consonant chart with examples for each category based on their place of articulation :

1. **Bilabial** : Consonants formed by bringing both lips together.

- Examples: /p/ as in "pat," /b/ as in "bat," and /m/ as in "mat."

2. **Labiodental** : Consonants produced by the lower lip and the upper teeth.

- Examples: /f/ as in "fun" and /v/ as in "van."

3. **Interdental/Dental** : Consonants articulated with the tongue against the upper teeth.

- Examples: /θ/ as in "think" and /ð/ as in "this."

4. **Alveolar** : Consonants made by the tongue against or close to the alveolar ridge.

- Examples: /t/ as in "ten," /d/ as in "den," /s/ as in "see," /z/ as in "zoo," /n/ as in "no," and /l/ as in "let."

5. **Post-alveolar (Palato-alveolar)** : Consonants articulated with the tongue near the back of the alveolar ridge or the hard palate.

- Examples: /ʃ/ as in "ship" and /ʒ/ as in "vision."

6. **Velar** : Consonants produced by the back of the tongue against the soft palate or velum.

- Examples: /k/ as in "key" and /g/ as in "go."

7. **Glottal** : Consonants articulated at the glottis.

- Examples: /h/ as in "hot."

Each of these categories represents a group of consonant sounds in English, illustrating the different manners and places of articulation used to produce them. Keep in mind that some sounds, especially those in the post-alveolar and velar categories, might not exist in certain dialects of English.

Here's a simplified English consonant chart based on the manner of articulation:

1. **Stops** : Consonants formed by completely obstructing the airflow at some point in the vocal tract before releasing it.

- Examples: /p/ as in "pot," /b/ as in "bat," /t/ as in "top," /d/ as in "dog," /k/ as in "kit," and /g/ as in "go."

2. **Fricatives** : Consonants produced by forcing the breath through a narrow channel, creating friction.

- Examples: /f/ as in "fun," /v/ as in "van," /θ/ as in "think," /ð/ as in "this," /s/ as in "see," /z/ as in "zoo," /ʃ/ as in "ship," and /ʒ/ as in "vision."

3. **Affricates** : Consonants that begin as stops but end as fricatives, combining the features of both stop and fricative sounds.

- Examples: /tʃ/ as in "cheap" and /dʒ/ as in "judge."

4. **Nasals** : Consonants produced with a lowered soft palate, allowing the air to pass through the nasal cavity.

- Examples: /m/ as in "man," /n/ as in "no," and /ŋ/ as in "sing."

5. **Liquids** : Consonants that allow the air to flow relatively freely around the sides of the tongue.

- Examples: /l/ as in "like" and /r/ as in "right" or "run."

6. **Glides (Semi-vowels)** : Sounds that function as both consonants and vowels, with a smooth transition from a consonantal position to a vowel-like position.

- Examples: /j/ as in "yes" and /w/ as in "we" or "went."

This chart represents the major groups of English consonants classified based on their manner of articulation. It provides a simplified overview of the different types of consonant sounds found in the English language.

Here is a simplified English consonant chart based solely on the voicing feature :

1. **Voiceless Stops :**

- /p/ as in "pat"
- /t/ as in "top"
- /k/ as in "kite"

2. **Voiced Stops :**

- /b/ as in "bat"
- /d/ as in "dog"
- /g/ as in "go"

3. **Voiceless Fricatives :**

- /f/ as in "fun"
- /θ/ as in "think"
- /s/ as in "see"
- /ʃ/ as in "ship"

4. **Voiced Fricatives :**

- /v/ as in "van"
- /ð/ as in "this"
- /z/ as in "zoo"
- /ʒ/ as in "vision"

5. **Voiceless Affricate :**

- /tʃ/ as in "cheap"

6. **Voiced Affricate :**

- /dʒ/ as in "judge"

7. **Voiceless Nasals :**

- /m/ as in "man"
- /n/ as in "no"
- /ŋ/ as in "sing"

8. **Voiced Nasals :**

- /m/ as in "man"
- /n/ as in "no"
- /ŋ/ as in "sing"

9. **Voiced Liquids :**

- /l/ as in "like"
- /r/ as in "right" or "run"

In this chart, each consonant is categorized based on whether it is voiced or voiceless. This feature helps distinguish between sounds produced with vocal cord vibration (voiced) and those produced without vocal cord vibration (voiceless).

Manner of articulation	Voicing feature	Place of articulation							
		Bilabials	Labiodentals	Interdentals	Alveolars	Palato-alveolars	Palatal	Velar	Glottal
Stops	Vl	p			t			k	
	Vd	b			d			g	
Fricatives	Vl		f	θ	s	ʃ			h
	Vd		v	ð	z	ʒ			
Affricates	Vl					tʃ			
	Vd					dʒ			
Nasals	Vd	m			n			ŋ	
Liquids lat.	Vd				l				
Retro.	Vd				r				
Glides	Vd	w					j	(w)	

Description and Classification of Vowels according "the tongue height, tongue advancement, lips rounding and tenseness parameters"

Vowels can be described and classified based on several articulatory features, including tongue height, tongue advancement, lips rounding, and tenseness. Here's a detailed breakdown of each parameter:

1. Tongue Height :

- High Vowels: These are produced with the tongue positioned close to the roof of the mouth. Examples include /i/ as in "see" and /u/ as in "too."

- Mid Vowels: These are produced with the tongue positioned at a middle height in the mouth. Examples include /e/ as in "say" and /o/ as in "go."

- Low Vowels: These are produced with the tongue positioned low in the mouth. Examples include /æ/ as in "cat" and /a/ as in "father."

2. Tongue Advancement :

- *Front Vowels: These are produced with the highest part of the tongue positioned towards the front of the mouth. Examples include /i/ as in "see" and /e/ as in "say."*

- *Central Vowels: These are produced with the tongue in a central position in the mouth. An example is the vowel /ə/ as in "sofa."*

- *Back Vowels: These are produced with the highest part of the tongue positioned towards the back of the mouth. Examples include /u/ as in "too" and /a/ as in "father."*

3. **Lip Rounding :**

- *Rounded Vowels: These are produced with rounded lips. Examples include /u/ as in "too" and /o/ as in "go."*

- *Unrounded Vowels: These are produced with unrounded lips. Examples include /i/ as in "see" and /e/ as in "say."*

4. **Tenseness :**

- *Tense Vowels: These are produced with a relatively tense tongue muscle. Examples include /i/ as in "see" and /e/ as in "say."*

- *Lax Vowels: These are produced with a relatively relaxed tongue muscle. Examples include /ɪ/ as in "sit" and /ʊ/ as in "put."*

Understanding these parameters helps in the analysis and classification of vowel sounds, enabling linguists and language learners to grasp the nuances and variations in vowel production across different languages.

English Vowel Chart :

Here is a comprehensive English vowel chart that about monophthongs (one vowel), categorized based on their tongue height, tongue advancement, lips rounding, and tenseness parameters:

1. **High, Front, Unrounded, Tense:**

- /i/ as in "see"

2. **High, Front, Unrounded, Lax:**

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- /ɪ/ as in "sit"

3. **High, Back, Rounded, Tense:**

- /u/ as in "too"

4. **High, Back, Rounded, Lax:**

- /ʊ/ as in "put"

5. **Mid, Front, Unrounded, Tense:**

- /e/ as in "say"

6. **Mid, Front, Unrounded, Lax:**

- /ɛ/ as in "let"

7. **Mid, Central, Unrounded, Lax:**

- /ə/ as in "about"

8. **Mid, Central, Unrounded, Lax:**

- /ʌ/ as in "sun"

9. **Mid, Back, Rounded, Tense:**

- /o/

10. **Mid, Back, Rounded, Lax:**

- /ɔ/ as in "lot"

11. **Low, Front, Unrounded, Lax:**

- /æ/ as in "cat"

12. **Low, Back, Unrounded, Lax:**

- /ɑ ou (ɑ/ɒ) / as in "father"

		Front	Central	Back	
High	i	ɪ		ʊ	
					u
Mid	e	ɛ	ə	ɔ	
			ʌ		o
Low		æ		ɑ ɑ/ɒ	
	Tense	Lax			tense

Here is a list of short and long vowels in English:

Short Vowels:

1. /æ/ as in "cat"
2. /ɛ/ as in "pet"
3. /ɪ/ as in "sit"
4. /ɒ/ as in "lot"
5. /ʌ/ as in "cut"
6. /ʊ/ as in "put"
7. /ə/ as in "ago"
8. /ɔ/ as in "pot"

Long Vowels:

1. /ɜ:/ as in "bird"
2. /i:/ as in "see"

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3. /ɑ:/ as in "card"
4. /ə:/ as in "there"
5. /u:/ as in "move"
6. /ɔ:/ as in "talk"

Understanding the distinction between short and long vowels is important in English pronunciation and spelling, as the length of the vowel sound can often change the meaning of a word.

Please note : All vowels are oral vowels.

Complex Vowels

The term "complex vowel" typically refers to a type of vowel sound that involves a combination of two or more distinct vowel qualities within a single syllable. These complex vowels are also known as **diphthongs or triphthongs**, depending on the number of distinct vowel elements they contain.

1. **Diphthongs**: Diphthongs are complex vowels that involve a smooth transition or gliding movement from one vowel quality to another within the same syllable. They combine elements of two different vowel qualities, allowing for a single, continuous sound. Examples of English diphthongs include /aɪ/ as in "price" and /ɔɪ/ as in "choice."

2. **Triphthongs**: Triphthongs are complex vowels that consist of three distinct vowel qualities articulated successively within a single syllable. These involve a glide from one vowel to another and then to a third vowel within the same syllable. One example is the word "fire" with the triphthong /aɪə/.

Complex vowels, particularly diphthongs and triphthongs, contribute to the richness and diversity of vowel sounds in various languages. They add complexity to the phonetic inventory of a language and play a significant role in the overall phonological structure and pronunciation patterns.

Diphthongs:

- /eɪ/ as in "day"

- /aɪ/ as in "time"
- /ɔɪ/ as in "boy"
- /aʊ/ as in "now"
- /oʊ/ ou /əʊ/ as in "go"
- /ɪə/ as in "fear"
- /ɛə/ as in "where"
- /ʊə/ as in "tour"

This chart represents the major English vowel sounds, including both monophthongs (simple vowels) and diphthongs (gliding vowels). Understanding these different vowel sounds is crucial for language learners and linguists studying the phonetics and phonology of the English language.

Triphthongs in English:

1. /aɪə/ as in "fire"
2. /aʊə/ as in "flower"
3. /eɪə/ as in "player"
4. /ɔɪə/ as in "employer"
5. /əʊə/ as in "lower"

It is important to note that the occurrence of triphthongs can vary depending on regional accents and dialects within the English-speaking world. Triphthongs are less common compared to diphthongs in English, which are more prevalent and widely recognized.

"Sound" and "Grapheme"

The terms **"sound" and "grapheme"** are important concepts in the study of phonetics, phonology, and written language. Here's the difference between the two:

1. Sound:

- In the context of language, a sound refers to a distinct auditory unit produced by the human vocal apparatus. It is the basic unit of spoken language that conveys meaning. Sounds are categorized into phonemes, which are the smallest units of sound that can distinguish between words in a particular language.

- For example, in the word "cat," the sounds /k/, /æ/, and /t/ represent the individual phonemes that, when combined, create the spoken word.

2. Grapheme:

- A grapheme, on the other hand, is the smallest unit of a writing system. It is a visual representation or a written symbol that corresponds to a phoneme or a group of phonemes. Graphemes can be letters, combinations of letters, or even single characters in a writing system that represent specific sounds or phonological units.

- For example, in the word "cat," the graphemes are the letters 'c,' 'a,' and 't,' which represent the individual sounds /k/, /æ/, and /t/, respectively.

In summary, the key distinction between a sound and a grapheme lies in their modalities: sound refers to the auditory unit in spoken language, while a grapheme refers to the written representation of a sound in a specific writing system. Understanding the relationship between sounds and graphemes is crucial for comprehending the processes of language production, perception, and written communication.

Secondry Articulations and Phonetic transcription

Here are explanations of various secondary articulations with clear examples through phonetic transcriptions:

1. **Aspiration:** is a process which takes place with voiceless stops at word initial position. In English, it can be heard in words like "pot" and "top."

- /p^hat/ (as in "pat")

- /t^hɒp/ (as in "top")

- /k^hæt/ (as in "cat")

2. **Palatalization:** is a process which takes place with consonants which occur before high front vowels.

- /bʲɪt/ (as in "bit")

- /kʲi:/ (as in "key")

3. **Labialization:** is a process which takes place with consonants occurring before round vowels and glides.

- /sʷwɪm/ (as in "swim")

- /kʷʊk/ (as in "cook")

4. **Unrelease:** This occurs when the articulators remain in the closure position after the release of a plosive at word final position. ***Stops, Liquids and Nasals are unreleased***

- /kæt-/ (as in "cat")

- /dɔ:g-/ (as in "dog")

5. **Nasalization:** This involves the sound passing through the nasal cavity. It can be seen in nasal sounds like "m" and "n."

- /sɪŋ/ (as in "sing")

- /mū:n/ (as in "moon")

6. **Syllabicity:** This indicates that a sound is serving as the nucleus of a syllable. ***Liquids and nasals are syllabic, because they can play the role of the vowel.***

- /teɪbəl/ (as in "table")

- /pleɪ/ (as in "play")

7. **Devoicing**: This refers to the loss of voicing during the articulation of a sound. It means, **a voiced sound becomes voiceless**. *Only the consonants "L and R" can be devoiced when they occur after a voiceless sound.*

- /p^hleɪ/ (as in "play")

- /t^hɹaɪ/ (as in "try")

Understanding these secondary articulations is essential for grasping the nuances of speech sounds and their variations in different languages and dialects.

Natural Classes

They are :

1. **Obstruents**: Obstruents are a class of consonants characterized by a constriction or closure of the vocal tract, causing turbulence in the airflow. They can be stops, fricatives, or affricates. Examples of obstruents include sounds like /p/, /b/, /s/, and /tʃ/.
2. **Stridents**: Stridents are a subgroup of obstruents characterized by a particularly noisy airflow due to the high-frequency turbulent noise they produce. They are often loud and have a high intensity. Examples of stridents include the fricatives /s/, /z/, /ʃ/, and /ʒ/.
3. **Sibilants**: Sibilants are a subgroup of stridents known for their hissing quality. They are produced with a high-pitched turbulent airflow directed through a narrow channel in the vocal tract. Examples of sibilants include the fricatives /s/, /z/, /ʃ/, and /ʒ/.
4. **Anteriors**: Anteriors refer to sounds articulated at or near the front of the mouth. They include sounds like the alveolar and dental consonants. Examples of anterior sounds include /t/, /d/, /n/, /s/, and /z/.
5. **Coronals**: Coronals are sounds produced with the tongue blade or the front part of the tongue raised. They include sounds like the alveolar, postalveolar, and retroflex consonants. Examples of coronal sounds include /t/, /d/, /n/, /s/, /z/, /ʃ/, and /ʒ/.

6. **Continuants:** Continuants are sounds produced with a continuous airflow through the vocal tract, allowing the sound to be prolonged or sustained. They include fricatives, approximants, and vowels. Examples of continuant sounds include fricatives like /s/ and /z/, as well as approximants like /j/ and /w/.

7. **Non-continuants:** Non-continuants are sounds produced with a momentary obstruction of the airflow in the oral cavity, resulting in a brief, abrupt sound. They include stops and affricates. Examples of non-continuant sounds include stops like /p/, /b/, /t/, and /d/, as well as affricates like /tʃ/ and /dʒ/.

Understanding these terms is important for analyzing the phonetic and phonological features of sounds in a language and for identifying patterns within the phonological system.

FEATURES	p	b	t	d	k	g	f	v	θ	ð	s	z	ʃ	ʒ	tʃ	dʒ	r	l	m	n	ŋ
Consonantal	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Vocalic	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	+	+
Obstruent	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	-	-	-
Anterior	+	+	+	+	-	-	+	+	+	+	+	+	+	+	+	+	-	-	-	-	-
Coronal	-	-	+	+	-	-	+	+	+	+	+	+	-	-	-	-	-	+	+	+	-
Voice	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	+	+	-	+	-
Nasal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+
Strident	-	-	-	-	-	-	+	+	-	-	+	+	+	+	+	+	-	-	-	-	-
Sibilant	-	-	-	-	-	-	-	-	-	-	+	+	+	+	+	+	-	-	-	-	-
Continuant	-	-	-	-	-	-	+	+	+	+	+	+	+	+	+	+	-	-	-	-	-

What is phonology ?

Phonology is a subfield of linguistics that **studies the systematic organization and patterning of sounds in human language**. It focuses on the **ways in which sounds function and interact within a particular language or languages, including their distribution, patterns, and the rules governing their use**. **Phonology** is concerned with **the abstract, mental representations of speech sounds and their relationship to one another in a linguistic system**.

Key concepts within phonology include:

1. **Phonemes:** These are the minimal distinctive units of sound that can differentiate words in a language. They are the basic building blocks of the sound system.
2. **Allophones:** These are variant pronunciations of a phoneme that do not change the meaning of a word when substituted for one another. They are the different ways a phoneme can be realized in different contexts.
3. **Phonological rules:** These are the underlying principles that govern how sounds interact with one another in a language, including rules of assimilation, dissimilation, deletion, and insertion.

By studying phonology, linguists aim to understand how sounds are organized and used in natural languages, how they are perceived and produced by speakers, and how they contribute to the overall structure and meaning of spoken language. Phonology is essential for understanding the systematic regularities and variations in the sound systems of different languages.

Relationship between phonetics and phonology

Phonetics and phonology are closely related subfields of linguistics that deal with the study of speech sounds in human language. ***While they are distinct areas of study, they are interconnected and work together to provide a comprehensive understanding of the sounds and sound patterns in language.***

1. **Phonetics:**

- **Phonetics** is the study of the physical properties of speech sounds, including their production, acoustic properties, and auditory perception. It focuses on the physiological and acoustic aspects of speech, examining how sounds are articulated and perceived by speakers and listeners.
- **It** deals with the classification and transcription of speech sounds, considering factors such as place and manner of articulation, voicing, and other acoustic properties.
- **Phonetics** provides the foundation for understanding the production and physical properties of speech sounds across different languages.

2. **Phonology:**

- **Phonology**, on the other hand, is concerned with the abstract, mental representations of speech sounds and their systematic organization within a specific language. It examines how sounds function within the language's sound system and how they interact with one another.

- **Phonology** focuses on the patterns and rules that govern the distribution and behavior of speech sounds, including the study of phonemes, allophones, and phonological processes.

- **It** deals with the analysis of sound patterns, syllable structures, stress patterns, and intonation, contributing to an understanding of the underlying principles that shape the sound system of a language.

The relationship between phonetics and phonology can be summarized as follows:

- **Phonetics** provides the empirical data on the physical properties of speech sounds, while **phonology** uses this data to analyze the abstract, cognitive representations and systematic organization of these sounds within a language. **Phonetics** acts as the foundation for the study of **phonology**, as the knowledge of how sounds are produced and perceived is crucial for understanding their role in the phonological system of a language. **Phonology**, in turn, uses the data provided by phonetics to establish and analyze the sound patterns and rules that govern the systematic organization of speech sounds within the language.

Techniques for the identification of the phonemes

Identifying phonemes in a language involves understanding the distinct sound units that can change the meaning of a word. Several techniques can be used to identify phonemes, depending on the linguistic context and the specific features of the language under study. Here are some common techniques for the identification of phonemes:

1. **Minimal pairs:** Minimal pairs are pairs of words that differ in meaning by only one sound, demonstrating that the two sounds are distinctive phonemes. Identifying minimal pairs helps in determining which sound contrasts are meaningful in a language. For example, distinguishing between "cat" and "bat" in English illustrates the contrast between the phonemes /k/ and /b/.

2. **Complementary distribution:** This refers to the phenomenon where two different sounds occur in different phonetic environments and do not contrast with each other in the same context. By examining the contexts in which different sounds appear, linguists can identify complementary distribution patterns that suggest the presence of distinct phonemes. For

example, in English, the sounds [p] and [p^h] are in complementary distribution, as [p] occurs before /l/ as in "play," while [p^h] occurs before other vowels as in "pay."

3. **Allophonic variations:** Analyzing the different allophonic variants of a phoneme, which are the various ways a phoneme is pronounced in different phonetic contexts, can help identify the underlying phoneme. Allophonic variations often reveal the phonetic rules that govern how different sounds are produced in different environments. For example, in English, the /t/ phoneme has different allophones [t], [t^h], and [ɾ] in the words "stow," "stop," and "better," respectively.

4. **Distributional analysis:** Examining the distribution of sounds in the phonetic inventory of a language can provide insights into the presence of distinct phonemes. Analyzing the occurrence of sounds in various phonetic contexts helps in identifying the patterns and rules that govern their distribution. This analysis involves looking at the positions of sounds in words and the environments in which they occur.

By employing these techniques, linguists can systematically identify and analyze the phonemes of a language, gaining a deeper understanding of its phonological system and the distinctive sound units that contribute to the formation of words and meaning.

Characteristics of allophones

- They are physical sounds
- They are concrete or variant of the same abstract sound
- They take place in phonetic form or surface structure
- They do not change the meaning of the word they take place in
- They are idiosyncratic
- Allophones can be predictable

Phonological Processes

Phonological processes are systematic and rule-governed modifications or alterations that occur in the production of speech sounds within a language. They are important for

understanding the patterns and regularities in the phonological system of a language. Here are some common phonological processes with clear examples:

1. **Assimilation:**

- Assimilation involves the modification of a sound to make it more similar to a neighboring sound. This can occur in terms of place, manner, or voicing.

2. **Dissimilation:**

- Dissimilation is the process in which two nearby sounds become less similar to each other to avoid repetition or similarity.

3. **Deletion:**

- Deletion refers to the elimination of a sound in a word, often in a specific phonetic environment.

- Example: In some dialects, the word "often" is pronounced without the /t/ sound, resulting in "ofen."

5. **Metathesis:**

- Metathesis is the rearrangement of sounds or syllables within a word.

- Example: The Old English word "brid" transformed into the modern English word "bird" due to metathesis.

Understanding these phonological processes is crucial for analyzing the regularities and variations in the pronunciation of words within a language, as well as for understanding how sound changes occur over time in linguistic evolution.

Concerning the part of phonological processes, I did not put examples as such, because from the phonological processes going, everything needs practice. Thus, you are allowed and it's your right to ask me what you do not understand from that part. Besides, I may plan a physical meeting to explain it in a more clear and concise manner, for you to get it well.