NONVERBAL ASPECTS OF COMMUNICATION

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Навчальний посібник з навчальної дисципліни «Теорія та практика мовної комунікації (англійська мова)» (англійською мовою) розроблено для здобувачів другого (магістерського) рівня вищої освіти факультету іноземних мов спеціальності 0014.021 Середня освіта (Англійська мова та зарубіжна література). Навчальний посібник пропонує огляд сучасних наукових теорій та різноманітних моделей невербальної комунікації.

Навчальний посібник призначено для самостійної та аудиторної роботи здобувачів магістратури, а також може бути корисним для аспірантів, вчителів, викладачів та всіх, хто цікавиться питаннями невербальної комунікації.

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PREFACE

Communication is an essential aspect of human interaction, enabling individuals to convey thoughts, emotions, and intentions. While verbal communication plays a crucial role in this process, nonverbal elements often carry significant meaning, sometimes even surpassing spoken words in impact. Nonverbal communication, encompassing facial expressions, gestures, posture, voice modulation, and spatial behavior, is deeply embedded in cultural, social, and psychological contexts. Understanding these nonverbal aspects is vital for effective communication in various personal, academic, and professional settings.

This manual aims at providing a comprehensive exploration of the intricate and multifaceted nature of nonverbal communication. It is designed for students, educators and professionals seeking to deepen their knowledge of how nonverbal elements influence interpersonal interactions and discourse. The manual consists of two chapters, each addressing critical aspects of nonverbal communication.

Chapter I focuses on nonverbal communication as a broad phenomenon, beginning with an overview of its general principles. It then delves into different channels of nonverbal communication, including kinesics (body movements and gestures), proxemics (use of personal space), haptics (touch), olfatics (sense of smell), and chronemics (perception of time). The chapter also examines gender differences in nonverbal communication, providing insights into how social and biological factors influence nonverbal behavior. Additionally, special attention is given to the role of nonverbal cues in the EFL classroom, highlighting their significance in language learning and teaching. Practical tasks and activities are included to reinforce theoretical knowledge and encourage experiential learning.

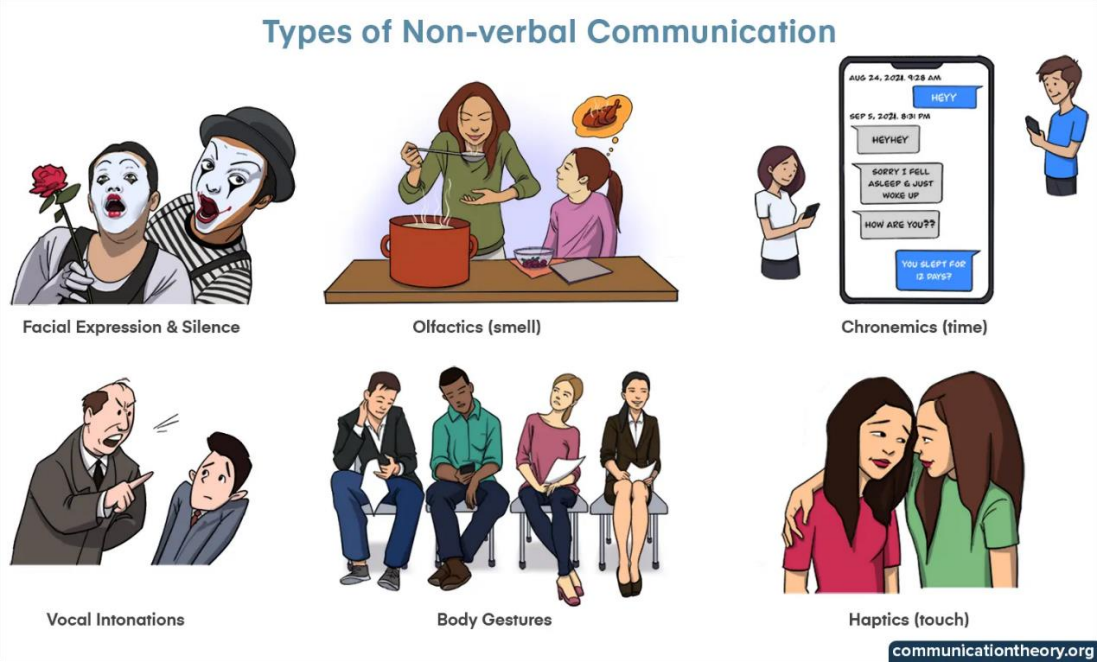
Chapter II shifts focus to voice as a nonverbal means of communication. It explores the prosodic characteristics, such as pitch, tone, rhythm, and volume, and their impact on conveying emotions and meanings. The chapter further examines voice as a source of information about speakers' personalities, covering aspects

such as gender, age, nationality, profession, and psychological traits. A dedicated section discusses how voice reflects individual's physical and emotional state. The final part of the chapter emphasizes the communicative value of teachers' and lecturers' voices, demonstrating its importance in educational settings. As in Chapter I, this chapter also includes practical tasks and activities to facilitate applied learning.

By integrating theoretical foundations with practical applications, this manual provides a balanced approach to studying nonverbal communication. It encourages readers to analyze, interpret, and employ nonverbal cues effectively in diverse communicative contexts. We hope that this manual will serve as a valuable resource for enhancing both academic inquiry and practical skills in nonverbal communication.

We extend our gratitude to scholars, educators, and practitioners whose research and insights have contributed to the development of this field. We also appreciate the efforts of students and professionals who continue to explore and refine their understanding of nonverbal communication, making interactions more meaningful and effective.

CHAPTER I. NONVERBAL COMMUNICATION



1.1. General notes on nonverbal communication

Nonverbal communication is the process by which nonverbal behaviors are used, either singly or in combination with verbal behaviors, in the exchange and interpretation of messages within a given situation or context. Linguist Deborah Tannen estimates that as much as 90 percent of all human communication is nonverbal, although other scholars argue that the percentage is much lower.

During intercultural communication, verbal and nonverbal messages are sent simultaneously. Verbal communication represents the literal content of a message, whereas the nonverbal component communicates the style or how the message is to be interpreted. Hence, the nonverbal code often complements, accents, substitutes, repeats, or even contradicts the verbal message.

The study of paralanguage is known as paralinguistics. The term "paralanguage" is sometimes used as a cover term for body language, which is not necessarily tied to speech, and paralinguistic phenomena in speech. The latter are phenomena that can be observed in speech (Saussure's *parole* but that do not belong to the arbitrary conventional code of language (Saussure's language). The paralinguistic properties of speech play an important role in human speech

communication. There are no utterances or speech signals that lack paralinguistic properties, since speech requires the presence of a voice that can be modulated. This voice must have some properties, and all the properties of a voice as such are paralinguistic.

As D. Crystal stresses the main concern of paralinguistics is certain vocal effect which are qualitatively different from phonemes or word but which play an important role in the communication of meaning. These affects are often referred to popularly as “tones of voice”, a convenient phrase which summarizes a complex functioning of the vocal apparatus in which pitch, loudness, speed of speaking and many other vocal qualities are used in distinctive combinations – but in the literature of Human communication all these features are subsumed under the heading of paralanguage. This term was chosen to reflect a view that loudness and speed of speaking were marginal to the linguistic system. It is a view that is no longer universally held but the term “paralanguage” has remained in general use. Actually there is a considerable difference of opinion as to exactly what should be called paralinguistic in the communicative behavior of a culture and how it should be analyzed.

Certainly, observations of people’s every day reactions suggest that paralinguistic phenomena are far from being marginal and frequently are the primary determinant of behavior in an interaction, sometimes pushing the so-called “cognitive” or “denotative” aspect of the utterances used into a secondary role. “It is not what he said, but the way that he said it which upset \ surprised ... me” is the most widely-quoted phrase used in support of this point; but the importance of paralanguage can be similarly shown from a variety of other comments besides: “Say it as if you mean it”, “You can keep that tone of voice for your secretary”, and so on. Thus it is clear from such examples that paralanguage cannot be given anything other than a central role (Crystal, 1974).

Nonverbal behavior is used to express emotion, convey attitudes, communicate personality traits, and to facilitate or modify verbal communication.

According to Malandro et al., (1989) the functions of nonverbal communication are:

1. Complementing: adding extra information to the verbal message.

2. Contradicting: when our nonverbal messages contradict our verbal messages.

3. Repeating: used in order to emphasize or clarify the verbal message.

4. Regulating: serves to coordinate the verbal dialogue between people.

5. Substituting: occurs when a nonverbal message is transmitted in place of a verbal message.

6. Accenting: emphasizing a particular point in a verbal message.

1.2. Channels of nonverbal communication

The closest thing the nonverbal code has to an alphabet is a gross classification system of the various channels through which nonverbal communication is sent. These channels are kinesics, paralanguage, proxemics, haptics, olfatics, physical appearance and dress, and chronemics. As we will see later, some nonverbal expressions, particularly some facial expressions of emotion, seem to be universal, but much of our nonverbal behavior is learned and is therefore culturally unique.

1.2.1. Kinesics

Kinesic behavior, or body movement, includes gestures, hand and arm movements, leg movements, facial expressions, eye gaze and blinking, and stance or posture. Although just about any part of the body can be used for communicating nonverbally, the face, hands, and arms are the primary kinesic channels through which nonverbal messages are sent. Relative to other body parts, they have a high sending capacity, especially the face.

The most widely recognized system for classifying kinesic channels was developed by Paul Ekman and Wallace Friesen. Together, they organized kinesic behavior into five broad categories: (1) *emblems*, (2) *illustrators*, (3) *affect*

displays, (4) *regulators*, and (5) *adaptors*. The meaning behind most of these kinesic behaviors varies across cultures.

There are the following components of kinesics: facial expression, body language and posture, gestures, eye contact, appearance.

Facial expression

According to Hans and Hans (2015), the facial expression is a type of kinesics that is categorized as the most expressive way of telling the messages to others in the communication process (Hans and Hans, 2015).

Facial expressions are an important way to show our personality, open or close communication, add meaning to other nonverbal actions, and express emotions.

Many people believe that facial expressions are partly natural and partly learned from society (Ekman, 1987). Ekman suggested that basic emotions like surprise, fear, anger, disgust, happiness, and sadness have specific facial expressions that people recognize all over the world. Hargie (1994) agreed saying that these expressions are natural and the same across different cultures. For example, raising one eyebrow can show concern, raising both eyebrows can show surprise, yawning can mean tiredness or boredom, and biting your lip can show anxiety. Kawamoto states that facial expressions are influenced by both cultural norms and societal expectations. He highlights that while certain expressions, like

smiling, are universal, their meaning and usage can vary significantly across cultures (Kawamoto, 2007, p. 170).

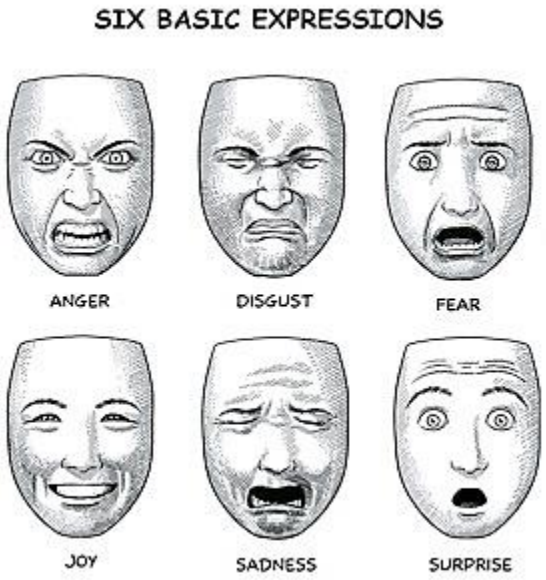


Figure 1. Basic facial expressions

Facial expressions are often referred to as the mirror of the mind (Rane, 2010) because they serve as an authentic reflection of emotions. As illustrated in Figure 1, facial expressions can convey messages that reveal a person's true feelings. For instance, if someone verbally claims to be happy while displaying a facial expression of sadness (as shown in Figure 1), it becomes evident that the spoken word "happy" does not fully align with the underlying message they wish to express. The sadness displayed on their face suggests there is more to the message than what is verbally communicated. By understanding kinesics, situations like this can be interpreted more effectively, leading to a deeper comprehension of the communication process. This ensures that communication becomes more successful and meaningful, as both the speaker and listener can perceive and interpret the same message (Sutrisna, 2020).

Taking into consideration the British and Japanese cultures, Fusako Kawamoto (2007) highlights significant differences in the use and interpretation of facial expressions. In Japanese culture, maintaining a calm and composed appearance is highly valued, often leading individuals to smile even in

uncomfortable or sad situations. This practice stems from a cultural emphasis on harmony and the desire to avoid burdening others with personal emotions. For instance, Japanese people might smile when discussing a difficult topic to prevent others from feeling uneasy or to mask negative feelings (Kawamoto, 2007).

In contrast, British culture tends to encourage a more straightforward display of emotions through facial expressions, with less emphasis on masking feelings. While politeness and reserve are valued, British individuals are generally more likely to express emotions such as sadness or discomfort openly, rather than hiding them behind a smile.

Body language and posture

Posture plays a key role in nonverbal communication, reflecting differences in status, attitude, emotions, and persuasion (Hargie, Saunders, Dickson, 1994). High-status and low-status individuals often display distinct postures when sitting or standing.

An “open posture” is characterized by a straight neck, raised head, relaxed shoulders, and a comfortable distance between the feet, signaling openness and

confidence. In contrast, a “closed posture” appears stiffer and more rigid, often indicating discomfort or defensiveness. In Japan, posture is uniquely influenced by cultural practices such as bowing, a common form of greeting. This habit often leads to a slightly forward-tilted posture, frequently observed in shop assistants who bow regularly as part of their work.

When seated, postural communication involves the positioning of hands, arms, feet, and legs, as well as body tension, tilting angles, and direction. Positive emotions are typically associated with an open posture, while negative emotions are often conveyed through a closed posture (Kawamoto, 2007).

It’s also important to note whether someone is standing freely or seeking support to lean on. Some individuals consistently need something to lean against. A sudden shift in physical posture can indicate a sudden change in internal attitude or mindset. People of higher social rank tend to occupy more space when seated and adopt a more open posture. This openness reflects their sense of confidence and reduced feelings of vulnerability (Alimjanovna, 2024).

The image below illustrates the intricate bowing ritual in Japan, where posture and depth of the bow reflect status and respect. The individual of lower status bows more deeply, while the individual of higher status maintains a shallower bow, demonstrating the cultural emphasis on hierarchy and nonverbal communication.

Figure 2. Cultural Significance of Bowing in Japan

In many Asian cultures, the act of bowing goes beyond a simple greeting, reflecting the importance placed on status and rank. In Japan, for instance, a lower posture signifies respect. Although it may seem straightforward to outsiders, the bowing ritual is quite intricate. The person of lower status initiates the bow, ensuring their bow is deeper than that of the higher-ranking individual. Meanwhile, the person of higher status determines when the bowing concludes. When both individuals hold equal rank, they bow simultaneously and end at the same time. Similarly, in Thailand, a gesture similar to bowing, called the “wai”, is commonly used to show respect. This movement involves pressing both hands together in front of the body, with the fingertips reaching about neck level. The lower the head is inclined towards the hands, the greater the respect conveyed (Kawamoto, 2007).

In contrast, squatting is not common in the United States and is often viewed as unsophisticated. When Americans need to squat, they typically place one tiptoe and the other foot’s sole on the ground. Women especially avoid squatting, particularly when wearing skirts. If squatting cannot be avoided, they might use their skirt to cover their knees to maintain elegance. This differs from some

Chinese women, who may place the skirt between their legs while squatting (Wang, 2009).

Gestures

Gestures are an integral part of our everyday lives. Whether you're waving, pointing, beckoning, or using your hands to emphasize a point during a conversation, you often express yourself through gestures without giving it much thought. However, the meaning of certain gestures can vary significantly across different cultures. For instance, while the "OK" sign made with the hand typically signals a positive message in English-speaking countries, it is seen as offensive in places like Germany, Russia, and Brazil. Therefore, it's essential to be mindful of how you use gestures to prevent misunderstandings (Riskiati, 2021).

Dane Archer's research explores the cultural variations in the use of gestures as a form of nonverbal communication. Although gestures from different societies may appear similar, their meanings can differ drastically. These differences persist despite the globalizing influence of media, highlighting the resilience and cultural uniqueness of gestures. For instance, the American "OK" gesture can mean "money" in Japan, "zero" in France, "homosexuality" in Ethiopia, and "obscenity" in Brazil. Similarly, the American thumbs-up gesture, symbolizing "good luck," is

considered vulgar in Sardinia, meaning “sit on this,” and expresses “screw you” in Iran (Archer, 1997).

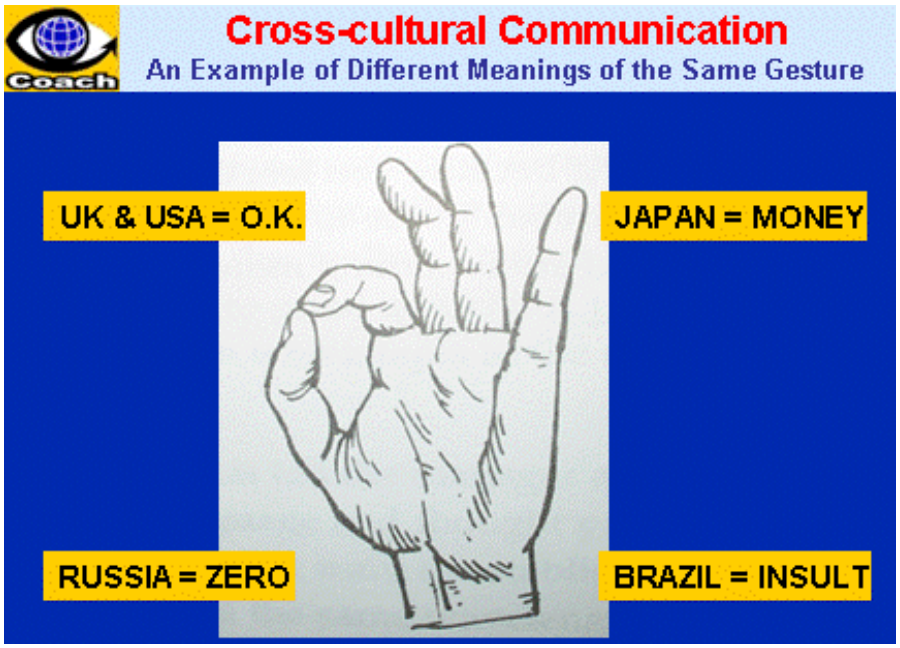


Figure 3. Cultural variations in the use of gesture “OK”

Andersen singles out three main types of gestures: adaptors, emblems, and illustrators (Andersen, 1999).

Adaptors are small, often unconscious movements that help us deal with emotions like nervousness or excitement. These can include things like tapping your pen, shaking your leg, or fidgeting. When we feel anxious or out of control, we may do these things without even realizing it. For example, a student might click a pen repeatedly during a test because of nervous energy. People may also use these gestures in public speaking, but they might not even notice they’re doing them until they see a video of themselves.

Emblems are gestures that have a clear, agreed-upon meaning in a culture. These gestures are like symbols that everyone understands. For instance, the “thumbs-up” gesture means “good job” in many cultures, and the raised middle finger is usually a rude gesture. Emblems are more intentional and are used to communicate specific messages, like how hitchhikers raise their thumb to ask for a ride.

Illustrators are the most common type of gesture and are used to support what you're saying. They help to show size, shape, or direction. For example, when talking about how tall someone is, you might stretch your hands apart to indicate height. Unlike emblems, illustrators don't have a fixed meaning on their own—they simply add to your words. These gestures happen naturally as you talk, often without thinking. Even when you're on the phone and the person can't see you, you might still gesture to help explain what you're saying.

The meanings of international gestures are rarely self-evident, which can lead to misunderstandings, misinterpretations, embarrassment, or even conflict in cross-cultural interactions. Travelers who lack fluency in the local language cannot assume a universal "language" of gestures exists, nor can they reliably interpret or use these gestures accurately. This can be problematic, particularly in cases where gestures may seem aggressive or threatening. For example, two gestures might appear hostile at first glance, but their meanings can differ widely. A man from Portugal demonstrating the "suicide" gesture and a man from Ethiopia using a similar gesture are not threatening observers, despite their actions seeming intense.

Gestures are also remarkably nuanced, with subtle variations leading to significant changes in meaning. For example, in England, the difference between a "palm-in" and "palm-out" V-sign is substantial. In Germany and many European cultures, placing a finger on the forehead signifies "stupid," whereas in America, a similar gesture near the temple means "smart." Though these differences may appear minor, they carry vastly different connotations, underscoring the complexity and potential pitfalls of nonverbal communication across cultures.

Eye contact

Eye contact is a very important part of nonverbal communication because most people rely on their sense of sight the most. The way you look at someone can convey various emotions, such as interest, affection, hostility, or attraction. Eye contact also helps keep a conversation flowing and lets you see if the other person is paying attention or how they feel about what you're saying (Riskiati, 2021).

In his research, Kawamoto (2007) discusses cultural differences in the use of eye contact between Japanese and Western people. He points out that in Japan, people tend to avoid prolonged eye contact, as it is often seen as threatening. Instead, they communicate through "brief glances" when exchanging intentional messages. This contrasts with Western cultures, where eye contact is used more deliberately, often as a form of "eye language" to emphasize agreement, encouragement, or emotional reaction during conversations.

For instance, in the West, when a speaker shares an incredible story, the listener often uses eye contact to express surprise or interest, and the speaker might then acknowledge it with a verbal response. This behavior reflects the importance of "eye language" in Western cultures, where eye contact is an essential part of communication.

There are several well-supported reasons for expecting that the bias in detecting a self-directed gaze may vary across people from different cultural backgrounds. First, while a direct gaze universally serves important social

functions, the way people attend to faces with a direct gaze differs across cultures. Eye-tracking studies show that East Asians tend to focus on the center of a face, while Westerners focus on a triangle formed by the eyes and mouth when learning and recognizing facial identity. However, when recognizing facial expressions, Japanese participants tend to focus on the eyes, while Americans focus on the mouth. These findings suggest that cultural differences in how we focus on faces with a direct gaze depend on the task at hand.

Second, cultural differences in eye contact behavior also play a role. In Western European cultures, maintaining eye contact is highly valued during social interactions, whereas in East Asian cultures, it is less emphasized. In fact, people in Japan are taught not to maintain direct eye contact because it can be considered disrespectful. Japanese children, for example, are taught to look at others' necks, which allows them to still be aware of the person's eyes without staring directly at them. Consistent with this, studies show that Japanese individuals make less eye contact than Canadians during face-to-face interactions. This suggests that Western Europeans may be more inclined to seek out and recognize direct gaze during social interactions. With greater visual experience in detecting eye contact, they might be less likely to perceive slightly averted gazes as self-directed, especially when interacting with others from their own cultural background compared to those from different backgrounds.

Third, cultural differences in interpreting others' emotions might also affect eye contact perception, even when a face doesn't clearly express any emotion. Research has shown that gaze perception can be influenced by factors unrelated to gaze direction. For instance, people are more likely to perceive an averted gaze as direct when the face expresses happiness or anger rather than a neutral expression. Additionally, individuals with high levels of social anxiety are more likely to perceive averted gazes as direct, especially when the face appears angry. These studies suggest that not only the emotional expression on the face but also the observer's subjective interpretation of that expression can influence how they perceive eye contact (Uono, 2015).

In his analysis of cultural differences in eye contact perception between Finnish and Japanese participants, Shota Uono found that Finnish participants were more likely to perceive a slightly averted gaze as directed at them when viewing Japanese faces compared to Finnish faces. On the other hand, the cultural background of the faces did not influence the Japanese participants' judgments. The study suggests that this may be because Finnish people, who engage in more eye contact in their daily lives than Japanese people, are better at distinguishing eye contact, especially with faces from their own culture.

Another possible explanation for these results lies in cultural differences in how emotions are perceived in facial expressions. Finnish participants may have been more likely to view a slightly averted gaze on Finnish faces as not directed at them because they associated such gazes with avoidance-related emotions, which they believe are more common in their own culture. For the Japanese participants, however, the cultural background of the face had no effect on their judgments. Interestingly, Japanese participants rated Finnish faces as showing more intense emotions—both approach-related anger and avoidance-related fear—than Japanese faces. These conflicting emotional cues (approach vs. avoidance) may have neutralized each other, leading to no significant difference in how the gaze was perceived (Uono, 2015).

Therefore, cultural differences in how facial emotions are interpreted might also play a role in the biases observed in eye contact perception.

Appearance

Concern about personal appearance is a universal trait. Evidence dating back to the Upper Paleolithic period, approximately 40,000 years ago, shows that our ancestors used bone to create necklaces and other body ornaments. From that time to the present, historical and archaeological findings reveal that humans have been deeply preoccupied with their physical appearance.

Appearance refers to the way a person looks and presents themselves, often reflecting the importance they place on their presence. Today, it's common for

people to judge others based on their appearance. When people meet in different situations, they communicate not just through words but through their entire personality. A positive and well-groomed appearance can leave a constructive and favorable impression on others (Sharma, 2011).

In modern society, personal appearance, clothing, and the items we carry or wear play a significant role in how others perceive and judge us. For instance, when deciding whether to start a conversation with a stranger, people are often influenced by the individual's appearance. A neatly dressed person with a pleasant facial expression is more likely to be approached. Similarly, a well-dressed and charming woman in a suit may have an advantage in securing a job. On the other hand, a wealthy individual flaunting a diamond ring or smoking a cigar might unintentionally intimidate or alienate others, causing feelings of discomfort, humility, or even irritation.

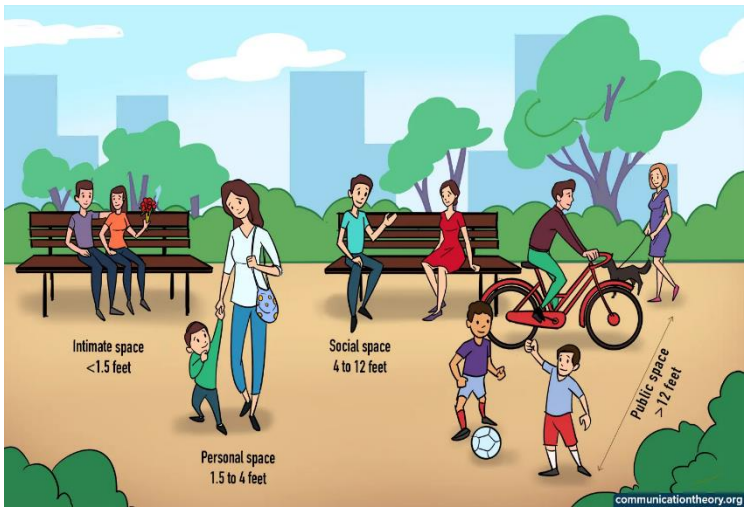
Our choices in color, clothing, hairstyles, and other aspects of our appearance are also forms of nonverbal communication. Research in color psychology shows that different colors can trigger various emotions and motives. People often quickly judge others based on their appearance, and these first impressions are crucial. Studies have found that how someone looks can influence not only how they are perceived by others but also impact their opportunities, including their potential earnings (Riskiati, 2021).

It is generally accepted that individuals should dress appropriately based on factors such as their age, profession, and social class. For example, police officers and attendants are expected to wear uniforms, merchants and government officials typically dress elegantly, artists often adopt fashionable attire, and students tend to favor casual styles. As Ruben notes, "We make inferences about another's intelligence, gender, age, approachability, financial status, class, tastes, values, and cultural background based on their attractiveness, clothing, and personal artifacts." (Ruben, 1992).

Our culture's fixation on physical attractiveness is deeply ingrained and begins early in life. Research indicates that even young children prefer attractive friends over those who are less visually appealing.

In conclusion, it is natural for people to form judgments based on another person's appearance and attire. However, inappropriate or poorly considered dress can lead to misunderstandings or even negative consequences. Thus, it is essential to develop a sense of how to present ourselves properly in terms of appearance and attire, as this greatly enhances effective communication.

1.2.2 Proxemics



Proxemics refers to the perception and use of space, including territoriality and personal space. Territoriality refers to physical geographical space; personal space refers to perceptual or psychological space – sometimes thought of as the "bubble" of space that humans carry with them in their day-to-day activities. In cultures whose population density is high, personal space and territoriality are highly valued. Privacy in densely populated locations is often accomplished psychologically rather than physiologically. In Calcutta, India, for example, there are nearly eighty thousand persons per square mile. There is literally not enough room in the city to claim any personal space. Touching and bumping into others while walking through the streets of Calcutta is quite common and to be expected.

Socioeconomic factors can also affect a culture's perception of space. Cramped and insufficient housing is common in much of Sri Lanka. In the 1980s

most housing units were quite small. Thirty-three percent of the homes had only one room, 33 percent had two rooms, and only 20 percent had three rooms. Moreover, the average number of persons per home was five. (Overcrowding in Sri Lanka is declining, however, since the government initiated intensive housing programs in the 1990s).

The Moroccan perception of space reflects the culture's valuing of community. Personal space during a conversation is typically less than an arm's length. In mosques, worshipers line up shoulder to shoulder to pray. Houses typically have very little space between them as well. Because Kenyan culture values harmony and sharing, Kenyans tend to be less aware of personal territory than people in the United States. For example, many Kenyans do not designate specific rooms in the home for specific activities, such as a living room or a dining room. In addition, the personal space distance between interactants is much closer than in the United States.

Saudi Arabians, too, are known to have closer personal space than Americans. Saudis typically enjoy getting very close, face to face, and engaging in direct eye contact.

Many other studies support the link between culture and proxemic behavior in comparing Americans with Arabs, Latin Americans, Pakistanis, Germans, Italians, Japanese, and Venezuelans. These examples suggest that culture plays a decisive role in how spatial distances are maintained during communication. Other variables besides culture can affect proxemic distances, however, such as the age and sex of the interactants, the nature of the relationship, the environment, and ethnicity. Several studies have documented that in most cultures, the need for personal space increases with age. In addition, the use of space as influenced by sex seems to vary significantly by culture.

1.2.3. Haptics

Haptics, or tactile communication, refers to the use of touch. Mark Knapp argues that touch may be the most primitive form of communication. In the United States, much research has been conducted to examine the impact of touching during the first few years of life. Haptic communication varies widely across cultures, and the amount and kind of touch varies with the age, sex, situation, and relationship of the people involved.

In his theorizing about culture and nonverbal communication, Edward Hall distinguishes between contact and noncontact cultures. Contact cultures are those that tend to encourage touching and engage in touching more frequently than either moderate-contact or noncontact cultures, in which touching occurs less frequently and is generally discouraged. Many South and Central American cultures are considered contact countries, as are many southern European countries. The United States is regarded as a moderate-contact culture, whereas many Asian countries are considered noncontact. Many Asian cultures have established norms that forbid public displays of affection and intimacy that involve touch.

In their field study of touch patterns among cross-sex couples, McDaniel and Andersen observed the touch behavior of couples in airports. They found that couples from the United States touched most, followed by (in order of most to least

touching) couples from Northern Europe, Caribbean/Latins, Southeast Asia, and Northeast Asia.

Psychologist Sidney Jourard conducted a study that counted the frequency of body contact between couples as they sat in cafés in different cities and countries. He found that the average number of touches per hour in San Junan, Puerto Rico, was 180; in Paris, 110; in Gainesville, Florida, 2; and in London, 0.

Because we are often taught not to touch others, some people develop touch avoidance. These people feel uncomfortable in situations requiring touch and generally avoid touching when possible. In her study of Americans, Japanese, Puerto Ricans, and Koreans, Beth Casteel found no touch avoidance differences in same-sex dyads for the Japanese and Americans, in that both were significantly more touch-avoidant than same-sex dyads in Puerto Rico and Korea. In opposite-sex dyads, however, Japanese and Koreans showed much higher levels of touch avoidance than Americans and Puerto Ricans.

Casteel concluded that the Japanese and Americans allow women to touch other women, but men should not touch men. Koreans and Puerto Ricans are just the reverse. In their comparison of high-contact cultures of southern Europe and low-contact cultures of northern Europe, psychologists Remland, Jones, and Brinkman found that more touch was observed among Italian and Greek dyads than among English, French, and Dutch dyads. The people of northern Italy have few inhibitions about personal space and touch. Heterosexual men are often seen kissing each other on both cheeks and walking together arm in arm, as are women. East Indians are very expressive with touch. To touch the feet of elders is a sign of respect. Indians demonstrate their trust for one another by holding hands briefly during a conversation or religious activity. When a Hindu priest blesses others at religious gatherings, he gently touches the palms of their outstretched hands.

Saudi Arabians tend to value touching also. Saudi businessmen often hold hands as a sign of trust, a form of touch behavior that some Americans often misunderstand. Saudi women, however, are never to be touched in public.

Most cultures prohibit some forms of touch. Harris and Moran observe that in Thailand, Sri Lanka, and some other cultures, the head is considered sacred and should not be touched by others. Americans sometimes make the mistake of patting children of other cultures on the top of the head as a sign of affection or endearment. In some cultures, this is seen as a serious breach of etiquette.

In many African and Middle Eastern cultures, the use of the left hand is forbidden in certain social situations. In Kenya, Indonesia, and Pakistan, for example, the left hand should not be used in eating or serving food. Harris and Moran report that in Kenya the left hand is considered weak and unimportant. Sometimes, Kenyans intentionally use the left hand when serving food to someone they disrespect. In other cultures, such as Iraq and Iran, the left hand is used for cleaning and bodily functions and should never be used to give or receive gifts or other objects.

Like proxemics, the nature of touch is often mediated by more than culture. The relationship between the interactants, the location and duration of touch, the relative pressure of the touch, the environment in which the touch occurs (public or private), and whether the touch is intentional or accidental influence touch across cultures.

1.2.4. Olfatics

Probably the least understood, yet most fascinating, of all human sensations is olfatics – that is, our sense of smell. Our lack of understanding is certainly not because we lack a sense of smell. According to Gibbons, humans can detect as many as ten thousand different compounds by smell.

Moreover, approximately 1 percent of our genes are devoted to detecting odors. Although this may not seem like much, humans have more olfactors genes than any other type of gene identified in human and mammalian DNA. Gibbons suggests that our lack of understanding may be because we lack a vocabulary for smell and are discouraged from talking about smell.

Particularly in the United States, they have become obsessed with masking certain smells, especially those of the human body. According to Gibbons, the biggest users of fragrance in the world are U.S.-based companies like Procter & Gamble, Lever Bros., and Colgate. Some brands of soap use more than 2 million pounds of fragrance a year. In many Western cultures, body odor is regarded as unpleasant and distasteful, and we go to great efforts to mask or remove it.

David Stoddart asserts that in addition to their ability to detect odors, humans are even more adept at producing odors. According to Stoddart, evidence from anatomy, chemistry, and psychology indicates that humans are the most highly scented of all the apes. Human scent comes from two types of glands that

lie beneath the skin, the sebaceous glands and the apocrine glands. Sebaceous glands are all over the body wherever there are hair follicles. They produce an odorous oily fluid whose original purpose was to protect hair. The apocrine glands are a type of sweat gland. They are most dense in our armpits but are also found in the pubic and anal regions, the face, the scalp, and the umbilical region of the abdomen (the belly button).

According to Kohl and Francoeur, research has repeatedly shown that women perceive odors differently at various phases of their menstrual cycles. They tend to be the most sensitive to odors during ovulation. Other studies indicate that when in close proximity to each other over time, as in dormitory living, women synchronize their menstrual cycles. Scientists believe that axillary organ secretions function as odor cues to stimulate their cycles.

Classen, Howes, and Synnott maintain that more than any other group, women are stereotyped and classified by their scent. Historically, in many cultures, women were considered the fragrant sex, unless they were prostitutes or suffragettes or challenged the male-dominated social order. The role of fragrance was primarily to entice men. In general, the Western cultural axiom has been that, unless perfumed, women stink. Jonathan Swift's poem "The Lady's Dressing Room" expresses this belief:

His foul imagination links
Each Dame he sees with all her stinks:
And, if unsav'ry odours fly,
Conceives a Lady standing by.

Kohl and Francoeur suggest that although preferences for certain smells seem to vary across cultures, there appears to be a universal preference for some kinds of scents that may have biological and evolutionary roots. These preferences are probably mediated by culture to some extent, however. For example, the finest perfumes in the world contain olfactory hints of urine.

Scientists allege that these scents function as sex attractants. We know, for example, that sex-attractant pheromones are expelled from the body in urine. These

two kinds of smell may mirror those of our humanoid ancestors and unconsciously stimulate the deepest parts of the brain. In addition to functioning as a sex attractant, smell is also used politically for marking social class distinctions. Classen, Howes, and Synnott contend that smell plays a significant role in the construction of power relations in many societies.

Le Guerer comments, for example, that idiomatic expressions often employ smell-related terms to voice antagonism and repugnance toward others. People refer to persons they dislike as “stinkers.” When we are suspicious of someone, we say we “smell a rat”. When something seems wrong or amiss, we comment that “it doesn’t smell right” or “smells fishy.” Dishonest politicians may “reek of hypocrisy.”

Anthony Synnott claims that odor is often used to categorize groups of people into status, power, and moral classes. To be sure, the smells themselves are not intrinsically moral or immoral, but the qualities or thoughts attributed to the specific scents are what give them their moral significance. Synott argues that a person’s scent is not only an individual emission and a moral statement, but also a perceived social attribute that is significant especially for members of subordinate groups, who are often labeled “smelly.” Such labels often foster racial, ethnic, and religious prejudice and hatred. Subordinate and microcultural groups are often described as possessing negative olfactory characteristics. In fact, Synnott argues that perceived foul odors legitimize inequalities and are one of the criteria by which a negative identity is imposed on a particular class or race.

Many cultures establish norms for acceptable and unacceptable scents associated with the human body. When individuals or groups of people fail to fit into the realm of acceptability, their odor signals that something is “wrong” with them, either physically or mentally. Kohl and Francoeur note that the American Puritan tradition of “cleanliness is next to godliness” may explain the American obsession with deodorants, perfumes, soaps, and shampoos.

Muslims believe that cleanliness of the body and purity of the soul are related. Muslim women are told to purify themselves after menstruation.

Cleanliness is prescribed before and after meals. The Koran specifies that all five daily prayers must be preceded by washing of the hands, arms, and feet.

Social class distinctions based on smells are the cultural product of education, religion, parenting, and social pressure from peers. With the exception of those scents that appeal to everyone, people are conditioned to rind certain scents attractive and others dirty or foul. Moreover, such distinctions sustain social barriers between groups and even justify a dominant group's persecution of subordinate groups.

Adolf Hitler's hatred of Jews was based partially on olfactics; he claimed that their foul odor was representative of their "moral mildew" and reflected their outer and inner foulness, and therefore their immorality. Gibbons reports that during World Wars I and II, German and English soldiers claimed they could identify the enemy by their smell. Similar claims have been made by North Vietnamese and U.S. troops.

Although it may be the least studied of all the senses, social scientists are discovering that olfactory sensation is a potent influence on social interaction. Survey data indicate that a significant percentage of adults are conscious of and influenced by smells in their environment. In their poll of more than 350 American adults, the Olfactory Research Fund found that 64 percent of respondents indicated that smell greatly influenced the quality of their lives. Specifically, 76 percent of the respondents reported that the sense of smell was "very important" in their daily relationships with persons of the opposite sex, and 20 percent indicated that it was "somewhat important." Seventy-four percent indicated that smell was "very important," and 22 percent said that "somewhat important" in their relationships with their spouses. Although the percentages dropped somewhat, 36 percent of the respondents indicated that smell was "important" in their relationships with friends, and 40 percent agreed that smell was "very important" in their relationships with co-workers. Eighty percent of the respondents reported using environmental fragrances, such as potpourri, room sprays, and scented candles. Well over 60 percent of respondents believed that particular aromas enhance the

quality of life, relieve stress, and help retrieve memories. Of those respondents who used cologne, perfume, or aftershave, 83 percent said they did so because they liked the scent, 68 percent said it made them feel better about themselves, 56 percent said it enhanced their sense of well-being, 51 percent said they used fragrances to make themselves more romantically attractive to others, and 46 percent said they used fragrances to make a fashion statement. This emphasis on smell is often motivated by the pivotal role olfactics play in the maintenance of social relationships. Todrank, Byrnes, Wrzesniewski, and Rozin assert that most cultures assign meaning to odors that are often displaced onto the people wearing them.

This is especially evident in relationships with members of the opposite sex. Although it is widely recognized that odors play a determinant role in the mating practices of many animal species. Kohl and Francoeur argue that odors are also an important ingredient in human mating and bonding and cite empirical evidence showing that odors hasten puberty, mediate women's menstrual cycles, and even influence sexual orientation.

Extant research indicates that odors help people identify their family members, facilitate the bond between parents and children, and influence how often and with whom individuals mate.

J. W. Neuliep and E. L. Groshkopf (2001) offer a specific tool to assess your level of olfactory perception and sensitivity which is presented below.

Personal Report of Olfactory Perception and Sensitivity (PROPS)

On a scale of l to 7, indicate the degree to which each statement applies to you.

1=strongly disagree, 2 = disagree, 3 = slightly disagree, 4 = undecided, 5 = slightly agree, 6 = agree, and 7 = strongly agree.

____ 1. When interacting with a stranger of the opposite sex, I am typically conscious of the scent of his or her breath.

____2. When interacting with a stranger of the opposite sex, I am typically conscious of the scent of his or her body.

____3. When interacting with a stranger of the opposite sex. I am typically conscious of the scent of his or her cologne or perfume.

____4. When interacting with a stranger of the same sex, I am typically conscious of the scent of his or her breath.

____5. When interacting with a stranger of' the same sex, I am typically conscious of the scent of his or her body.

____6. When interacting with a stranger of the same sex, I am typically conscious of the scent of his or her cologne or perfume.

____7. When interacting with a close friend of the opposite sex, I am typically conscious of the scent of his or her breath.

____8. When interacting with a close friend of the opposite sex, I am typically conscious of the scent of his or her body.

____9. When interacting with a close friend of the opposite sex, I am typically conscious of the scent of his or her cologne or perfume.

____10. When interacting with a close friend of the same sex, I am typically conscious of the scent of his or her breath.

____11. When interacting with a close friend of the same sex, I am typically conscious of the scent of his or her body.

____12. When interacting with a close friend of the same sex, I am typically conscious of the scent of his or her cologne or perfume.

____13. When interacting with a stranger of the opposite sex, I am typically conscious of the scent of my breath.

____14. When interacting with a stranger of the opposite sex, I am typically conscious of the scent of my body.

____15. When interacting with a stranger of the opposite sex, I am typically conscious of the scent of my cologne or perfume.

____16. When interacting with a stranger of the same sex, I am typically conscious of the scent of my breath.

____17. When interacting with a stranger of the same sex, I am typically conscious of the scent of my body.

____18. When interacting with a stranger of the same sex, I am typically conscious of the scent of my cologne or perfume.

____19. When interacting with a close friend of the opposite sex, I am typically conscious of the scent of my breath.

____20. When interacting with a close friend of the opposite sex, I am typically conscious of the scent of my body.

____21. When interacting with a close friend of the opposite sex, I am typically conscious of the scent of my cologne or perfume.

____22. When interacting with a close friend of the same sex, I am typically conscious of the scent of my breath.

____23. When interacting with a close friend of the same sex, I am typically conscious of the scent of my body.

____24. When interacting with a close friend of the same sex, I am typically conscious of the scent of my cologne or perfume.

____25. When interacting with someone from a different culture or ethnicity,

I am typically conscious of the scent of his or her breath.

____26. When interacting with someone from a different culture or ethnicity, I am typically conscious of the scent of his or her cologne or perfume.

____27. When interacting with someone from a different culture or ethnicity, I am typically conscious of the scent of his or her body.

____28. When interacting with someone in a private environment, I am typically conscious of the scent of the immediate surroundings.

____29. When interacting with someone in a private environment, I am typically conscious of the scent of the furniture.

____30. When interacting with someone in a public environment, I am typically conscious of the scent of the immediate surroundings.

To calculate your PROPS score, sum your responses as follows:

1. Perception and sensitivity to others: add Items l—12 (range 12-84).

2. Perception and sensitivity to self: add Items 13—24 (range 12-84).

3. Perception and sensitivity to different cultures: add Items 25-27 (range 3-21).

4. Perception and sensitivity to environment: add Items 28-30 (range 3-21).

Higher scores indicate more sensitivity to the particular contexts. For example, scores above 50 for perception and sensitivity to others and/or self would be high, whereas scores below 30 would be considered low sensitivity. Scores above 15 for perception and sensitivity to persons from different cultures would be considered high, whereas scores below 7 would be considered low sensitivity.

To summarize the above, olfactory perception plays a significant role in human interaction, influencing social relationships, cultural norms, and even our perceptions of morality and status. While cultural factors shape scent preferences, biological and evolutionary influences are also important. A deeper understanding of olfactics can offer valuable insights into human behavior and social dynamics.

1.2.5. Chronemics

Chronemics refers to the nonverbal channel of time. Recall E. Hall's description of monochromic and polychronic time-oriented cultures. According to Hall (1990), monochronic (M-time) orientations emphasize schedules and the compartmentalization and segmentation of measurable units of time. Many M-time cultures are low context, including the United States, Germany, Scandinavia, Canada, France, and most of northern Europe.

Conversely, polychronic (P-time) orientations see time as much less tangible and stress multiple activities with little emphasis on scheduling. P-time cultures stress involvement of people and the completion of tasks as opposed to a strict adherence to schedules. Many P-time cultures are high context, including southern Europe, Latin America, and many African and Middle Eastern countries.

The primary system for organizing time, in just about every culture, is the calendar. According to L. E. Doggett, one of the world's leading authorities on calendars, cultures create and use calendars as a way of organizing units of time to satisfy the needs of the society. Doggett maintains that calendars give people a sense that they can control time. Calendars also provide a link between people and the cosmos, or the supernatural. He asserts that, in many cultures, calendars are considered nearly sacred and serve as a source of social order and cultural identity. In many ways, calendars dictate human communication patterns. When people eat, work, celebrate, worship, engage in leisure, attend school, hunt, rest, and fight wars are often prescribed by the calendar. Social contracts of just about every kind are typically determined by calendars. For example, marriages are deemed successful by the number of years they have lasted. Prison terms are defined in terms of months or years. In most cultures, an individual's age, which is measured by a calendar, is the primary criterion for social and cultural privileges and responsibilities.

E. Hall has pointed out that perceptions of time differ considerably across cultures. In the United States, for example, time is tangible (i.e., concrete, perceptible). Hall notes that to Americans, time can be bought, sold, saved, spent, wasted, lost, made up, and measured. Americans are also future-oriented, in that we take great efforts to plan and schedule what we expect (or want) to happen. Conversely, to many Arabs, a person who tries to look into the future is regarded as either irreligious or insane. To many Arabs, only God can decree what will or will not occur. Hall also notes that duration is an important component to one's perception of time. According to Hall, duration is what happens between two points. Most Americans view time in this manner and carefully schedule and

evaluate cultural events according to their duration (e.g., minutes, hours, days) as in "Oh, that movie was way too long," "This won't take but a minute." "When will you get here?" To some Native American groups, time is not thought of as measurable. Time is a sequence of events that differs for each set of circumstances.

Chronemics highlights how cultures perceive and value time differently, shaping communication and daily interactions. Understanding these differences helps improve cross-cultural understanding and effective communication.

Questions for self-control:

1. What is the basic definition of kinesics? Provide the examples of kinesic behavior across cultures.

2. Define proxemics and provide the examples of proxemic cross-cultural differences.

4. Give the definition of haptics. Dwell on the cross-cultural haptic differences.

5. Define olfactics. How smell is perceived across cultures?

6. Give the definition of chronemics. How time is perceived across cultures?

Discussion questions:

1. How do cultural differences in kinesic behavior (facial expressions, gestures, eye contact) impact cross-cultural communication and potential misunderstandings?

2. In what ways do socioeconomic factors shape personal space and territorial behavior in different cultures?

3. How does personal appearance influence your first impressions, and to what extent do these impressions turn out to be accurate?

4. To what extent should people conform to societal expectations regarding appearance, and when is it important to challenge these norms?

5. How can differences in touch norms lead to misunderstandings in cross-cultural interactions, and what strategies can be used to prevent or resolve them?

6. What are some possible psychological reasons for individuals' sensitivity to and preference for certain scents?

7. How do varying cultural perceptions of time impact business, education, and personal relationships?

1.3. Gender differences in nonverbal communication

When people are telling the truth, women are better both at decoding and encoding nonverbal behavior than males. However, men are better at detecting lies.

The social-role theory, which posits that sex differences in social behavior are due to the division of labor between the sexes in society, can be used to explain these male-female differences.

Empirical support for this interpretation was obtained by E. Hall (1989) who found that women's superiority in nonverbal encoding and decoding is correlated with the degree of oppression of women in the culture.

In their analysis of gender differences in nonverbal communication, Maria Gonzales and Danilo S. Vargas explore six key areas in which gender influences how nonverbal signals are used and interpreted.

1. Artifacts

Artifacts refer to personal objects and items used to communicate self-identity. This includes items like clothing, jewelry, and accessories. The choices individuals make in these artifacts convey personal preferences, social roles, and sometimes defiance against societal expectations. Gender plays a role in how these items are chosen, with certain items or fashion trends being more strongly associated with one gender over another. For example, men may wear watches to signify status, while women may use jewelry to express femininity or social status. Gendered expectations around these artifacts can shape an individual's self-expression and the messages they convey to others (M. Gonzales, D. Vargas, 2021).

2. Personal Space and Proxemics

Proxemics deals with the way people use space, both in terms of personal space (the bubble around us that we feel comfortable with) and the physical spaces we have access to. Gender differences are evident in both aspects:

- **Personal space**: Men tend to take up more space and encroach on others' space more frequently, which is often seen as a sign of dominance or authority. Women, on the other hand, are more likely to exhibit behaviors that respect others' personal space.
- **Access to physical space**: Gender roles can influence the kinds of spaces individuals have access to, with women often having less control over public or private spaces due to societal constraints.

3. Haptics (Touch)

Touch is a significant form of nonverbal communication, but men and women tend to use it differently.

Both men and women use touch as a means of communication in our society, but the types of touch and the messages they convey differ (Lee & Guerrero, 2001). Women tend to use touch more often to show care or support, such as by placing a hand on someone's shoulder or giving a hug. In contrast, men are more likely to use touch to guide or control the actions of others. The power imbalance between men and women, along with the greater social power men often hold, can sometimes result in inappropriate or unwanted touch, which is linked to issues like sexual harassment and domestic violence. Nevertheless, men also use touch to express affection and desire with romantic partners, to show care and closeness with children, and to demonstrate support for friends. Men are socially encouraged to show care through touch, especially with other men, so choosing to do so is often a deliberate act that challenges traditional gender norms. Additionally, men may engage in touch through activities that are culturally accepted, such as wrestling, playful fighting, or sports like football. (M. Gonzales, D. Vargas, 2021).

Research conducted by Hertenstein and Keltner (2011) identified differences in how men and women use touch to communicate emotions effectively. The study found that, among unacquainted participants, women are more likely than men to effectively communicate sympathy through touch, regardless of the gender of the person they are interacting with. On the other hand, men are more likely to use touch successfully to express anger. Additionally, this research found that happiness is typically communicated through touch only in female–female pairings (Hertenstein & Keltner, 2011).

4. Kinesics

Similar to haptics, men and women express themselves through body language in distinct ways, conveying different meanings. Reflecting cultural

norms, men typically use their body language to project strength and authority, while women use theirs to express warmth and approachability. For instance, women tend to smile more than men, with Caucasian women doing so more frequently than African-American women (Halberstadt & Saitta, 1987).

In a study by M. LaFrance and A. C. Vial (2003), the relationship between gender and smiling in different social contexts was explored. The findings revealed that women smile more than men, particularly in situations involving social interaction or tension. Women, for example, smile more when being observed, when trying to connect with others, or when feeling embarrassed. This suggests that women's smiling behavior is often tied to social expectations and the desire to appear approachable and engaged. However, the difference in smiling between men and women was smaller when both genders were engaged in the same task or held the same social role (M. LaFrance and A. C. Vial, 2003).

Another important component of kinesics that shows gender differences is posture, which can be categorized as either expansive (open) or compact (closed). Research indicates that men generally adopt more relaxed and open postures, while women tend to maintain more closed positions. For example, men are more likely to sit with their legs apart and arms away from their sides, while women often sit with their legs together and arms close to their bodies (Vrugt & Luyerink, 2000). This difference in posture is related to power and dominance. Expansive postures are often linked to higher dominance and social power (J. A. Hall, Coats, & LeBeau, 2005). In fact, adopting an expansive posture can make individuals feel more powerful and may even alter their hormone levels, enhancing the feeling of higher social rank. Studies on children also reveal that dominant individuals tend to display more open, expansive body language (Weisfeld & Beresford, 1982).

Whether influenced by social factors or biological predispositions, men generally take up more space and are more likely to intrude into others' personal space compared to women.

5. Paralanguage (Vocalics)

Consistent with the communication goal of fostering and maintaining relationships, women are more likely to use listening sounds or back-channeling cues, such as “mmm,” “ah,” and “oh,” often with head nodding. These cues typically indicate, “I am listening and following your words, please continue.” While men also make similar sounds, they do so less frequently, and when they do, it usually signals agreement rather than active listening. This difference can occasionally result in miscommunication between the sexes. Recognizing this distinction can help minimize misunderstandings. For instance, when two of your characters (Laura, Scott) talk, Scott might ask Laura, “Are you saying ‘mm hmm’ because you agree, or are you simply listening?” to clarify whether she’s using a more typically female approach to listening or just showing that she’s engaged (M. Gonzales, D. Vargas, 2021).

6. Physical Attributes

Physical attributes, particularly body size and shape, carry strong gendered implications. These traits are often the most visible and are immediately linked with societal expectations of gender. Gender differences manifest in:

- **Body size and shape**: Women are often socially pressured to conform to certain body standards (e.g., slimness or softness), which can impact how they are perceived and how they communicate nonverbally. Men, conversely, may be expected to exhibit physical strength or muscularity.
- These physical attributes are often seen as markers of gender and influence nonverbal communication in terms of how others perceive one’s strength, vulnerability, or status in a given context (M. Gonzales, D. Vargas, 2021).

To sum up, gender influences nonverbal communication in various ways, including personal space, touch, body language, vocal cues, and physical attributes. Recognizing these differences can enhance understanding and promote more effective and respectful communication across genders.

Questions for self-control:

1. What are the main areas in which gender influences how nonverbal signals are used and interpreted?

2. How does the social-role theory explain gender differences in nonverbal behavior?

3. What did E. Hall (1989) find regarding the relationship between nonverbal encoding/decoding skills and the level of women's oppression in a culture?

Discussion questions:

1. How do cultural norms and societal expectations influence gender differences in nonverbal communication?

2. What role does nonverbal communication play in reinforcing or challenging traditional gender stereotypes?

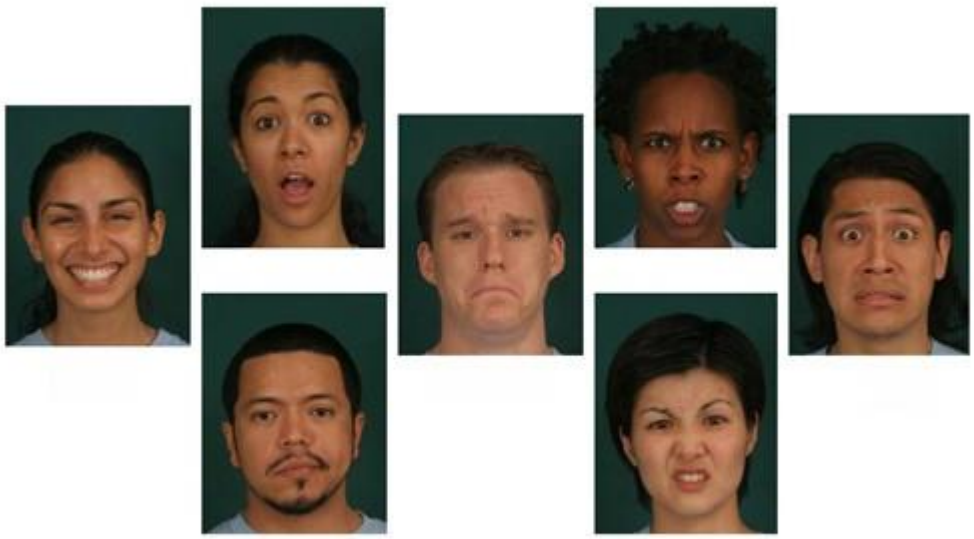
3. In what ways do men and women differ in their use of personal space and physical proximity?

4. How do men and women use touch differently in communication, and what role does physical power play in these differences?

5. What is the relationship between body language and gender, particularly regarding posture and expressions of dominance or warmth?

6. How can understanding gender differences in nonverbal communication improve interactions in professional and social settings?

1.4. Emotion and nonverbal communication



Nonverbal emotional expression comes before verbal communication in every human's development. At birth, infants are naturally equipped to express a wide range of emotions. Effective communication relies on infants being skilled emotional senders, as well as the ability of adults to interpret these displays, which can vary greatly. Infants have limited control over their emotional expressions, as they are biologically programmed to express emotions instinctively. Although socialization teaches the proper ways to display emotions, even adults often show spontaneous, automatic nonverbal cues through their voice, body, arms, and most notably, their facial expressions.

Peter Anderson (2009) explains each emotion generates distinct nonverbal displays that are easily recognizable. Emotions also lead to specific verbal communication patterns aimed at eliciting appropriate responses from others. Paul Ekman in his research singles out six fundamental emotions which are universally recognized and expressed across different cultures. Cultural display rules guide individuals in how to mask, amplify, minimize, exaggerate, substitute, or hide their emotional expressions. Recent studies suggest that emotional expressions may vary regionally, with unique "accents" in how they are conveyed. However, the six

emotions—fear, anger, sadness, disgust, happiness, and surprise—remain universally communicated in a similar way across cultures.

Fear

Fear, one of Ekman's six basic emotional expressions, is both one of the most distributing and most essential emotions. It is contagious, and its expression serves as a warning of potential danger, triggering both protective responses and, in some cases, harmful phobias. While fear is often temporary, prolonged fear can lead to severe anxiety, paranoia, and phobias, affecting both individuals and communities. The expression of fear typically includes specific nonverbal signals, such as raised eyebrows, narrowed eyes, and tightly stretched lips revealing bared teeth, signaling impending danger. Fear can also provoke automatic actions like ducking, fleeing, or cowering, along with vocalizations such as shouting, screaming, or crying. Fear appeals are commonly used by parents, educators, politicians, and health officials to influence attitudes and change behaviors effectively.

Anger

Peter Anderson (2009) identifies anger as another basic universal emotional expression – an intense feeling of displeasure resulting from injury, harm, or mistreatment by others. Anger arises from various social triggers, such as insults, verbal attacks, injuries, thoughtlessness, rudeness, goal frustration, threats to one's identity or reputation, or relational threats like infidelity or disloyalty. It is expressed quickly and spontaneously through both verbal and nonverbal cues. Although anger is unpleasant and its display can be alarming, it is an essential form of communication that signals the potential for conflict or harm. Angry expressions are often directed at the person believed to be responsible for the distress but can also be shared with friends, family, or professionals for emotional release or to seek support. Anger manifests in facial expressions such as clenched jaws, furrowed brows, and intense stares, which are universally recognized. Anger is

also communicated vocally with loud, harsh, low-pitched tones. Verbal expressions of anger may include profanity, insults, threats, or attempts to induce guilt. Physical expressions of anger can involve aggressive gestures like shaking fists, stomping feet, slamming doors, or even breaking things. In some cases, anger may lead to withdrawal or the severing of relationships.

Sadness

Sadness, depression, and grief are emotions that stem from and are expressed through communication. Interpersonal loss or troubled social interactions are the primary causes of sadness. Infants demonstrate sadness and distress in response to the emotional cues of their parents. Depression, a prolonged state of melancholia, both results from and contributes to strained relationships.

Peter Anderson (2009) states that infants naturally express sadness to signal distress to caregivers through spontaneous behaviors such as crying, a downturned mouth, and fussing. These displays can be deliberately recreated by individuals to communicate sadness. People also express sadness verbally when seeking comfort from others. When feeling sad, individuals often speak softly, slowly, and without enthusiasm, with pauses and a lack of variation in their tone. They may withdraw from social interactions, become physically immobilized, and exhibit nonverbal signs such as sad facial expressions, slouching, reduced smiling, lack of eye contact, and more closed body language.

Disgust

Disgust is a basic emotion that likely originated when humans encountered unpleasant stimuli such as rotten food, decaying animals, or bodily waste. The expression of disgust is easily recognized, even by preschool children, and is characterized by a downturned mouth, a wrinkled nose, sometimes a protruding tongue, and nearly closed eyes. Theorists suggest that the initial function of this expression was to block harmful sensory inputs and expel noxious substances. Disgust is often expressed vocally with exclamations like “yuck” or “ick,” as well

as verbal phrases such as “gross” or “disgusting.” Over time, humans have applied the disgust expression not only to unpleasant tastes or smells but also to distasteful people, relationships, and situations. Whether related to taste or social interactions, the disgust expression is an innate, cross-cultural response to unpleasant stimuli. Disgust was one of Darwin’s fundamental emotions and is also one of Ekman’s basic facial expressions.

Happiness

Peter Anderson (2009) highlights that happiness is universally expressed and recognized as a sign of positive affect. A genuine, felt smile goes beyond just an upturned mouth; it includes raised cheeks, squinting eyes, and smile lines around the eyes. This expression of happiness is typically seen during social interactions and is rarely displayed in private, highlighting the social nature of the emotion. Smiling serves as an appeasement gesture that signals friendliness and low threat. It is common among all primates and has evolved as a sign of nonviolence, helping to calm others and foster positive relationships. Happiness encourages closer interpersonal distances and promotes friendly tactile communication, such as hugs, while reducing aggressive or hostile touch. Additionally, happy individuals often speak with warm tones and a higher pitch.

Surprise

The scientist explains that surprise, unlike the other five basic emotions, does not carry positive or negative evaluative content. It is an orienting emotion triggered by rapidly changing interpersonal or environmental circumstances. The typical facial expression of surprise includes an open mouth, raised eyebrows, wide-open eyes, flared nostrils, and a head orientation toward the source of the surprise, often accompanied by startled vocalizations. The universal recognition of surprise across cultures points to its evolutionary interpersonal origins. Surprise is the shortest-lived of all emotions, typically lasting only a fraction of a second before blending into other emotional expressions like happiness, fear, or anger.

The Social Emotions

Peter Anderson (2009) adds to the emotions listed above the social emotions, so named because they both result from and are displayed during interpersonal communication. Social emotions evolved to socialize, reward, sanction, and discourage specific behaviors. Appropriate emotional displays and their accurate recognition are taught in every culture to facilitate smooth, harmonious social interaction.

The scientist singles out the following social emotions: embarrassment, guilt, shame, pride, love, and jealousy.

Embarrassment evolved as a social emotion tied to failed self-presentation, loss of face, or threats to self-esteem. It is often remedied through verbal explanations and excuses, along with nonverbal apologies such as shrugs, sheepish expressions, blushing, gaze aversion, feeble smiles, and avoiding social interaction. Similarly, guilt is a cross-cultural emotion that serves as a response to harmful behavior or interpersonal transgressions. It is communicated nonverbally through actions like hiding, isolation, and apologetic behaviors. Guilt is often communicated through avoidance, bodily shrinking, and silence.

Closely related to guilt and embarrassment is shame, a deep social emotion resulting from perceived wrongdoings or negative reactions from others. Shame brings intense feelings of inferiority and a loss of respect for failing to meet expectations. Theorists debate whether shame is a primary emotion or a mix of emotions, including sadness, anger, and helplessness. People feeling ashamed may try to disappear, hide, sulk, or cover their faces, and may express feelings of worthlessness or ask for forgiveness.

Pride, often seen as a positive emotion, can also be excessive and lead to arrogance. Nonetheless, pride is essential for self-esteem and naturally emerges when receiving compliments or recognizing accomplishments. Pride is socially driven, requiring an audience, and is expressed through nonverbal behaviors like standing taller, displaying strength, and engaging in celebratory actions such as

hugs or high fives. Verbal pride may be conveyed through sharing achievements or boasting.

Love is a powerful, universal emotion that fosters long-lasting relationships and emotional bonds between people. Love is essential for survival in social groups and is expressed both verbally (e.g., saying “I love you”) and nonverbally through actions such as prolonged eye contact, intimate touch, and protective behaviors.

Jealousy, often accompanying love, arises when a person perceives a rival as a threat to a primary relationship. Jealousy evolved as a protective emotion for friends and mates. It is linked to a range of emotions, including sadness, anger, fear, and hurt. Jealousy manifests through negative emotional displays toward both the partner and the rival, often leading to behaviors such as communication changes, avoidance, threats, or even violence. However, jealousy can also result in increased affection, flirtation, self-improvement, or even stalking and surveillance behaviors.

To summarize the above said P. Anderson concludes that emotions play an essential role in human communication, with nonverbal expressions developing before verbal ones. While cultural norms influence emotional displays, fundamental emotions such as fear, anger, sadness, disgust, happiness, and surprise are universally recognized. Social emotions like embarrassment, guilt, and love further shape interpersonal interactions.

1.5. Nonverbal communication in the EFL classroom discourse

Nonverbal communication plays a crucial role in the EFL classroom, as it can greatly influence teaching effectiveness and students' learning experiences. Teachers and learners are constantly engaged in a multimodal environment, in which gestures, eye gaze, silent pauses, laughter, body movements, positioning, distances, and other nonverbal codes replace speech or co-occur with it in a network of embodied actions. Verbal and nonverbal resources are inextricably entwined in the foreign language classroom and may produce both mirroring effects, immediately visible in the asymmetric speech exchange with a teacher, and long-term effects, in a student's mental process of language acquisition. Teacher's appearance, gestures and posture, face and eye contact, voice, touching and proximity will play a pivotal role in the student-teacher relationship and it may further affect students' motivation and understanding in learning.

Richmond (2002) states that when the teacher improves affect through effective nonverbal behavior, the students tend to listen more, learn more, and have a more positive attitude toward school. Effective classroom communication between teacher and student is a key to a positive effect on students' affective and cognitive learning (Afdaliah, 2022).

Hsu (2010) conducted research that investigated teachers' nonverbal behaviors about students' motivation for learning English. She concluded that the teachers' nonverbal behaviors are associated positively and significantly with students' motivation.

Riki Ruswandi, Muhamad Arief, and Novitasari (2024) claim that nonverbal communication, including body language, facial expressions, and eye contact, is crucial in creating a conducive learning environment. These nonverbal cues can express enthusiasm, empathy, and confidence, essential for engaging students and fostering a positive classroom atmosphere. When teachers use both positive verbal and nonverbal communication techniques, they can inspire and motivate students, encouraging them to participate actively and put more effort into their studies.

Barabar and Caganaga (2015) emphasize that nonverbal communication is a crucial element in EFL classrooms, particularly in classroom management. They argue that nonverbal behaviors such as eye contact, facial expressions, gestures, and body language help teachers maintain discipline, enhance student engagement, and support verbal communication. The study highlights that effective use of nonverbal communication can improve learning outcomes by creating a positive classroom atmosphere and aiding comprehension (Barabar, 2015).

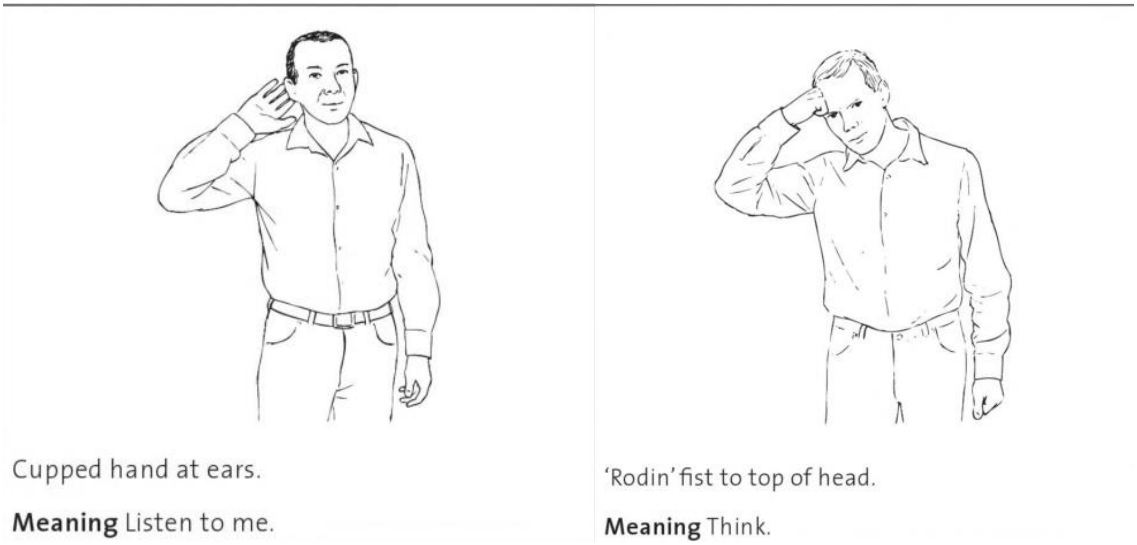
To further explore the role of nonverbal communication in EFL classrooms, it is essential to analyze its components, as each plays a significant role in shaping the teaching and learning process.

Gesture

Teachers use gestures in their teaching activities. They mostly perform hand gestures to complement or reinforce their verbal messages when explaining the material. The hand gesture makes their verbal messages better and more attractive. Besides that, they also use hand gestures to accentuate their verbal messages many times. Based on the teachers' statement, gestures are used to make students interested in the learning material and understand the lesson easier.

Scrivener (2012) in his research "Classroom Management Techniques", analyzes gestures as a crucial element in providing instructions and explanations for EFL (English as a Foreign Language) learners. He highlights how gestures help clarify meaning, reinforce spoken language, and support comprehension, especially for students with limited proficiency. Scrivener suggests that teachers should use

deliberate, consistent, and culturally appropriate gestures to improve learning. Additionally, he emphasizes that gestures can help manage the classroom by directing attention, signaling actions, and reducing the need for excessive verbal explanations. The scientist provides examples of different types of gestures that help to manage the class and guide students to follow instructions effectively. For instance, gesture *listen* (hand cupped behind the ear), *think* (‘rodin’ fist to the top of head); gestures on feedback on language errors – *say it again* (hand doing rolling gesture), *good sentence* (thumbs up), *correct the sound* (showing mouth shapes); gestures indicating time – *Past* (hand/finger pointing back over shoulder), *now* (hand/finger pointing straight down), *Future* (hand/finger pointing ahead) (Scrivener, 2012).



Cupped hand at ears.

Meaning Listen to me.

‘Rodin’ fist to top of head.

Meaning Think.

Students may use gestures both consciously (to replace words that are not accessible) and unconsciously (to reflect one’s way of thinking or to mirror the teachers’ actions). It is important to consider that each native language implies a specific way of “thinking for speaking”, which is also reflected in embodied actions. When learning a new language, especially if this is typologically distant from one’s first language, students need to learn new patterns.

In certain cases, the timing of their gestures indicates that they are speaking in L2 but they are thinking according to their native language system, or somewhere between first language and L2, as is typically observed in their interlanguage, referring to its verbal components. As a matter of fact, an L2

interlanguage is a combination of language and embodied actions, both gradually approaching the L2 multimodal communicative system using positive and negative interference phenomena, hypergeneralizations, personal hypotheses, etc. (Stam, 2008). A teacher's task is to guide the students to progressively adapt their verbal and nonverbal behavior and inner thoughts to the target language and culture.

Students' gestures play a relevant role in their learning processes. They reveal mental phenomena such as attention, memory, problem-solving, and reasoning. As a visible representation of their cognitive activity when using the L2, they may help the teacher to understand their needs and acquired skills. They can also be analyzed as a manifestation of their representation of L2 identity and nonverbal behavior, integrating nonverbal habits of the target language (or believed as such) into their interlanguage (Diadori, 2024).

Frequently, students who study the second language (L2) have gaps in their vocabulary and use iconic gestures to simulate a real object, metaphorical gestures for abstract concepts, or deictics to point out what is present in the setting where an interaction takes place. Such embodied lexical retrieval may refer to different cognitive processes when the student is searching for a word that is known but difficult to retrieve, or when the word is missing (Stam, 2012).

Posture

The characteristics of someone with "good posture" include a straight back, an elevated head, and forward-looking eyes (Lee, 2004).

Teachers can convey meaning in various ways. For instance, they can use body posture to act out verbs and help students understand their meanings. Additionally, body posture can express emotions such as anger or attentive listening, which can help teachers manage the classroom and show their level of interest in what students are saying. Moreover, when teachers use body posture in conjunction with other semiotic resources, such as hand gestures and verbal messages, they create multimodal ensembles that can better convey meaning.

These ensembles can help students understand concepts more effectively and can make the classroom environment more engaging and interactive (Chalal, 2024).

Hans and Hans (2015) suggest that teachers can influence students' attitudes and appear more approachable by maintaining a relaxed yet professional sitting or standing posture (Hans, 2015). Additionally, to affect students' emotions, capture their attention, or emphasize a concept, teachers should sit or stand with a straight back, face students directly, and distribute their weight evenly (Bunglowala & Bunglowala, 2015).

Facial expression

Facial expressions are a vital component of nonverbal communication in the EFL classroom. They help convey emotions, provide feedback, and improve students' comprehension of spoken language (Mehrabian, 1972). A teacher's facial expressions can indicate encouragement, attentiveness, or disapproval, influencing student engagement and participation (Ekman, 1993). Research suggests that expressive facial cues can clarify meaning, reinforce verbal messages, and create a supportive learning environment, which is essential for effective language acquisition (Argyle, 1988). By integrating facial expressions effectively, teachers can support better communication, reduce language barriers, and promote a more interactive and engaging classroom experience.

In the classroom nonverbal clues from instructors' and students' facial expressions are vital. The dynamic facial emotions assist the successful results of the pupils by promoting a secure and supportive learning environment in the classroom. Students may be more likely to think carefully about their answers and participate actively when a teacher asks questions with patience and attentiveness to their responses. In some cases, an unintended frown may encourage students to reconsider their answers more carefully. This approach helps maintain students' dignity, making it more effective than directly saying "NO" or "wrong." In many cultures, a teacher's positive demeanor and smile are perceived as expressions of warmth and encouragement (Mandy, 2016).

In their research, Nihla Afdaliah, Abdul Halim, and Sultan (2018) examined differences in facial expression by analyzing two teachers' interactions with a class. Teacher 1 showed various facial expressions during her teaching activity. It was found that she expressed her anger, seriousness, and disappointment when the teacher found that students were not disciplined. However, she sometimes shows her smile and sometimes laughs with her students to help them feel comfortable and engaged in learning.

On the other hand, teacher 2 rarely showed an angry expression. During the process of teaching and learning, the teacher mostly showed her smile and laughed with her students. According to the teacher, her smile plays a crucial role in creating a positive classroom atmosphere for students to study. In this case, the teacher tried to get closer and show her friendliness to the students by smiling so that the students could be relaxed and enjoy the learning process. This idea is supported by Wainwright (2010), who said that "lively and expressive facial expressions, like smiling, encourage positive reactions from others and share feelings that words can't express" (Wainwright: 156).

Eye contact

Lecturers make eye contact while speaking in the classroom and use their eyes to convey their message. When eye activity is widely studied as a subsection of kinesics, it incorporates an area of nonverbal studies called "oculesics," which is derived from the Latin word "oculus," which means "eye." We focus on our face and eyes during conversation, along with our ears and eyes, and we mainly absorb communicative information in a learning context. The eye signals, a crucial component of facial expressions, allow to read the student's thoughts and comprehend their behavior (Pease & Pease, 2004).

Since the eyes are the window to the soul, eye contact as a communication tool is quite apparent. The precision with which individuals can predict where another person's attention will be directed has been examined in studies by psychologists and researchers (Zahra, 2008). When a student is in college, a

teacher may infer what they are looking at from where they are looking. Once the teacher knows what a student is looking at, they might infer what he or she is interested in. As a result, eye movements may be much more critical. In the classroom, instructors must alternate between two different facial expressions. The first kind, glancing about, is particularly beneficial for classroom education since it can grab students' attention, encourage critical thinking, and find students who are almost completed with an assignment so they may be asked a question. The second rationale is the ability to be used as a tool for classroom management. Staring intently and attentively is the second kind of eye contact. It exudes seriousness, care, and honesty when the teacher does this. The triangular area of the student's face should be the center of the teacher's attention when criticizing a student's lousy conduct or treatment. Because these emotions would be transmitted to the instructors via their pupils' eyes throughout the teacher's presentation, teachers sometimes carefully check their students for indications of frustration, fatigue, and perplexity (Bunglowala & Bunglowala, 2015). Even if the usage of eye contact and nonverbal communication in the learning environment might be influenced by the socioeconomic status of students and instructors, this is nonetheless true.

Touch

Another important component of nonverbal communication in EFL classrooms is physical touch, which often conveys messages of friendship, encouragement, and emotional support. A simple pat on the back can symbolize a gesture of kindness or motivation. Touch plays a significant role in communication, especially in expressing emotions. For example, greetings and farewells between friends and loved ones frequently involve some form of touch. Additionally, touch can help reduce communication barriers. As one of the most basic yet sensitive ways of connecting with others, physical touch is essential for showing care and support. Sometimes, it can even be more impactful than words in building connections with students or conveying feelings. However, it is crucial to consider where the touch occurs. Appropriate physical contact, such as on the

shoulders or arms, conveys calmness, confidence, and approval. On the other hand, areas like the chest and legs should generally be avoided, especially with older girls. The back, head, and hands are intermediate areas, but the head and hands, which are frequently touched by teachers of very young children, become less acceptable from ten or eleven onwards, especially for girls. As might be expected, all groups of students disliked angry types of touch, such as being hit or having their heads twisted around. Furthermore, it is not common for college teachers to touch students. Most College students do not like the teacher's touch, except for some necessary or particular situations such as encouraging touch combined with words, which would be more effective than verbal encouragement alone sometimes. Based on the teacher's interview, it was found that the teacher's touch had a positive effect when the teacher touched the student to show her affection, support, and friendliness. This idea is supported by Bunglowala (2015) and Wainwright (2010) who suggest that touch is an efficient way of breaking down communication barriers; touch with care, handshakes, hugs, pats, arms around shoulders and guiding hands on the arm or back may suggest warmth, openness and a willingness to engage.

Vocal expression

Vocal expression can be as important as the words themselves. The full and correct use of paralanguage in class is a powerful tool for effective teaching and learning. Pitch in the voice can play a very significant role in teaching-learning process. With the rise and fall of pitch, the complete meaning of a word can be changed.

Teachers can use this technique in the understanding of the meanings of different words. Givens (2002) stated, "Tone of voice reflects psychological arousal, emotion, and mood. It may also carry social information, as in a sarcastic, superior, or submissive manner of speaking." Effective teachers are more likely to be good at varying their voices or conveying different messages in different situations for different purposes. Observations reveal that a presentation with a

loud voice, a high pitch, and a fast rate is more likely to draw students' attention than that with a relatively quiet voice, a low pitch, and a slow rate. Generally speaking, when there are key points in the teaching process or some problems that need to be emphasized, the teacher can raise his tone and slow down the speed (Bunglowala & Bunglowala, 2015).

According to Mehrabian (1972), vocal cues, such as intonation and emphasis, contribute greatly to the interpretation of meaning in communication. In the EFL classroom, clear and expressive speech helps bridge language barriers by reinforcing the meaning behind spoken words. A monotonous tone, on the other hand, may reduce student interest and comprehension. Research suggests that vocal variety improves classroom interaction and encourages active student participation (Wainwright, 2010). By adjusting their voice appropriately, teachers can create a more dynamic, engaging, and effective learning experience.

Distance

The spatial distance between a teacher and his students in class is appropriate or may not affect positively or negatively on teaching and learning activities. Some students think the teacher who walks around the room or stands closer to them is perceived as friendly and can make students more involved in class activities. On the other hand, it has also been found that teachers stand further away from poor students or put them at the far end of the classroom. The teachers who conduct their classes while standing or walking among their students are viewed more positively than those standing at the front of the classroom, and are seen as friendlier and more effective than those who stand further away from the students. If a teacher just stands behind the teacher's desk throughout the process of class, he neglects the fact that "motionless teachers can bore students" (Bunglowala & Bunglowala, 2015).

The appropriate use of spatial distance can also influence classroom management. Teachers who vary their position in the room can monitor student behavior more effectively, ensuring that all students remain attentive and engaged.

Standing near disruptive students, for instance, can serve as a subtle form of discipline without confrontation. Additionally, maintaining an appropriate balance between personal space and engagement is crucial, as standing too close may make some students uncomfortable, depending on cultural norms (Burgoon, 1978).

Appearance /Clothing

A teacher's appearance and clothing play a significant role in nonverbal communication within the EFL classroom. The way a teacher presents themselves can influence students' perceptions, engagement, and overall classroom atmosphere. Clothing, grooming, and general appearance can convey professionalism, approachability, and authority, all of which impact the teaching-learning process (Burgoon, 1989).

Peng Hong-Li analyzed the issue of physical appearance and its effect on nonverbal communication in college English classroom teaching. The findings show that, students pay great attention to the physical appearance of a professor during the first lecture. It could mean that clothing also does have a great impression and serves various roles in classroom teaching, especially during the first meeting. The results indicate that the students might construct their opinion of the professors based only on their physical appearance. In his study, Beebe (1980:18), also mentioned that those teachers rated as more attractive were also rated as more competent and were more likely to motivate their students. However, it is important to notice that more than half of the students strongly disapprove of the heavy use of cosmetics by female teachers, which means that attractiveness, when it comes to female professors, is not necessarily connected to the use of cosmetics.

The next important component related to physical appearance is clothing. The results of the studies indicate that students do not expect teachers to follow fashion trends, however, they do expect them to dress professionally, which means no short skirts or shorts for female professors, as well as no shorts for male professors in class. When it comes to informal and casual clothing, most of the

students neither support nor oppose professors dressing in such a way. Although most students believe that professors should be professionally dressed, they do not think professors should wear professional suits in class. This may be, as Peng Hong-li (2011:511) suggests, because suits seem to be too formal and serious, while other, professional yet not-so-formal clothes, do give a friendlier vibe, and students feel more relaxed. The way professors dress might influence the relationship between them and the students. Also, Duke (1974:403) mentioned that one of the functions clothes fulfil is status. By dressing too formally or too seriously, professors may give the impression that they are superior to their students, which might create a distance in the communication between the professor and the student (Duke, 1974).

According to the teachers' interview, using too many accessories will distract the students' attention in the process of teaching and learning. Moreover, they stated that the teacher is a role model for students who should provide a good example and the students are more interested in the teacher who dressed neatly in the classroom. In his study, Rasyid stated that appearing physically neat and clean will reflect the teacher's clear, modest, thoughtful, and managerial mind so that the teacher's presence in the classroom will be highly welcomed, expected, and respected by the students (Afdaliah et al., 2018).

To sum up, nonverbal communication plays a crucial role in EFL classrooms by complementing verbal communication and optimizing the learning experience. Teachers' effective use of gestures, expressions, and body language helps motivate students and improve their understanding of the language.

Questions for self-control:

1. What are the main types of nonverbal communication used in an EFL classroom?

2. According to Hsu (2010) and Annisah (2013), how does nonverbal communication contribute to students' comprehension of complex concepts?

3. What is the significance of proxemics (physical distance) in teacher-student interaction?

4. How does a teacher's appearance impact students' perceptions of their competence and authority, according to Peng Hong-li (2011)?

Discussion questions:

1. In what ways do you believe nonverbal cues, such as gestures and facial expressions, impact students' motivation and engagement in learning English?

2. Why is it important for teachers to be aware of their own nonverbal communication strategies? How can this awareness influence the learning environment?

3. How do you think students perceive their teachers' nonverbal communication? Can you think of specific examples where a teacher's nonverbal cues enhanced or hindered your learning experience?

4. What role does cultural context play in the interpretation of nonverbal cues in EFL classrooms? How can teachers mitigate potential cultural misunderstandings, based on empirical studies?

5. Reflecting on Hsu's (2010) and Annisah's (2013) findings, how significant do you think the role of nonverbal communication is in enhancing students' understanding of complex concepts?

6. How do different postures and physical distances between teachers and students influence classroom dynamics and student comfort levels?

7. In light of Peng Hong-li's (2011) findings, how does teachers' appearance relate to perceptions of competence and authority? What implications does this have for teacher education?

TASKS AND ACTIVITIES

I. Kinesics: Body Language and Facial Expressions

1. Analyze Cultural Kinesics in the belles-lettres text

Read *The Joy Luck Club* (1989) written by American author Amy Tan and find examples of kinesic behaviors (gestures, posture, facial expressions) in characters from different cultural backgrounds.

- How does kinesics reflect the characters' cultural values?
- Write a short analysis of how their nonverbal behavior reveals emotions or attitudes.

2. Watch two films with characters from contrasting cultural settings (e.g., *Crouching Tiger, Hidden Dragon* vs. *The King's Speech*).

https://www.dailymotion.com/video/x96b4sw

https://www.youtube.com/watch?v=lijpG1otMnQ

https://surl.li/pxwykk

- Describe the characters' use of kinesics (gestures, facial expressions).
- Compare how these behaviors align with cultural norms described in the theoretical part.

3. Choose a character from *To Kill a Mockingbird* by Harper Lee. Identify and write down their kinesic behaviors.

- How do their posture, gestures, or facial expressions reflect their role in the story?

II. Proxemics: Space and Personal Boundaries

4. Read *The Catcher in the Rye* by J.D. Salinger. Find examples where personal space (proxemics) plays a role in interactions.

- How does Holden Caulfield's perception of space reflect his personality and relationships?

5. Watch two adaptations of *Sense and Sensibility* by Jane Austen (1995 (https://surl.li/dmxari) and 2008 (https://surl.li/wwakhf) versions).

- Describe how characters use space to convey intimacy, authority, or discomfort.
- Compare these uses of proxemics in both adaptations.

6. Observe a public interaction (e.g., at a café or park). Note how people maintain personal space in different scenarios (e.g., friends chatting vs. strangers passing).

- Compare your findings with the proxemic norms described in the document.

III. Haptics: Touch in Communication

7. Read *A Thousand Splendid Suns* by Afghan-American author Khaled Hosseini. Identify moments where touch plays a significant role in the story.

- How does the use of touch convey relationships, emotions, or power dynamics?

8. Watch *The Pursuit of Happyness* and note instances where touch is used to convey emotion or support.

https://surl.li/jkrjiz

- Analyze how these moments align with the cultural norms of haptics from the document.

9. Create a table comparing how touch is used in three cultures discussed in the document (e.g., American, Saudi Arabian, and Japanese).

- Write a short essay on how these differences could lead to misunderstandings in cross-cultural interactions.

IV. Chronemics: Time Perception

10. Read *One Hundred Years of Solitude* by Gabriel García Márquez. Find examples where time is perceived differently by the characters. How do these perceptions reflect a polychronic view of time?

11. Watch *Slumdog Millionaire (2008)*. Identify scenes where time plays a significant role in communication or decision-making.

https://surl.li/trwkie

- Analyze how the characters' attitudes toward time reflect their cultural and personal values.

12. Role-play a meeting between a monochronic character (e.g., a German executive) and a polychronic character (e.g., an Indian entrepreneur).

- Discuss the challenges they face and how they can adapt to each other's time perception.

V. Gender and Nonverbal Communication

13. **a) Gendered Body Language in Literature**

- Read *Jane Eyre* by Charlotte Bronte. Analyze how gender influences posture and gestures in the interactions between Jane and Rochester.
- Write an essay on how nonverbal communication reflects societal norms of the time.

b) Gender Differences in Media

- Watch interviews with male and female public figures (e.g., political leaders or celebrities).

- Note differences in their use of gestures, posture, and eye contact.
- Discuss how these differences reflect societal expectations.

c) Role-Playing Gender Norms

- In pairs, role-play a professional scenario (e.g., a job interview). One participant uses traditionally masculine nonverbal cues (e.g., expansive posture), and the other uses traditionally feminine cues (e.g., closed posture).
- Reflect on how these behaviors influence the perceived authority or approachability of the participants.

VI. Olfatics: The Role of Smell

14. a) Read *Perfume* written by German author Patrick Süskind. Identify how the sense of smell influences interactions and perceptions in the story.

- Discuss how olfactics is portrayed as a powerful yet subtle form of communication.

b) Reflect on a personal memory triggered by a specific scent (e.g., perfume, food, or natural smells).

- Write about how this experience aligns with the theoretical material discussed on olfactics.

CHAPTER II. VOICE AS A NONVERBAL MEANS OF COMMUNICATION

2.1. Voice and its prosodic characteristics

Voice is closely connected with the process of speech production. It means that organization of the speech sounds provides the listener with information necessary to decode the intended message. Voice is not only a carrier of language, and, therefore, of the direct semantic information that language contains, it also conveys a lot of information over and above the literal meaning of the speech content. Perhaps, this is best illustrated by the phrase “it’s not what she said, it’s how she said it,” in which the characteristics of the speaker’s voice contribute additional meaning to the semantic content of the words.

To understand the nature of the voice phenomenon it is necessary to analyze the general foundation of voice production.

Voice production is based on the coordination of three factors: breathing, phonation and resonance. Breathing air out of the lungs produces the power supply for the voice. This air flow from the lungs makes the vocal folds (or vocal cords) in the larynx vibrate to produce the basic sound of the voice. This process is called phonation. The basic sound travels up from the larynx through the throat, mouth and nose. It is modified into the sound we recognize as the human voice. This transformation is known as resonance. Production of the voice depends on how well we balance or coordinate these three fundamental components: breathing, phonation and resonance.

When we breathe in and out without speaking, the vocal folds in the larynx are open to allow the air to pass to and from the lungs easily. The impulses sent from the brain when we intend to speak are the signal to the muscles of the larynx to close the vocal folds. When the air coming up from the lungs encounters the closed vocal folds, the pressure and flow of the air overcomes the resistance of the vocal folds and sets them into a pattern of rapid vibration. That is, the vocal folds open and close repeatedly, around 200-220 times per second for women and 100-120 times per second for men. This rapid vibration of the vocal folds produces the sound waves in the air, which are the basic tones of our voices. The vocal folds are therefore the source of the human voice (Fant, 1960).

It is clear enough that speech sounds are produced by the human voice specifically, unlike the "non-speech" sounds. An individual is able to produce not only speech sounds but also other different sounds such as cries and moans; can imitate animal sounds or sounds of some natural phenomena. The sphere of the creative activity is represented by an individual's ability to sing. Here we face the necessity to find out whether there are any differences in speaking voice production and singing voice production.

If to compare speaking voice and singing voice we can find some general features. As Finlan and Manser state "the human voice, in order to play its role in communication, must be molded into intelligible speech sounds – into words, phrases, and sentences – into a language pattern that is clearly understandable" (Manser, Finlan, 1962:123).

While this statement pertains to speaking, the same is also true for singing. Moreover, the most important similarity here is that in both cases we deal with human voice. But within this similarity there are also very essential differences between speaking voice and singing voice. The most prominent one is a singing formant existing as the opposition to the speech formant.

The two acts of speaking and singing are different acts; they have their different uses and their different occasions of use. The vocal apparatus works differently: the larynx, the tongue, the soft palate. In the process of speech

production the voice glides up and down. In a song it makes steps. The variations of pitch in speech may be compared to the effect produced by sliding the finger up and down a vibrating string; those in a song - to that produced by “stopping” such a string at certain points.

The speaking voice and the singing voice are distinguished by such a physiological component as breathing. When an individual produces the speaking voice he uses chest breathing. When an individual produces the singing voice he uses chest and abdominal, so-called “mixed” breathing.

Thus, the existing distinctions in the processes of the speaking and singing voice production prove the necessity to differentiate the notions “speaking voice” and “singing voice”.

In linguistics voice is defined as a sound formed by the vocal cords vibrations under the exhaled air pressure. As you can see the given definition reflects only the physiological side of the phenomenon, and voice is characterized only as a source of sound. If to study voice purely as a sound signal, as an acoustic phenomenon, one should take into account that for the acoustics it does not matter what kinds of sounds are transferred – barking of a dog, singing of a bird, ripple of a creek or human speech (speaking sounds of the voice). The mechanisms of speech production are researched by the physiological acoustics (see “Acoustic theory of speech production” (Fant, 1960)).

At the acoustic level, speech signals consist of rapid and erratic fluctuations in air pressure. These sound pressures are generated by the vocal apparatus. It is obvious that the source of speech sounds and non-speech sounds is the same: the air vibrations are formed at the larynx opening and perceived by the ear as the voice sounds.

Acoustic theory of speech production stresses the leading role of the voice formation system in the speech production process. On the one hand it points at the general source of the speech sounds and non-speech sounds formation; on the other hand it specifies the peculiar features of the human voice in the process of the speech production.

According to Trask voice can be defined as the “natural and distinctive tone of the speech sounds broadly as produced by a particular person, or more broadly as any phonation involving vibration of the vocal folds” (Trask, 1996: 378-379).

Abercrobmie (1967) classifies the features of the voice into two groups: voice quality features and voice dynamic features. The former refer to those physical, organic features with which we are born and are not consciously chosen and the letter refer to those features that are learnt through socialization and which we are said to be able to control. Thus, the conscious use of a particular vocal aspect for a specific purpose fulfills a communicative function, as stated by Pennock- Speck and Saz Rubio (2009), because it conveys information to the audience and influences them, for example, to buy the product like in commercials.

Acknowledging the fact that the human voice major function is connected with a speech activity, we immediately accept the necessity to distinguish the speaking voice phenomenon.

The voice is defined as a complex of the prosodic characteristics such as melody, loudness, voice quality and tempo, reflecting the speaker’s individual voice peculiarities and manifesting his or her emotional state in a definite speech situation.

Thus, the speaking voice prosodic characteristics include melody, loudness, voice quality and tempo.

Melody modulation of the English speech is one of the peculiarities of the English national voice formation type. One of the melody components is pitch. Pitch is a rate at which vocal folds pulses recur. It characterizes individual features of a definite speaker’s voice, and depends on the physiological peculiarities of their vocal apparatus.

Pitch refers to how high or low voice sounds. It is determined by the speed of vibration of the vocal folds, the thickness of the edge of the folds, and the length of the folds. The higher the voice, the faster is the rate of vibration of the vocal folds. The more elongated and thinner the edges of the vocal folds become, the higher the pitch will be. On the other hand, if the vibrating edges of the vocal folds

become thicker and shorter, and the vocal folds vibrate at a slower rate, the pitch will be lowered. We use vibration in pitch during the speech to signal meaning and emotion and this is referred to the melody modulation.

Pitch is conditioned by the rate or frequency of the vocal cords vibration as well as the amplitude of vibration. Pitch is never constant: it changes in the process of speaking. If vocal cords vibration changes from rapid to slow, pitch goes down, i.e. it falls; if the reverse takes place, pitch goes up, i.e. it rises.

Pitch-movement can also be described as tone: simple (a falling or a rising tone) or complex (falling-rising, rising-falling, falling-rising-falling, etc.). If pitch is sustained and is neither raised nor lowered during phonation the tone produced is “level”. Pitch-movement can be realized in different pitch-registers within the limits of a speaker's pitch-range.

Loudness is the amplitude of the sound wave produced that is measured by its intensity. It is defined as a perceived sound that refers it to the perceptual level.

In general, loudness refers to how loud or soft a voice is. It is dependent on the amount of air pressure from the lungs and the muscle tension in the vocal folds. The greater the air pressure and the more tense the vocal folds are, the louder the voice will sound. The lower the air pressure from the lungs is, and the slacker the vocal folds are, the softer the voice will be.

By loudness we mean the relative prominence of the voice. The acoustic correlate of loudness is intensity which is measured in decibels. But, in fact, there is no one-to-one correspondence between intensity and loudness, since the latter is also conditioned by the frequency of vibration. We perceive tones of equal intensity but different frequency of vibration as different in loudness: the higher tone will sound louder. This means that there exists a certain difference between the degree of intensity and the degree of loudness. But this is true only for the sounds that go beyond the diapason of the voice.

Like pitch-registers the degrees of loudness are regarded not in absolute but in relative terms. Five semiologically relevant degrees of loudness are singled out: normal, loud, very loud, soft, very soft. The distinctions between “"loud”" and “very

loud", "soft" and "very soft" degrees of loudness function on the metasemiotic level.

Loudness is primarily determined by the sound pressure level (SPL), measured in decibels (dB). The human ear perceives a nonlinear relationship between SPL and loudness. It means that a small increase in dB can result in a significant increase in perceived loudness. The human ear canal naturally resonates at around 3,000 Hz, amplifying sounds in this region. This resonance enhances sensitivity to speech-related frequencies, as most consonants and vowel formants fall within this range.

Speech intelligibility is largely determined by consonant sounds, which are rich in higher frequencies (2,000–6,000 Hz). Vowel sounds, which carry the bulk of speech energy, have fundamental frequencies in the 100–300 Hz range, but their formants (resonant frequencies) extend into the mid-range, enhancing clarity.

Thus, when a speaker's voice falls within this frequency range, it is perceived as louder and clearer than voices with equal physical intensity but in lower or higher frequency bands.

Tempo is a characteristic which is not directly connected with voice formation. Tempo can function as an emotional state indicator. In general, tempo is the pace of speech delivery, measured in syllables per minute or in words per minute.

Tempo is a relative speed of pronunciation. When we speak of a tempo we mean not the absolute speed (not the number of words per minute) but the functional change in the speed of pronunciation. In this connection it should be pointed out that the functional modifications of tempo do not depend on the individual peculiarities of the speaker's tempo.

As it is well known, the average tempo differs from one person to another (some people speak more slowly, others more quickly), nevertheless, whatever the individual peculiarities of every speaker's tempo may be, we can speak of basic meaningful modifications of tempo which are actually used and distinguished by everybody. These are: normal tempo, fast tempo, and slow tempo. Their opposition

is significant for intelligibility as they help: 1) to distinguish between parenthetical insertions and the main part of the utterance; 2) to mark the end of a paragraph and the beginning of the following one. Thus, for instance;

A systematic course of phonetics, is the

| *fast* |

indispensable foundation of all linguistic research.

It goes without saying, that one cannot learn a foreign language (its vocabulary, syntax, the particular division into registers, etc.), unless one

| *fast* |

begins by cultivating one's ability to observe, to analyze, and further on to synthesize the flow of speech in the language in question.

| *slow* |

From the point of view of the mechanism of their production,

| *fast* |

most speech sounds are formed by the flow of air which is expelled from the lungs and variously modified in the throat and the mouth.

On the metasemiotic level these basic oppositions are further complicated by distinguishing between five degrees: normal, slow, very slow, fast, very fast. Thus, for instance,

I well remember, though how the distant idea of the holidays, after seeming for an immense time to be a stationary speck, became to come towards us, and

to grow and grow. How, from counting months, we came to weeks, and then to days,

| *slow* | | *fast* |

and how I then began to be afraid that I should not be sent for, and when I learnt

| *very fast* |

from Steer-forth that I had been sent for and was certainly to go home, had dim forebodings, that I might break my leg first.

| *slow* |

How the breaking-up day changed its place fast, at last, from the week after next to next week, this week, the day after tomorrow, tomorrow, today, tonight –

| *fast* |

when I was inside the Yarmouth mail and going home (Ch. Dickens).

| *very slow* |

The perceptual impression of the speech rate is related to the amount of speech a speaker produces in a specific period of time. The number and length of pauses is relevant. A different impression of speech rate is obtained when a speaker talks fast for a few seconds, pauses, and then says something in a fast way again; then a speaker talks for the same amount of time at a slower pace without pausing.

The last but not the least voice prosodic characteristic is voice quality. Abercrombie defines it as "a quasi-permanent quality running through all the sound that issues from a person's mouth" (Abercrombie, 19677: 205). He suggests that the "Term "voice quality" refers to those characteristics which are present more or less all the time that a person is talking […]" (Abercrombie, 1967).

In other words, by perceiving someone's speech, we can extract some consistent characteristics of the voice with a certain voice quality.

Voice quality is defined by Trask as "the characteristic auditory coloring of an individual's voice, derived from a variety of laryngeal and supralaryngeal features and running continuously through the individual's speech. The natural and distinctive tone of speech sounds produced by a particular person yields to a particular voice" (Trask, 1996: 381).

In dealing with voice quality, a distinction is made between “organic” and “phonetic” qualities: the former arises from the speaker’s anatomical features and is not under the speaker’s volition control; the latter is the product of the way speakers habitually set their vocal tract and larynx, and, therefore, is controlled volitionally. A speaker’s volitional setting is a constellation of the acquired traits characteristic of a particular community. A voice is the product of these two kinds of quality, which convey not only the linguistic meaning of the message, but also information about the speaker’s age, sex, nationality, profession personality traits, psychological state.

Laver interprets the voice quality as a characteristic auditory coloring of an individual speaker’s voice. At the same time he stresses that both laryngeal and supralaryngeal features will be seen as contributing to voice quality (Laver, 1980).

Laver and Trudgill (1979) refine the concept of changeability when they make a distinction between two types of a long-term speaker’s characterizing voice features: anatomically induced voice characteristics and vocal settings. The first cannot be changed, the second are influenced by the speaker.

Anatomically induced voice characteristics arise from anatomical differences between the speakers. These differences can explain voice quality differences between the individual speakers or a group of the speakers.

Extralinguistic vocal settings can be defined as a way in which an individual habitually speaks. More specifically, settings are constituted by a tendency for the vocal apparatus to maintain a given configuration. For instance, a speaker may habitually use a nasal voice quality. The nasal characteristic then is shared by the segments throughout her / his speech. The difference between a linguistic use of nasality and a nasal voice quality setting is that in the latter case nasality stretches on the nasal and non-nasal sounds.

A speaker may choose to pronounce her / his speech with a slight whispery voice quality, perhaps she / he thinks that such sounds are attractive. Settings may also be a part of some particular personal or social accent. In addition, settings can indicate the membership of a specific social group, e.g. women are said to use a

breathy voice quality more often than men, without any physiological need to do so.

There are some voice qualities generally distinguished by the linguists (Laver, 1980; Keller, 2005):

- Breathy voice quality is characterized by the low muscle tension. It can be described as “a bedroom voice”, a husky, relaxed, sexy way of speaking. Vocal fold vibrations are inefficient and the term “breathy voice” is used where whispery would be more appropriate. Breathy voice requires a very lax laryngeal muscle system. It cannot be combined with creaky or harsh voice qualities for which more tension is needed. That is why Laver stresses that any compound type of voice qualities should be described by using the term “whispery” and not “breathy”, for example, “a harsh, breathy voice”.
- Whispery voice quality as well as breathy voice quality shares the characteristic of audible friction: when listening to a breathy voice, the air escapes audibly through the vocal folds. Like a breathy voice it is characterized by the low tension in the glottis. The difference between these two types of voice qualities is that it is moderate to high medial compression and moderate longitudinal tension. This tension pattern creates a triangular glottal opening which size varies with the degree of the medial compression. Whispery voice is described as “a library voice”, a voiced way of whispering. When one speaks in a whispery voice, the muscle tension is high. The portion of the vocal cords is tightly closed. The size of the opening corresponds with the amount of audible friction; the opening is smaller in a perceptually more silent whispery voice. On the whole, a breathy voice and a whispery voice can be presented in the opposition “a lax voice” ↔ “a tense voice”.
- Creaky voice quality is characterized by a very low pitch. The listener can actually hear the separate vocal fold vibrations: short boosts, abrupt, and periodical. It gives the perceptual impression of running a stick along a fence, or slowly opening a door with creaky hinges. Creaky voice results from high tension and medial compression, but little longitudinal tension. It is produced with thick, compact vocal cords. The folds above the vocal cords come into contact with the

vocal cords, which has a dampening effect on the vibrations. Klatt and Klatt found out that the acoustic measures for a creaky voice are as follows: a narrow glottal pulse, a low fundamental frequency and double periodicity caused by diplophonic irregularities in the fundamental period.

- Harsh voice is also called rough. Harshness is perceived as a rough, rasping sound. The phonation starts with a hard glottal attack instead of a much softer aspirated beginning. Harsh voice is characterized by the irregularity of the glottal wave-form and by spectral noise. The irregularities consist of aperiodicity in the frequency and amplitude of the acoustic signal. Aperiodicity is defined as a short-term fluctuation in the period duration. Aperiodicity of the fundamental frequency is called frequency jitter. Aperiodicity in frequency and amplitude s is not heard as loudness, because the fluctuation are too small. But the fluctuations are heard as the components of the voice quality. A harsh voice is also related to an increase in the spectral noise level.

- Nasal voice quality is achieved by opening the barrier between the oral and nasal cavities, in other words, by lowering the velum. In the process of speech production the velum is usually lowered more or less, without immediately giving the impression of nasal voice quality. The important factor here is the ratio of the opening from the oral cavity to the nasal cavity. If the first (oral to nasal) is larger than the second (pharynx to oral), the voice sounds nasal. An airflow through the nose does not have to be present for a nasal resonance.

- Tense voice quality is characterized by the degree of the muscular tension throughout the vocal apparatus. A tense voice quality can be demonstrated in the communicative situation when a speaker utters something while lifting a heavy object. There are two main setting: laryngeal tension and supralaryngeal tension that manifest themselves in lax versus tense phonation or articulation. Laver (1980) describes a tense voice as loud, high-pitched, harsh, with subglottal pressure, slightly raised larynx, tensed velum, extensive movements of the tongue, and highly mobile jaw. Laryngeal tension is the amount of tension in the vocal cords. Supralaryngeal tension is the amount of tension in the muscles in the

pharynx and oral cavity. The supralaryngeal tension can also influence the tongue movements. It is clearly heard in the process of vowel production when tense and lax voices are accompanied by the large and small vowel space respectively.

Thus, the voice quality can be defined as a long-term, extralinguistically used suprasegmental voice characteristic. On the one hand, it is constrained by anatomical differences between the speakers. On the other hand, a voice quality is modulated within these physical boundaries on the grounds of sociolectal, preferences of the socio-cultural community or idiosyncratic settings, i.e. personal preferences.

To summarize the above said we may conclude that voice prosodic characteristics are melody, loudness, voice quality and tempo. The main functions of the human voice are to render the individual vocal peculiarities such as the speakers' gender, age, profession, nationality as well as their emotional state in the definite communicative situation.

Questions for self-control:

1. Give the definition of "voice" generally accepted in linguistics. Compare it with the definition of "speaking voice": in what way do they differ?
2. Dwell on melody as a voice prosodic characteristic.
3. What is loudness? What degrees of loudness do you know?
4. Speak about "organic" and "phonetic" voice qualities.
5. What voice qualities are generally distinguished by the linguists?

Discussion questions:

1. Comment on the following statements made by different linguists about the main functions of the human voice:

"The human voice, in order to play its role in communication, must be molded into intelligible speech sounds – into words, units, phrases, and sentences – into a language pattern that is clearly understandable" (R. Finlan, R. Manser).

“The information we gather from voices is then vital in everyday conversation to decide on the spur of the moment “Whom to like, whom to trust and with whom to do business” (P.H. Bezona).

“The human voice, when the man is not making conscious use of it by way of impersonation, does in spite of himself reflect his mood, temper and personality. It expresses the character of the man” (G.W. Allport, H. Cantril).

“Human voice can convey a considerable amount of information to the listener and can be used to assess a number of qualities about a person. For instance, listeners can determine a variety of physical attributes of speakers such as gender, race, height, weight and other body dimensions by simply hearing their voice” (S.M. Hudges, B.C. Rhoden).

2. Agree or disagree with the following: “More than just the words you say, how you say them matters even more. Communication is about more than words — it includes your voice and body language.” (Jacob Morgan, a trained futurist, one of the world’s leading authorities on leadership and employee experience).

3. Which of the prosodic characteristics is the most significant in speaker’s voice perception? Why?

2.2. Voice as a source of information about the speaker

Vocal stereotyping plays an important role in our daily lives. Upon hearing a voice on the telephone, we can attribute certain gender, age, personality, and physical characteristics to a speaker we have never met. These judgments are surprisingly consistent among speakers of the same language. This fact allows to state that voice functions as a source of information about the speaker’s personality.

It should be mentioned that common voice characteristics of a particular language community originate from the typical anatomical configuration of the speakers’ vocal tract and/or their habitual pronunciation characteristics. These so-

called “markers of identity” can be clearly illustrated by the telephone conversations mentioned above. They often open with a statement like “Hello, it’s me”. Through this utterance, we suggest that we belong to the circle of people familiar to the listener and surely we believe that the listener will be able to identify us on the basis of our voices. It is clear enough that we are able to do this because our voices differ acoustically.

“Markers of identity”, i.e. voice prosodic characteristics, allow us not only to identify the speaker but also to assess the speaker’s characteristics whom we are not familiar with. There is substantial evidence, which suggests that listeners can derive information about the speaker’s age, physique, weight, height, sex, social background, professional activity, and personality traits on the basis of his / her voice prosodic characteristics. Scientists found out that the listeners’ assessments of the speaker’s physical characteristics from the two-sentence voice samples were only marginally less accurate than those made from the full-length samples. It proves the claim about direct associations between vocal cues and the person’s physical and psychological attributes.

The following sections are dedicated to voice prosodic characteristics as sources of information about speakers’ gender, age, profession, nationality, and personality traits.

2.2.1. Gender voices

The divergence of male and female voices is conditioned by physiological peculiarities. Hormone differences of the sexes influence the pitch characteristics of female and male voices. Different types of breathing and its frequency result in peculiarities of pausal segmentation of utterances in male and female speech. Differences in the length and thickness of the vocal cords, in the size and shape of the glottis, and the volume of the oral cavity tell of different values of fundamental frequency, formant and energy structure of the sound signals, bringing forth peculiarities of the voice quality.

The main role in conveying information about the speaker's gender is played by formant frequencies, which are determined not only by the peculiarities of the vocal tract but also by the impressions about the male and female pronunciation stereotypes existing in a given language community. Representatives of the language community negatively evaluate any violations of these stereotypes.

In fact, physiological attributes do not explicate all the innervariant and intravariant differences between female and male voices. Phonetic differences are also conditioned by extralinguistic factors, such as speakers' status, their social roles, formality/informality of the speech situation, which can increase or decrease the scope of divergences between female and male speech.

One of the prominent voice prosodic characteristics is pitch range as judgments about the speaker's sex based on this parameter seem usually accurate enough. This fact is easily explained by the results of the experiments. A group of American scientists, H. Hollien, D. Dew and P. Philips (1971) measured the average minimum and maximum pitch for 332 adult men and 202 adult women. The range for men was 78-698 Hz, while the female range amounted to 139-1108 Hz. The female range is considerably wider than for men. The difference is attributed to the intrinsic length of the vocal folds. Intrinsically shorter vocal folds in women give rise to higher pitch levels than longer vocal folds in men: the average vocal fold length in adult women is typically 17 mm and 23 mm for men.

The male-female differences in the shape of the glottis have been noted by I. Titze (1984). He studied the differences in proportionate facial bone growth and found out that women display greater upper-jaw growth while men display lesser lower-jaw growth. It results in greater facial convexity in women. Thus, both differences in the size and shape of the vocal tract may result in characteristically lower and more closely spaced formant frequencies for male speakers.

An individual's vocal apparatus is strongly influenced by hormones. Referring to Brad H. Miles (2012), it should be noted that testosterone appears to be causally linked to the masculinizing of the vocal folds and vocal tract during puberty, and with the maintenance of the masculine vocal properties during

adulthood. Testosterone is an immunosuppressant and can be produced in high levels only by individuals who are healthy and well-buffered, that is why masculine traits appear to be a reliable cue of health and fitness. Testosterone-dependent masculine vocal characteristics may be true signals of disease resistance and long-term physical health.

In contrast to the masculinizing effects of testosterone, estrogen and progesterone appear to play a role in shaping feminine-sounding voices. The cytological profile of the larynx is similar to that of the genitals, and across the menstrual cycle, histological changes that occur in the endometrium are mirrored by those that occur in the larynx. Vocal parameters have been found to change under hormonal variation associated with the menstrual cycle, with some forms of hormonal contraception, and with the onset of both puberty and menopause. Moreover, F0 in women is negatively associated with long-term health risk factors, and positively associated with levels of estrogen, which, in their turn, are positively associated with fertility.

Another factor that may play an important role in a speaker's sex identification is suggested in Laver and Trudgill (1991), i.e. the difference in average frequency of the formants. Laver and Trudgill refer to Fant to suggest that formants of female speech are 17 % higher than in men as a result of their generally shorter vocal tract.

D. Crystal (1974) remarks that intuitive impressions of the effeminacy in English partly correlate with such a segmental effect as lisping. However, mainly such characteristics are non-segmental. For instance, the "simpering" voice largely reduces to the use of a wider pitch range than normal for men with glissando effects between stressed syllables, a more frequent use of complex tones (e.g., the fall-rise and the rise-fall), the use of breathiness and huskiness in the voice, and switching to a higher (falsetto) register from time to time.

Vocal characteristics are relatively permanent and, to a large extent, determined by the anatomy and physiology of the speaker's vocal organs. Nevertheless, they can also undergo a biological sex transformation. Although it is

technically possible to transform women into men and vice versa by means of operations and hormonal treatment, the vocal clues as to the original sex of the transformee remain present to a greater or lesser extent. Even after the intensive speech therapy often the original sex characteristics still present in the transformee's speech, and they are the only clues to the listeners that make them wonder about the appearance of the speaker as a man or a woman.

Collins (2000) investigated male vocal attractiveness evaluated by the female participants in a Dutch context. The study included body measurements of the stimulus persons and acoustic measurements of the stimulus voices. Collins found strong evidence that vocal stereotypes are associated with definite body type and age. While their impressions were not necessarily accurate, the listeners strongly agreed on assessments of the speakers' weight, age, and attractiveness. Low-pitched voices were estimated by the female listeners as pleasant, belonging to older, heavier, more likely to have chest hair, and more muscular.

Berry (1992) proved that such vocal attributes as "bright", "sweet", "generous" and "articulate" were statistically significant in distinguishing attractive and unattractive voices for males, while "bright" and "affectionate" were significant for females. The three acoustic measurements were statistically not significant in males at all, meanwhile the two co-related measures were significant in females: attractive voices were lower in pitch with smaller fluctuations. These results manifest that the components of vocal attractiveness essentially differ in men and women.

The experimental research by Kramer (1977) defines female and male vocal typical features. Thus, male speech distinguishing features are insistence, dominating and demanding voice, and aggressiveness. Female speech is characterized by attention to an interlocutor, friendliness, softness, delicacy, and interest. These distinguishing features comprise information about definite prosodic parameters. For example, it is increased loudness for men. For women, it is high pitch, wide range of tempo and melody modulations.

Bolinger (1986) considers that the pitch range is associated with a big or a small size. Thus, low male voices are associated with something big meanwhile high female voices and "babyish voices" – with something small. Besides the scientist states that men usually try to act as potential aggressors, using low levels of the pitch range. Women unlikely attempt to sound effeminate and employ high levels of the pitch range. Fay and Middleton (1940) found correlations between deep and loud voices and large male bodies. So, up to some point, the voice seems to indicate the approximate size of the speaker.

The pitch is one of the most obvious indicator of the sexual age: adult men speak in general within a frequency of between 50 and 200 Hz, adult women - between 150 Hz. The research by Daly and Warren (2001) claims that it is a combination of pitch range and pitch dynamism that distinguishes female from male voices, with women using a greater pitch range and more dynamic speech.

As for the stereotypical sexy voices, scientists have concluded that deep and raspy voices are considered to be attractive both for men and women. Though these voice qualities are common for men and women, the tokens for "deep" are slightly more frequent for sexy male voices than for sexy female voices, which matches the social unacceptability of high-pitched voices, especially for men in Western Europe and the USA. It is sustained by the fact that women systematically find "men's voices with harmonics that are closer together and lower in frequency more attractive" (Collins, 2000:777).

Grammer gives biological background for the fact that women are more attracted by deep male voices: "The biological background for such an attractiveness rating might lie in the fact that usually the size of the voice-producing apparatus correlates with body size, which is sexually dimorphic and thus again prototypical for males" (Grammer, 2003: 398).

It is interesting to note that not only gender but also sex orientation, such as gayness, seems to have vocal correlates. For instance, gayness is quite frequently associated with falsetto and creaky voices.

Besides common male and female vocal stereotypes, there are regular cross-national gender associations with high-pitched and low-pitched voices. For example, Dutch and Japanese women with high-pitched voices are perceived as shorter, weaker, more modest, and more dependent than women with low-pitched voices (Van Bezoojen, 2002). The Germans, the Brits, and the Spanish consider high and squeaky voices unpleasant. According to the results of the experiment the label "high" was used slightly more frequently for unpleasant male voices, meanwhile label "squeaky" was more frequently associated with unpleasant female voices (Begona, 2009).

Another prosodic parameter that differentiates the speaker's gender is voice quality. Voice quality is also influenced by the social context. It marks not only the biological female / male difference but also socio-cultural differences in femininity and masculinity (Collins, 2000; Begona, 2009; Miles, 2012).

There are quite definite voice qualities typical of male and female voices. Breathy voice quality is typically female. The American scientists carried out two experiments. In experiment 1 the 14 samples were presented at random to the judges as if they were from different speakers. Judges rated femininity on a five-point rating scale with 1 (little feminine) and 5 (very feminine). In experiment 2, the normal and breathy samples of each of the seven speakers were presented pair wise and judges were required to indicate which of the two sounded most feminine in their opinion. By all seven participants, the breathy voice samples were judged to be more feminine than the natural voice samples. This was the case when the breathy and natural samples were presented randomly in experiment 1 and when the samples of each speaker were presented pairwise in experiment 2. The results demonstrate that breathiness indeed contributes to the perception of femininity.

Various studies show that male voices are creaky and tense. Male speakers with creaky voices are perceived as more friendly, sympathetic, likable, and trustworthy than female speakers with creaky voices (Pittam, 1987). Overall creaky voice quality is considered a positive characteristic of male voices as well as harsh voice quality. Male speakers with harsh voices were described as mature,

well-adjusted, realistic, and artistic. Quite the opposite characteristics were ascribed to the female speakers with harsh voices. They were perceived as stupid, naïve, lazy, rude, boorish, unemotional, inartistic, careless, apathetic, boring, and ugly. Thus, harsh female voices evoke negative associations.

Male speakers with tense voices are estimated differently. On the one hand, this voice quality is associated with a higher social status than female speakers with the same voice quality. On the other hand, male speakers with tense voices are described as rude, cruel, and neurotic. Positive and negative traits are ascribed to the female speakers: feminine, energetic, sensitive; immature and stupid. Thus, in the English-speaking community associations between tense voice quality and particular personality traits are inconclusive. In other words, there is no definite positive or negative gender stereotype concerning tense voice quality.

Nasal voice quality is a typical prosodic characteristic of the English male adult and teenage speakers who want to sound tough. Nasality can obtain positive and negative connotations depending on whether it enhances a person's status, for instance among teenagers, or it makes a person sound childish and immature.

However, some studies claim that nasal voice quality can evoke negative associations both in male and female speakers. The results of the experiments demonstrate that male speakers with nasal voices were perceived as stupid, lazy, uninteresting, and ugly. Women with such a voice quality were described as stupid, boorish, and inartistic. Thus, nasal voice quality is considered to be a negative characteristic either for male or female voices.

In general, voice prosodic characteristics can mould the speaker's image, emphasize their femininity or masculinity. For instance, women who speak in a high, smooth, soft, husky, and slow voice project another gender image than women with low, rough, fast, and loud voices (Graddol, Swann, 1989:38). This kind of perception influences their social roles: if a woman wants to sound more authoritative and dominant she is supposed to change her voice. Margaret Thatcher is known to have had a speech therapy to lower her voice in order to sound more authoritative and less feminine.

Voice characteristics comprising gender markers are especially meaningful in the dialogues when people are not in one visual space, for instance, when people are in different rooms of the same premises and do not see each other.

If we search for the examples of the voice gender markers in the belles-lettres texts, we shall find out that such voice characteristics are usually verbalized with the help of direct nomination, nomination of the stereotype prosodic characteristics or direct nomination plus nomination of the stereotype prosodic characteristics.

In cases when the direct nomination is employed, such as *"a woman's voice called", "a different male voice", "a feminine voice sais", "a female voice asked"*, the author implies that readers associate this or that gender marker with a definite vocal stereotype.

If we analyze the characteristics describing male and female voices with the help of nominating some stereotype prosodic parameter we can state that more frequently the authors resort to nominating voice qualities and loudness.

The male vocal stereotype is verbalized by the lexical units rendering typical male vocal characteristics such as low pitch, sharpness, increased loudness, deep and husky voice qualities; female vocal characteristics are conveyed by the lexical units nominating high pitch, melodiousness, softness, breathy voice quality, etc.

The following examples vividly illustrate the above-said:

"The deep voice said with a chuckle" (A. Hailey).

"The gruff voice paused"; "A strong bluff voice answered" (A. Hailey).

"Again the thin voice on the phone" (A. Hailey).

As you can see if the voice of a person speaking on the phone is described as *"deep", "gruff", "strong"* it is implied that the listener understands that he speaks with a man. If a person's voice is marked as *"thin"*, the listener perceives it as a female voice.

It is necessary to mention that to nominate male and female voices the authors often use singing voices: *"She queried in her low contralto voice"; "The*

Immigration Minister began in his bass booming voice"; "Ed Middleton boomed in his resonant baritone" (A. Hailey).

It is interesting to note that sometimes the speaker's gender and his or her voice characteristics may contradict each other. In such cases, the author deliberately creates a contrast between the speaker's gender and their voice.

"An immensely fan blond man – so blond he was nearly albino – who had been sitting at Miriam's table came over and said to me in a thin, tremulous, effeminate voice: "So you're the party who put it to little Art Nunhei" (D. Hammet).

This description of the voice (*thin, tremulous, effeminate*) demonstrates the so-called "deceived expectation" effect – the fat man with a thin tremulous voice looks ridiculous and absurd in the speakers' eyes as a high pitch verbalized by the adjective "thin" is natural for women that is stressed by the epithet "effeminate". It actually means that the man who speaks in such a voice looks effeminate. The tremulous voice quality definitely adds to the effect.

"Mrs. Wimbush laughed. Her voice, her laughter, were deep and masculine. Everything about her was manly. She had a large, square, middle-aged face, with a massive projecting nose and little greenish eyes, the whole surmounted by a lofty and elaborate coiffure of a curiously improbable shade of orange…" (A. Huxely), *"said Mrs. Winbush in her deep, distinct voice"* (ibid).

In the given example the female character, Mrs. Wimbush, is introduced through her voice description. *"Low, deep, masculine voice"* is the first information the reader receives about her. Thus, Mrs. Wimbush is perceived as a masculine woman with rugged face features. Further portrait description enhances the first impression: a large square face, a massive projecting nose, little greenish eyes – all these characteristics in total with her masculine voice create the image of the manly woman (*"Everything about her was manly"*).

To sum this paragraph up we presume to refer to Laver (1991) who claims that out of the three types of information that vocal features can carry about our identity, it is the physical information that is the most easily recognized and

correctly guessed through the voice, and the physical information is first of all the speaker's gender and age.

Questions for self-control:

1. Dwell upon the peculiarities of the female and the male pitch ranges.
2. How does voice quality differentiate male and female voices?
3. Speak about gender vocal stereotypes existing in the English language community.

Discussion questions:

1. Which prosodic parameter plays the main role in conveying information about the speaker's gender? Explain why.
2. Compare the English gender vocal stereotypes with the gender vocal stereotypes existing in other cultures.
3. In what ways do societal expectations shape how men and women are expected to speak (e.g., pitch, voice quality, loudness)? Do these expectations differ across cultures?
4. What prosodic characteristics do you associate with "male" and "female" voices? How would you describe "a pleasant male voice" / "a pleasant female voice"?
5. Does vocal stereotyping play any role in gender discrimination? If yes, how can we work towards more inclusive communication norms?
6. How do vocal stereotypes associated with gender influence perceptions of authority, confidence, and credibility in social settings?

2.2.2. Voice and age

The age peculiarities of the voice have always been of special interest for the linguists. Generally, all age-related voice changes are connected with physiological factors. The respiratory system changes from the adulthood to the old age: maximum expiratory flow rate decreases and lung pressure does the same. That is why elderly speakers experience a decline in the amount of air they can move in

and out of the lungs and the efficiency with which they move air. The instability of the vocal fold vibration increases and may raise the fundamental frequency of the elderly men's voices.

There are various studies (Bladon and Henton, 1985; Pittam, 1987; Klatt and Klatt, 1990) proving that general age peculiarities for men and women are such vocal characteristics as breathiness in the middle age; hollow voice quality and low loudness in the old age.

For elderly people common prosodic characteristics are a tremulous voice quality and a high pitch. Lenville (2004) explains that tremor and increased hoarseness may result from the fundamental frequency and amplitude instability. Fundamental frequency declines from the young adulthood to the old age in both men and women. The levels of fundamental frequency standard deviation are more than double between the young adulthood and old age for men. For women the levels jump 71 % over a similar period. The measures of jitter in the cycle-to-cycle fluctuations in the fundamental period of the vocal fold vibration overlap extensively in young and elderly speakers, especially women.

As for the teenage girls it should be noted that as a rule their voices become lower at the age of 13-14. Teenage boys' voices undergo mutation at the age of 14-18 and obtain so called "cracked" voice quality. Elderly men's voices become a little bit higher at the age of 65-80.

It is generally known that pitch is the most obvious indicator not only for gender but also for age. Adult males speak, in general, within a frequency of between 50 and 200 Hz, adult females – between 150 and 300 Hz, and children – up to 400 Hz.

Mulac and Giles (1996) studied the vocal stereotype of the "old" voices and found out that "old" voices were characterized as unclear, strained, coarse with vowel elongation. They also investigated social perception of the older speakers by the young listeners. The young listeners predicted the speakers' age due to the above-mentioned prosodic characteristics. Moreover, perceived age was correlated with negative traits such as frail, ill-natured, subdued, incompetent, and dependent.

German scientist, W. Helfrich, suggests four important parameters on which listeners could base their judgments about speakers' age. The most significant is pitch. The study proves that the development of the average pitch from young adulthood onwards is different for men and women. For women, there seem no further systematic changes in the mean pitch as a function of progressing age. In men, however, the mean pitch decreases slightly from early adulthood up to the age of 40-50 and a slight upward shift of pitch is observed from the age of 65 onwards.

The second parameter is the pitch range, which can be defined as the difference between the lowest and the highest pitch in utterance. W. Helfrich indicates that pitch range appears to remain constant during the childhood and increases from the adolescence to the adulthood. In the old age the pitch range seems to narrow again.

The third parameter relates to the number of perturbations, i.e. involuntary and irregular movements in the pitch curve. This perceptually corresponds to the vocal trembling. W. Helfrich observes that advancing age goes hand in hand with an increase of the number of the perturbations and explains this by impaired coordination in the nervous system.

The fourth parameter is a voice quality. It is stated that elderly people's voices are typically characterized as more "hollow" and an increase of breathiness has been noted with increasing age.

It is interesting to note that the speaker's voice does not only reflect information about the speaker's own age, but may also reflect certain assumptions made by the speaker about the listener's age. It can be observed that elderly listeners are addressed in a loud voice and a lower tempo than younger listeners, whereby the speaker assumes that the listener may be hard of hearing and experience difficulties in understanding.

Luchsinger and Arnold (1965) carried out the research to explain how the voice is altered through time and age. The scientists came to the conclusion that

old people's voices have specific characteristics, such as harshness, creakiness and deficient harmonies.

It is obvious that from birth to death humans undergo a number of radical biological changes, many of which leave traces in their voices. These traces can be detected by the listeners who use this information to assess the speaker's age.

If to go back to the peculiarities of the children's voices it should be noted that at birth the respirating system is poorly developed. The lungs are very small, but they grow rapidly during the first year of life, increasing up to sixteen in volume. The angle of the ribs is more horizontal in infants and small children than in adults, so children are unable to pivot their ribs very much to increase the volume of the chest cavity. Because of these factors, small children rely primarily on the diaphragm and on the elastic recoil forces, rather than on the intercostal activity, for respiration (see Glaze, Bless, Milenkovic, and Susser, 1988).

From birth to puberty the vocal tract and respirating system grow and mature at approximately the same rate as the rest of the body. Patterns of development for males and females are very similar until puberty begins, but acoustic evidence (in particular, consistent sex-related differences in formant frequencies) point to the emergence of sexual dimorphism in the vocal tract in children as young as four years of age (Vorperian and Kent, 2007), and by the age of 7-8 boys have lower formant frequencies than girls.

Kelkar (1965) refers to the extended pitch and loudness characteristics, and the relatively slow and regular tempo of baby-talk. He mentions certain general vocal effects, such as pouting and palatalization. There are other works proving the same fact: higher overall pitch is typical for baby-talk.

I. Kreiman and D. Siditis (2011) describe the acoustic changes in voice with age as follows: for infant and children the general vocal features are high pitch, poor control of loudness, hoarseness, initially slow tempo that increases with age. Adults under 60 have such vocal characteristics as lower pitch, constant pitch range, good control of loudness, fast tempo. Adults over 60 have the following speaking voice parameters: decreasing pitch for females and increasing pitch for

males, formant frequencies continue to lower, phonation becomes less stable, hoarseness/breathiness, loudness may increase or decrease, and tempo becomes slower.

The speakers with a slow tempo were perceived as old. Hoarseness, roughness, increased breathiness, and decreases in the precision of articulation also correspond to increases in the perceived age. The voices perceived as old were described as harsh, strained, tremulous, reduced in loudness, and hesitant.

It is interesting to mention that sometimes the exaggerated vocal stereotype of an elderly person can be not very accurate, and, therefore, often rather unconvincing when such "old" vocal images are rendered by younger actors and actresses. A vivid illustration of this we can find in Kreiman and Siditis (2011). They refer to the film "Edward Scissorhands" (Burton and Di Novi, 1990) which begins with actress Winona Rider as a grandmother telling a bedtime story about her youth to her grandchild. In contrast to the voice she uses as a teenager, her grandmotherly voice is extremely hoarse and very quiet, almost whispered. She uses a very slow tempo combined with very short phrases and audible inhalations, but there is relatively little change in frequency comparing to her youthful voice. The exaggerated hoarseness and slowness, combined with the unchanged frequency, give the impression of a woman who is not old, but who is quite ill or depressed.

The film "Citizen Kane" (Welles, 1941) features a number of male characters whose age progresses in the story. And again the depiction of changes in voice with aging is rather simplistic. These imitations of the aging voices sound somewhat like young men caricaturing older ones, although the visual images ameliorate the effect. For example, when actor Orson Welles first appears as a young Charles Foster Kane, his voice is characterized by an extremely fast tempo, clear articulation, and large frequent variations in loudness. While his character ages, the most significant changes in his voice are substantial reductions in speaking rate and in loudness, and a decrease in variability. Depictions of age and emotion are difficult to disentangle in this film; in some scenes Welles's elder

voice seems a bit breathier or more hoarse than his younger one; the pitch range is also slightly lower, and his voice sounds more monotone, but these effects are attributable to the emotional content of the scenes as much as to aging.

As for the belles-lettres texts the voice characteristics identifying the speaker's age are presented with the help of direct nomination which means the use of adjectives or nouns pointing at the speaker's age group. Direct nomination can be accompanied by the stereotype prosodic characteristics. The stereotype prosodic characteristics are rarely used separately. In this case the speaker's age is mentioned in the previous context.

Predominantly the authors combine the adjectives nominating old and young voices with the nouns marking the speaker's gender. For example:

"... and old woman's voice rose again" (S. King); *"... the young man's voice was saying"* (S. King).

In such cases the authors rely on the stereotype associations existing in their language community on the account of how "old" and "young" voices should sound. The same can be said about childish voices.

"She said in a childish petulant voice" (S. Shaw).

"Children's voices were heard" (H. D. Lawrence); *"a girl's voice asking for Carlo"* (M. Puzo); *"The voice sounded like a little girl around six or seven"* (C. Willford).

Teenage voices are usually nominated by the adjective "adolescent" or by the of-phrase "of an adolescent"; "of a young boy (girl)":

"... the adolescent voice buzzed" (S. King); *"It was more like the voice of a young boy, on the verge of changing"* (C. Willford). The example is interesting because here the direct nomination of the definite age group is combined with marking the voice mutation typical for the mentioned age group.

Stereotype vocal characteristics of the childish voices are conveyed with the help of such adjectives as *"high", "high-pitched", "tiny"*:

"The voice was hesitant, high-pitched, childish" (S. Shaw).

Overall, age-related changes in voice are driven by physiological transformations, including alterations in the respiratory system, vocal folds, and nervous system coordination. These changes lead to distinct vocal characteristics at different life stages, such as breathiness in middle age, tremulousness and reduced loudness in old age, and pitch changes across the lifespan. Pitch, pitch range, and voice quality serve as primary cues in assessing speakers' age.

Question for self-control:

1. Which of the voice prosodic characteristics is generally known as the most obvious indicator of the speaker's age?
2. What are the vocal markers of the speaker's voice studied by H. Helfrich?
3. Dwell on the studies of different scientists devoted to the voice changes through time and age.
4. What vocal characteristics are typically associated with youth versus old age?

Discussion questions:

1. Make a description of the "old" voice stereotype and the "young" voice stereotype. Compare your descriptions with ones of your group-mates'.
2. Find information about voice modulation software and AI-generated voices and answer how can these technological advancements affect perceptions of age in communication?
3. Can people alter their voices to sound younger or older, and what are some reasons they might choose to do so?

2.2.3. Voice and nationality

Since every individual is a part of a speech community, it can be assumed that the speech characteristics of this community are to a greater or lesser extent reflected in every individual's voice.

Thus, voice is a means of identification of the speaker's nationality or regional origin. First of all, it manifests itself in accents and dialects. Various

accents and dialects are differentiated by the systematic variations in the pronunciation of the particular phonemes. Dialects are associated with speech communities, often reflecting a speaker's regional origins and /or socioeconomic status, and can influence the way the listeners perceive the speaker's behavior.

Phoneticians, for instance, W. Labov (1991, 2003) in the USA and J. Laver and P. Trudgill (1979) in England carried out various research projects to support the following idea: a lot of information about the speaker's nationality and his or her regional origin can be obtained from the peculiar features of their voices.

While communicating the speakers of different variants of the English language sound to each other in a special way. Americans, for example, feel that speakers of Southern British are overstating the case, "pretentious and manneristic", and Southern British speakers form their own impressions of Americans ("monotonous", "dispassionate").

Bolinger (1986) quotes Baley, who emphasizes the contrast between four dialects of English, describing the impression that each of them creates on an outsider: the English is condescending, the Irish is insultingly incredulous, the Northern is repetitive (echo question), and Southern is unaccountably surprised.

P. Tudgill (1978) compared the prosodic characteristics of the working-class speakers to those of the middle-class speakers in the Norwich region. He found that working-class speakers can be characterized by a creaky voice, a high pitch range, generally louder voices, and a substantial degree of nasality. He also stated that velvety smoothness distinguishes the inhabitants of some prestigious London districts, the representatives of the higher class.

Esling (1978) found a clear correlation between the voice quality and the social class in the region of Edinburgh. The higher social status is related to more frequent use of a creaky voice. The lower social status, however, correlates more strongly with whisper and harshness.

Belonging to a specific group may also bring with it the acquisition of certain vocal features. For example, Mendoza-Denton (1998) states that certain

gangs may signal their belonging to a group by using various voice qualities, for instance, as Latina gang girls - by using a creaky voice.

If we acknowledge the existence of different national voice types we automatically agree that different language communities have some definite vocal stereotypes of other national voices. This phenomenon is called a foreign accent, when non-native speakers of a language are recognized by the mother-tongue speakers as foreign. Just as the regional affiliation is apparent from the regional accent, the foreign accent informs about the mother-tongue of the non-native speaker. In both instances the accent can be quite variable. A regional accent can be very slight or extremely outspoken. The same holds for a foreign accent, which may be hardly noticeable or so strong that the speaker's utterances become difficult to understand.

Foreigners often transplant the intonations of their mother tongue into the English intonation. Transplanted intonations can cause problems when native speakers misapprehend them. For example, answering a question Spanish speakers of English are apt to use an intonation pattern which is typical of the English command. Thus, in an interview, the native speaker of Spanish may sound arrogant when speaking English. Gumperz (1982) describes clashes of this sort between East Asian and Southern British speakers of English. An Indian goes to a bank in London to make a deposit and says to the teller: "Excuse me, I want to deposit some money". This gets the speaker off on the wrong foot, mainly because the Central American profile on "money" seems to be emphasizing an obvious thing and stressing it may be perceived as pushiness. The steeply falling tail in Indic English, creates a strange over-emphasis for the ear of other English speakers. English.

J. Verhoeven (2002) stresses that both regional and foreign accents may have social implications. Some regional accents can be regarded as prestigious such as the Antwerp accent in the Dutch-speaking part of Belgium, whereas others may be regarded inferior. This is also true for a foreign accent: due to the historical reasons a French accent in the Dutch-speaking part of Belgium is socially less

acceptable than a Scandinavian accent. In addition, both types of accents may have communicative implications. Depending on the strength of the accent, speech may become less intelligible and this may have important consequences for the communicative success.

Apart from these similarities, there is at least one important difference in that regional accent is typically acquired by imitation of other speakers of the same (regional) speech community, while a foreign accent is not acquired but rather represents the lack of the successful acquisition of the target language. As to the causes of foreign accent, a vast body of research mainly focuses on phonological differences between the mother tongue of the learner and the target language. Although phonological interference certainly plays a role in the foreign accent, it is likely that the foreign accent also has a purely phonetic basis. Again, the reference can be made to the concept of the articulatory setting, which has been said to differ between languages.

As far as the relationship between ethnic origin and voice prosodic parameters does exist, it is suggested that the pitch seems to be quite indicative. Yamazawa and Hollien (1992) compare the average pitch of Japanese and American women. It was found out that Japanese women had a somewhat higher average pitch than American women, i.e. 223 Hz vs 205 Hz. Although they argue that this difference probably has to do with structural differences between the two languages, an explanation in terms of ethnic origin is not ruled out completely. Hudson and Holbrook (1982) compare the average pitch of the black people with that of the white people of the similar age. They found out that the black people generally spoke at lower pitch levels.

Vocal stereotypes of the various national voices existing in different language communities find their reflection in the belles-lettres texts. Let us illustrate this with the examples:

"He had a little Nordic lilt in his voice" (A. Hailey).

"Well, what nationality are these people', he demanded, suddenly, and read with a slight French intonation […]" (F. S. Fitzgerald).

As we see the authors aim at evoking the associations in the readers' mind with the Scandinavian and French voice types. The Scandinavian voice type is suggested to be associated with a special rhythm while the French voice type is characterized by peculiar melodiousness.

The Spanish voice type, as a rule, is associated with a husky, hoarse or cracked voice quality: "*Latin with a hoarse voice*"; *"He spoke fluent but husky, broken English*"; *"there was an old lady entrusted with jewelry, with a cracked Spanish voice, like the cawing cow".*

Asian voices are well-known for their high pitch. Thus, Asian voice types are associated with high pitch correspondingly. For example:

"The Asian woman said in a high, tiny voice" (C. Willford).

The British voice is usually described with the help of such parameters as lowered loudness - gentle, soft, low, quiet; precise voice quality – precise, distinct, clear, pure; melodiousness – melodious, mellifluous. The following examples illustrate the above-said:

"Gwen said in her gentle English voice"; *"He smiled, her clear melodious English voice delighting him again"* (A. Hailey). "*… soft British voice said in the receiver"*; *"The voice went on, gentle, almost-British*" (I. Shaw).

As for the British regional voices, it should be noted that the main peculiar feature of the last is melody. The Irish voice is characterized by the predominance of the rising tones in the affirmative utterances: *"His voice with some faint Irish melody…"* (F. S. Fitzerald).

The Welsh voice is distinguished due to its special melodiousness, which is the result of the pitch range narrowing on account of the lower register. That is why Welsh voices sound higher than English voices. The peculiarity of the segmental speech level manifests itself in the prolongation of the medial and intervocal consonants, in their vocalization. Exactly this feature adds to the specific melodiousness of the Welsh voices, which are often called "sing-song": *"he asked me in his singsong accent"; "Doone commented in his sing-song voice"* (A. Cronin). If to nominate a voice or an intonation "Welsh" it is immediately

perceived as very melodious: *"... the reply came back in a singsong intonation, very Welsh and apologetic."; "The voice had a Welsh intonation"; "Welsh voice"* (A. Cronin).

American voice is characterized by drawling, nasal voice quality, monotonousness, and slow tempo. The answer why exactly these prosodic characteristics are recognized as typical of the American voice is found in the experimental phonetic studies. Their results prove the drawling pronunciation of the short and unstressed vowels is typical of the Americans who practically do not use weak forms and neutral vowels. Besides, it is stated that monotonousness is a peculiar feature of the general American pronunciation standard. Monotonousness is understood as much more extended in time phrases in comparison, for example, with Southern English. At the perceptive level this extension is defined as a tendency to fix more syllables with a secondary stress as well as to the slow tempo.

These typical features of the American voice find their reflection in the belles-lettres texts where Americans speak in a *Bostonian drawl, Florida drawl, nasal Texas drawl, Midwestern twang*. These characteristics render the well-known vocal stereotypes of the American regional voices.

If we compare English and American voices we find out that they essentially differ. This variation is socially determined and manifests itself with main prosodic parameters, first of all, melody and its components.

As E. Sapir noted: "It is understood in a given society that we are not to have too great an individual range of intonation. We are not to rise to too great a height in our cadences; we are to pitch the voice at such and such an average height. In other words, society tells us to limit ourselves to a certain range of intonation and to certain characteristic cadences, that is, to adopt certain melody patterns peculiar to itself" (Sapir, 1927 : 899).

Further, the scientist illustrated his claim comparing the speech of an English country gentleman with that of a Kentucky farmer, and concluded that the intonation habits of the two are notably different, though there are certain

important resemblances due to the fact that the language they speak is essentially the same.

To bring everything to a conclusion, it should be noted that any of the voice prosodic characteristics can serve as distinguishing features of the various national voice types as well as of the regional vocal stereotypes.

Questions for self-control:

1. Dwell on the notion “national type of voice”. Who was the first to introduce this notion?
2. Speak about the distinguishing features of the “British voice”.
3. What is regional vocal stereotype? What British regional stereotypes do you know?
4. Dwell on the main prosodic characteristics of the “American voice”. What are regional peculiarities of the “American voice” (refer to the works by W. Labov, Ch. Boberg).

Discussion questions:

1. What is “foreign accent”? Discuss the impressions made by the English speech of the Spanish, the French, the Germans, the Dutch on the native English speakers. Share your experience on what impression you made on the English speakers while communicating with them in English.
2. Study the works by P. Trudgill and J. Wells and make a brief report on one of the British regional voices. Be ready to answer your group-mates’ questions.
3. How do media and popular culture reinforce national vocal stereotypes? Can you think of examples from movies, TV shows, or advertisements?
4. How do accents and national vocal stereotypes contribute to national identity? Why do people sometimes modify their voices to fit certain expectations?
5. Do know any common vocal stereotypes associated with specific nationalities, and how accurate do you think they are?
6. Do national vocal stereotypes influence cross-cultural communication?

2.2.4. Voice and profession

Voice prosodic characteristics identify speakers' social status and their profession. A vast range of various pieces of research gives an opportunity to state a strong connection between the vocal stereotypes and the speaker's professional activity. The existence of the vocal stereotype labels in the English-speaking community sustains the fact. These vocal stereotypes are defined in modern linguistics as "professional voices": such as "political voices", "military voices", "judge's voices", "policeman's voices", etc.

The results of various studies show several differences in the prosodic portraits of the representatives of the British society layers. Prosodic and paralinguistic correlates of the social categories are demonstrated in the speech of a person who occupies a definite position in society.

For instance, according to the experimental data, the speech of the teacher and taxi driver is markedly different. The teacher's speech is characterized by a great variety of intonational means: various types of heads and nuclear tones (besides the gradually descending stepping head + low fall, about 57 percent of instances of sliding scales and 72 percent of fall-rises), the pitch range is twice as wide as that of the taxi-driver. The taxi driver uses level heads in 43,3 percent of utterances.

The speech of the representatives of other professional groups, higher in social status than the taxi driver, but having no higher education and experience of public addresses is characterized similarly. Here level scales were revealed in 70 percent of occurrences and level tones – in 50 percent. Monotony in these samples is avoided by the use of loudness, which contributes to the prominence of the stressed syllables.

The professional teacher's voice displays simultaneous increase of loudness and pitch height; prominence of stressed syllables is acoustically achieved by means of higher fundamental frequency and intensity. In voices of lower speech culture the level characteristics of fundamental frequency are accompanied by the

higher intensity values, thus creating divergence of data on auditory and instrumental levels. For example, about 20 percent of level scales and tones of the taxi-driver's speech were perceived by the auditors as rising ones due to the changes of intensity.

The radio-play characters' "prosodic portraits" (from the "BBC Educational Recordings' series") are also of great interest. The speech of the elderly respectable gentlemen (a bank manager, a high instances lawyer) who exercise authority and self-confidence in any circumstances; the speech of the comparatively young men (a lawyer instances lawyer; an army officer), who are more dependent, emotional and demonstrate unstable behavior; and the speech of the younger men (an Oxford student, a student of a Military academy) demonstrate several differences.

The characteristic features of the first group of the characters are:

– various changes of pitch range towards the higher and lower limits within a considerably stable norm;

– dominating use of gradually descending scales + low falling tones;

– use of high fall as the second in rank to convey positive and negative emotions;

– low frequency of rising tones;

– constant use of high level of loudness in all emotional states;

– variable tempo which in neutral speech is faster, in negative and positive emotional states both slows down and accelerates;

– use of both logical and emotional pauses;

– voices are deeper, lower in timbre, stronger.

The lawyer's voice is outstanding for its plumminess. Combined with the gradually descending stepping head low fall conveys a shade of dominance, arrogance and reflects the speaker's authority and superiority.

The traits of the second group's prosodic portrait are:

– high narrowed pitch range correlating with higher emotional colouring of speech;

– some balance between low and high falling tones, which is violated somewhat in case of evaluation;

– high pre-head + falling broken / sliding head, sometimes rising head;

– wide use of fall-rises and rise-falls, particularly in negative states;

– the lower level of loudness than in the first group, within the stable norm, with some changes towards soft in all states but negative, when it goes upwards;

– acceleration of tempo up to vary fast;

– large quantity of pauses increasing in negative emotional states;

– higher in quality voices as compared with group 1, in the emotional states switch to falsetto, trembling voice with aspiration.

Such paralinguistic features as stammering (in all emotional states, but twice as often in negative states), a nervous chuckle, sniggering with embarrassment (in neutral states, but especially marked in positive emotional states), a sigh (in negative emotional states) contribute to characterizing speakers of the second group as subordinate in status, that reveals their embarrassment in difficult circumstances. The men of this group, who are in a dependent, subordinate position, use a lot of hesitating pauses, mainly vocalized ones.

The prosodic correlates of the status and age peculiarities of the third group of characters are:

– changes of pitch range towards the high narrowed range in the speech of higher emotional coloring;

– predominant use of high fall, especially in positive emotional states as well as emphatic heads similar to those in group 2;

– change of loudness from norm to soft only in neutral speech; in emotional states shift to higher level is twice more often than to lower in negative states; increase of loudness only in conveying positive attitudes;

– acceleration of tempo, manifested primarily in negative emotional states;

– use of both logical and emotional pauses;

–marked timbre characteristics of young voices of a youth and a boy, shouting as a paralinguistic sign of negative emotions.

Thus, the actors of the play under experimental analysis made an ample use of various tonal contours, voice range, loudness, tempo, pausation, voice quality and paralinguistic features of speech to present characters as belonging to certain socio-economic layers of the English society with definite psychological (age-group) characteristics. They created the socially accepted types of speech, characteristic of the British society of the second half of the 20th century.

D. Crystal (1974) states that the person's social status is expressed in his voice by means of the corresponding set of supersegmental characteristics. The leading role among them is ascribed to the tempo and pauses of hesitation. The voice quality plays an important role as well.

It is noteworthy to mention the results of the studies connected with social vocal standard formation. For example, in the USA in the 60-s young men tried hard to speak in a husky voice, imitating famous film stars', actors' voices. This phenomenon of the "social imitation" was of a temporal character. As a reflection of the social status, there appeared a term "community quality" as an analogue of the term "voice quality". Unlike the traditional voice quality, which is inborn, "community quality" is obtained by a person as a social category.

Studies of the speaker's professional activities and the speaking voice prosodic characteristics affirm that there is a definite set of the last for the "professional voices".

N. Ambadi (2002) researches into the surgeons' voices phenomenon, their influence on the patients' perception of the information. The researcher distinguishes such vocal types as dominant voices and concerned anxious voices. Such prosodic characteristics as voice quality, loudness, and tempo were analyzed. The informative part of the messages was eliminated.

The dominant voice was described as deep, loud, mildly quick. The sounds of speech were clearly articulated. The patients associated such a voice type with the absence of understanding and sympathy.

The concerned voices were characterized as breathy, calm, and slow. This voice type was associated with understanding and concern about a patient's state and evoked a patient's positive reaction.

There are various works focused on the lawyers' professional voice prosodic characteristics.

J. Wells (1982) notices that professional voices of the lawyers' as well as of the diplomats manifest themselves in the RP (Received Pronunciation), affected pronunciation of some sounds, for example, trembling intervocalic [r], which gives hoarseness to the voice; or vocalized [r] and prolonged unstressed syllables which give relaxed sounding to the voice. The typical voice quality is pluminess.

P. Trudgill (1978) marks a modern tendency in the British society to evaluate RP negatively. This tendency explains why lawyers' voices are often labeled as "posh", "snobbish".

There are voice qualities associated with quite definite professions. For example, breathy and husky voice qualities are typical of the TV or radio announcer of the entertainment programmes, where the announcer aims to establish contact with the listeners. It is explained by the nature of these voice qualities. Breathiness is produced when a great deal more air escapes during each opening of the cords than the average. Only a part of the air is vocalized and the vocal cords are wider apart than usual. Breathiness, in fact, is a mixture of breath and voice. Huskiness also implies incomplete vocalization of the air stream; there is, however, an increase of tension of the vocal cords and of the pharynx muscles.

All the associative links between the professional voices and their typical prosodic characteristics are reflected in the English language, in the belles-lettres texts in particular. There are some examples:

"His voice was dry, low and educated. It would bore the listener in a short time" (I. Shaw).

"Hello, Bridget, this is Colin Firth."[…] It was Mr. Darcy. The same posh, deep can't-be-bothered voice that proposed to Elizabeth Bennet is on the BBC" (H. Fielding).

“Bridget!”, - said a posh voice… (H. Fielding).

“Now the confident, broad-shouldered figure of A. R. Butler rose. With effortless dignity – like a Roman senator, Alan thought – he faced the bench. My lord”, - the urbane, deep voice filled the courtroom. – “I have listened with both interest and admiration […]. Smoothly the skillful, polished phrases marched on. Where Alan had stumbled, seeking words, A. R. Butler delivered them with flowing, rhythmic precision. It was, Alan admitted to himself, a superb performance […]. In the quiet a chair scraped back. It was Tolland, the shipping company lawyer. In a voice which rasped oddly in contrast to the mellifluous tones of A. R. Butler, he began […]. Mr. Justice Willis considered A. R. Butler, Q.C., an exhibitionist and a poseur. The rhetoric and flowing speech, the show of affable benevolence, were histrionic tricks in the bag which might, and did, influence juries” (A. Hailey).

The research of the lawyers’ vocal stereotype allows to make the following conclusion: lawyers’ vocal stereotype is described with the help of such verbal means as 1) the adjectives nominating voice quality - “deep”, “dry”; and the noun “precision” (precise voice quality); 2) the adjective “mellifluous” that verbalizes melodiousness of the speaking voice; 3) the adjective “low” nominating loudness; 4) the adjective “ educated”. It marks the professional voice from the viewpoint of the speaker’s education level; 5) the adjective “urbane”. It manifests the voice high culture stressing the speaker’s high social status; the adjective “posh” defining RP that, in its turn, implies voice high culture and high social status.

D. Crystal notes: “In English we are familiar with the “tone of the voice” that is generally attributed to people acting in their professional capacities, such as the clergyman, lawyer, and undertaker. Phrases such as “you sound like a clergyman” are conventionally meaningful, and would be interpreted as referring to a vocal effect in which pitch-range movements were narrowed, there was frequent use of monotone, rhythm was regular, tempo fairly slow, and overall pitch-height and resonance of the voice were increased.” [Crystal, 1971: 193].

Thus, we may clearly distinguish clergyman vocal stereotype which is characterized by the following prosodic parameters: a narrowed pitch-range, monotone, a slow tempo, a resonant voice quality. For example:

"Richard Wilfred Albert Paul, will you love her, cherish her[…]", said the vicar in a resounding tone" (H. Fielding, 394).

The resonant, resounding voice quality plays an important role as a professional characteristic of a clergyman's voice: it creates a kind of solemn atmosphere during various church ceremonies, e. g. during the wedding ceremony described in the above-mentioned passage.

The analysis of the various studies devoted to the political voice and its peculiarities shows that this vocal stereotype is characterized by such prosodic parameters as 1) precise, careful, clear; sonorous; commanding voice quality; 2) monotonousness; 3) slow tempo.

The novel by A. Hailey "In High Places" presents perfect illustrative material of "political voice" stereotype, as it tells about the life of the political elite.

The following passages exemplify the most prominent prosodic characteristics of this professional vocal stereotype:

"I'm a public servant, precise voice he read. "This is an inquiry held under the provision Of the Immigration Act… Through the rest of the official wording the voice droned on.It was all so pretentiously correct, Alan thought." (A. Hailey).

"*Let me remind you of some facts: Once again, Howden's voice was commanding."* (A. Hailey).

"Canadian industry and employment must be safeguarded after the Act of Union: Howden's voice was clear, his tone emphatic." (A. Hailey).

"The sonorous, distinguished voice of the Speaker of the House was moving toward the end of the prayers" (A. Hailey).

All these examples illustrate the most typical prosodic characteristics of the "political voice" which are determined by the speakers' professional activity. For instance, careful, precise, clear, sonorous voice qualities are connected with frequent public appearances and speeches, official meetings, etc. Commanding

voice quality is necessary for the high position officials. Monotonousness and slow tempo that are verbalized by the verb *to drone* point out the official atmosphere of the events. For example, when the functionary announces some official statement or document.

One more vocal stereotype existing in the English world picture is a professional military voice. Researchers distinguish resonant voice quality as a leading prosodic characteristic of the military voices. Usually the resonant voice quality is accompanied by the increased loudness. D. Crystal (1974) associates military voices of the resigned officers with such qualities as huskiness and hoarseness. Our research allows to add to the military vocal stereotype such prosodic characteristics as a deep voice quality, a quickened tempo and sharpness (high-pitched range).

"My son! Well, he's getting married, you know!", said Admiral Darcy, a genial bellower' (H. Fielding, 45).

As you can see the admiral's voice is characterized by the noun "bellower" (derived from the verb "to bellow" that verbalizes a deep voice quality and increased loudness.

"He said approvingly with something of the old military bark in his voice" (H. Fielding, 175).

This example illustrates the old military voice as sharp, loud and quick (bark – the sharp, loud sound; to bark – to say something quickly in a loud voice).

In the English language community there also exist the vocal stereotypes of the policeman, the detective and the sheriff. The typical prosodic characteristics of these vocal stereotypes are increased loudness, deep, heavy resonant voice qualities.

"Hello there, Mr. Jenson, nice to see you again." The sheriff had a booming voice that carried easily to us (J. Chase).

"The sheriff said in his booming voice" (ibid.).

"The knuckles hit the door again, and a deep voice called: "Open up. Police". (C. Willford).

"Sergeant Wilson", a deep voice rumbled. Miami Police Department" (C. Willford).

The given passages illustrate the leading prosodic characteristics of the "police" professional voice such as deep, hollow and resonant (booming) qualities, and increased loudness (booming, to rumble). As for the pitch characteristics it's typically described as harsh, sharp:

"The other detective said in a harsh voice: "We know all about that meeting" (M. Puzo).

"Ordways's voice was a harsh policeman's voice, not at all the gentle tone he used earlier tonight with Inez Guerrero" (A. Hailey).

"The policeman's voice sharpened" (A. Hailey).

Thus, we can follow the associative link existing in the English speaking community: a policeman's voice, a detective's voice, a sheriff's voice – a deep, hollow, resonant, harsh, sharp, loud voice.

It is noteworthy that the authors creating the images of a good policeman / a bad policeman in the well-known communicative situation resort to the opposition "a harsh voice – a gentle voice". The words "sharp", "sharpened", "harsh" have a negative connotation (unpleasant). The word "gentle" has a positive connotation (pleasant): "*Detective Phillips said gently", "said in a gentle voice", "said in a polite voice", "asked gently"* (M. Puzo). *"This one was white and neither as gentle nor as softly spoken as the other"* (A. Hailey).

The air traffic controller's professional voice can be clearly distinguished from other vocal stereotypes. This professional activity is accompanied with a constant psychological and emotional tension. Often the air traffic controllers' state is close to the stress. At the same time this profession demands great concentration and self-control as pilots' and passengers' lives depend on the air traffic controllers. In "Airport", the novel by A. Hailey, we can find a perfect description of this professional activity:

"Coupled with tense mental sharpness was another requirement – a controlled, studied calmness at all times and duty. The two requirements –

contradictory in terms of human nature – were exhausting mentally, and, in the long run, took a toll. Many controllers developed stomach ulcers which they concealed through fear of losing their jobs… Some of controllers –Keith Bakersfield knew several – were mean and irascible at home, or flew into rages, as a reaction to pent-up emotions at work. Coupled with irregular hours of a household, the effect was predictable. Among air traffic controllers, the list of broken homes was long, divorce rates high" (A. Hailey).

The given description clearly demonstrates that the professional demands determine the prosodic characteristics of the air traffic controllers' speaking voices as their professional activity makes them work out skills to control their speech behavior in spite of the difficult circumstances and the emotional states in force-major conditions. Taking into account all these extralinguistic factors, the air traffic controller's professional voice can be described in the following terms: 1) the voice quality is clear; 2) the loudness is calm, quiet; 3) the pitch is low.

E.g.: *"Under normal conditions the assignment would test the strongest nerves. As it was, the situation was complicated by radio failure in the KC-135… At moments like this, even though pressures built to fever pitch, voices should stay calm."* (A. Hailey).

"Keith seethed with rage. Damn Tevis! Damn air traffic control! Damn his dead father! Damn here and now! Damn everything! Keith was concentrating now; the extra level of his mind had closed… All else was excluded but problem of Flight Two. He radioed clearly and quietly, "Trans American Two, you are now twenty-five miles east of the outer marker. Begin descent at your discretion." (A.Hailey).

"Vernon Demerest's voice came calmly on the cabin a few moments later: "Ladies and gentlemen. This is Captain Demerest […]" Each word rang clearly" (A. Hailey).

Besides the vocal stereotypes of lawyers, clergymen, policemen, air traffic controllers there are many other professions that would be recognized on the basis of their voice specific prosodic characteristics, e.g., a disk jockey, a street vendor,

parade-ground commander, a sports commentator, radio and television announcers, and so on.

Questions for self-control:

1. Dwell on the notions “community quality” and “professional voice”.
2. Speak about the most prominent prosodic characteristics of
    - the lawyer’s professional voice;
    - the policeman’s professional voice;
    - the “political” voice;
    - the “military” voice.

Discussion questions:

1. a) Study one of the following works and make a brief report on the English professional voices and their typical prosodic characteristics:

- D. Crystal “Prosodic and Paralinguistic correlates of social categories”
- P. Trudgill “Sociolinguistic patterns in British English.” “Sociolinguistic variation and change.”
- J. Wells “Accents of English.” “Accents in Britain today.”

b) Share your report with your group-mates for further discussion.

2. Can listeners accurately determine a speaker’s profession based on their voice alone? Why or why not?

3. How does a person’s profession influence their voice characteristics (e.g. loudness, pitch range, voice quality, tempo)?

4. Do the voice characteristics differ between customer-facing and non-customer-facing professions?

5. Can vocal training improve professional success in such fields as law, media, or politics?

2.2.5. Voice and personality reflection

Voice conveys information about a person's psychological characteristics, about his or her psychodynamic type.

The connection between a voice and a person, first of all, manifests itself in the etymology of the word "personality". As I. P. Moses (1954) states the word "personality" derives from the Latin word "persona" which initially meant "a sound heard from behind the mask" (the masks put on by the actions at the theatre performances). As it is known, nowadays the symbolic connection between the word "persona" and the voice is lost.

E. Sapir writes: "Whether personality is expressed as adequately in the voice as in gesture or in carriage, we do not know. Perhaps it is even more adequately expressed in the voice than in these. In any event, it is clear that the nervous processes that control voice production must share in the individual traits of the nervous organization that condition the personality" (Sapir, 1927 : 895).

Sapir considered the voice and the vocal dynamics to be the leading ones in defining the personal traits, the speaker's social background, including his or her nationality. In order to interpret the voice as to its personality value, one needs to have a good idea of how much of it is purely individual, due to the natural formation of the larynx, to peculiarities of breathing, to a thousand of factors that biologists may be able to define for us.

If we were to make an inventory of voices, we would find that not two of them are quite alike. And all the time we feel that there is something about the individual's voice that is indicative of his personality. We may even go so far as to surmise that the voice is in some way a symbolic index of the total personality.

Thus, listening to the voice one might decide many things about a man. One might decide that he is sentimental; that he is extraordinary sympathetic without being sentimental; that he is cruel. One might decide on the basis of the voice that a person who uses a very brusque vocabulary is nevertheless kind-hearted. This sort of comment is a part of the experience of everyone.

I. Laver and P. Trudgill (1979) noted that voice is a product of intrinsic and extrinsic voice qualities, which convey not only the linguistic meaning of the message itself, but also the information about the speaker's psychological characteristics.

There are numerous studies that investigate vocal attractiveness stereotype. The vocal attractiveness stereotype represents the influence of the auditory both personality and vocal characteristics from voices.

Allport and Cantril (1934) were two of the first experts in the field of the empirical research on voice and personality who came to interesting conclusions: on the one hand, that many personality's features can be determined from the voice, and on the other hand, that stereotypes play an important role in making judgments about the personality of the speaker. As they mention: "for the various features of personality there is associated in the minds of judges some preconception of the type of voice to which these features correspond" (Allport, Cantril, 1934 : 50). The voice can subsume several features of personality at the same time. For example, a very high, creaky, female voice, can transmit submission and insecurity at the same time. They also put forward the idea that the heterogeneity of the voices chosen in their experiment contributed to the success rate.

The idea of existing voice stereotypes was later developed by Kramer and by Aronovitch. Kramer (1964) defined the concept of voice stereotypy as voices that convey a stereotype of some personality trait without the stereotype necessarily having any validity. Some years later after the experiment, Aronovitch (1976) came to the conclusion that "raters consistently judge certain voices as reflecting various personality characteristics, regardless of whether or not the person whose voice is rated possesses these characteristics" (Aronovitch, 1976 : 214). Aronovitch also concluded that "voice stereotypes" are based, at least in part, on the distinctive, measurable properties of the human voice. He claims that "male and female raters tended to judge male and female voices essentially alike" (Aronovitch, 1976 : 216).

Eckert and Laver carried out the research analyzing voice stereotypy and claimed: “Somebody whose voice is perceived as being weak and monotone, won’t have an extroverted personality” (Eckert, Laver, 1994 : 7).

Hecht and La France (1995) investigated whether personality impressions and vocal characteristics of telephone operators have many correlations with how quickly they are able to serve customers. The judges were asked to listen to “intrinsic” arises “from the speaker’s anatomical features”, which is not under the speaker’s volitional control. “Extrinsic” is the product of the way speakers habitually set their voice tract and larynx, and therefore, is controlled volitionally. Then they were asked to rate the operators’ personality traits and vocal characteristics based on their impressions of the voices. Such personality traits as “enthusiastic”, “sympathetic”, “confident”, “professional” and “friendly” were grouped into a single factor called “positive attitude”. Then the correlations between vocal characteristics and positive attitude as well as the five personality traits were stated.

The vocal characteristics that had significant correlations with positive attitude were “changing” and “clear”, and to a lesser extent, “high”. High-pitched voices were rated as significantly more enthusiastic and sympathetic. The auditory correlate the “changing” quality with range of pitch, loudness, and temporal fluctuations. The “clear” quality reflects a wide range of articulatory movements, which can be analyzed auditory within Laver’s voice quality descriptive framework as well as acoustically by means of vowel formant analysis.

Yarmey (1993) investigated vocal and facial cues of good versus bad characters, using three presentation conditions: face only, voice only, and both face and voice. The participants were asked to rate the vocal characteristics and select representatives of three non-criminal occupations and three criminal occupations. In all three presentation conditions it was easier for the participants to select representatives of the non-criminals than for the criminals. The following significant correlations were found between vocal attributes and impressions for “bad guys”. Nine personality traits are represented by the three categories:

weakness – soft, monotone; incompetence – soft, not clear, slow; lack of warmth – monotone, tight. For good guys such correlations between vocal attributes and trait impressions were singled out: strength – deep, loud, relaxed; competence – deep, relaxed, clear, slow (for "serious-minded"), fast (for "outgoing"), tight (for "industrious").

A weak and tight voice demonstrates that we deal with a shy, humble and indecisive person. If we hear a strong, full, rich voice, it means that this is a voice of a healthy, strong, handsome or beautiful person. Tall, big, well-built people usually use a low register of the pitch range, i.e. they speak in low-pitched, deep voices that are conditioned by their vocal apparatus structure.

Scherer (1989) presents evidence that listeners attribute certain personality characteristics to the speakers on the basis of certain vocal clues in speech. He concludes that higher pitch levels in male American speech tend to be associated with dominant and competent personalities. The Germans associate similar higher pitch levels with discipline, responsibility and social conformity. Higher pitch levels in these types of personalities are explained by the fact that these personality characteristics are accompanied by a "habitually high degree of arousal or state of readiness of the organism" (Scherer, 1989: 155). Higher arousal can be assumed to cause an increase in muscular tension, which may lead to the higher pitch levels in speech. Scherer also points out that there may be a relationship between loudness of the voice and extroversion, and that the characteristic of voice quality seems quite promising as an indicator of personality traits.

Zuckerman and Miyake (1990) studied the influence of the vocal attractiveness on the listener's impression of the speaker's appearance. Their research reveals that people can agree on judgments of attractiveness in human voices, which have an impact on their interpersonal impressions. The scientists came to a conclusion that the speakers with attractive voices are rated as ones having attractive personalities. Besides people with pleasant voices were evaluated as personalities with positive traits of character.

Overall, the studies on the vocal attractiveness stereotypes reveal that individuals with attractive voices are perceived as those who possess desirable personality characteristics. People with attractive voices are judged to be warmer, more likeable, honest, dominant, and likely to succeed than people with less attractive voices.

There is research on the impact of vocal maturity on a person's perception. Berry (1990) reveals that adults with babyish voices are judged to be warmer, more honest, less powerful, and less confident than those with more mature sounding voices. Berry (1992) examined the relations among vocal attractiveness, vocal maturity and personality impressions. The analysis stated that increases in vocal attractiveness yielded impressions of greater power and warmth, whereas increases in vocal maturity yielded impressions of increased power and decreased warmth.

Fährmann (1960), as cited in P. H. Begona (2001), concluded that deeper and louder voices express assertive attitudes versus higher and quiet voices that express submission. This proves what was said about the social information. Higher tones are also somewhat paradoxically associated with lighter and "colourful" voices, as opposed to deeper tones that convey an idea of "dullness" or "emptiness". Fährmann also states that warm, soft, harmonic voices convey security and affection, whereas cold, hard, shrill voices are often labeled as insecure and unfriendly.

Rather interesting conclusions were made by Weireich (2008) who analyzed two attributes: dominance (confident, competent) and benevolence (sensitive, helpful), and the vocal stereotypes associated with these personal qualities in the German-speaking community. According to the results of the auditory analysis benevolence is associated with a breathy and soft voice, meanwhile dominance and confidence were ascribed to people with a low-pitched, laryngeal voice, with glottal and pharyngeal laxness and a high sonority. The study proves the existence of the vocal stereotypes for male German speakers. Besides, a difference in the listeners' judgments depending on their gender was found. The female listeners

evaluated the male voices more positively than their male colleagues. Weireich interpreted this as a competition between gender.

Arndt and Janney (1987) mention the attitudinal function as being one of the five possible functions of prosody. Here "attitude" will be defined as a cognitive-affective reaction of like or dislike towards an item / a person / a situation. Attitudes can change according to the context and the experience and can even be learnt. For example, an insecure person can receive advice and therapy so as to become a confident public speaker, as can be found in many self-learning books. That is, an attitude of insecurity can change to an attitude of self-confidence by working on one's self-esteem.

Attitudes, being in part affective, can be better approached with the attitudinal dimensions of affect: for some authors there would be only two dimensions: valence and activity, for others - even a third added dimension to the previous two, that of potency. What is sure is that an attitude implies not only either a positive or a negative judgment but also a degree of activity, ranging from "active" to "passive" (Kienast, 2002 : 12).

Arndt and Janney (1987) make an interesting point about two dimensions that have to be taken into account when doing attitudinal research, in this case of vocal features: 1) the personal-interpersonal dimension, that is, the fact that cues are either interpreted as unintentional (emotional) or intentional (emotive); 2) the positive-negative dimension (our interpretation of vocal cues depend on our attitude toward the speaker).

Vocal cues never occur in isolation, because they are generally accompanied by linguistic content and by gestures. Moreover, when vocal cues are used to transmit different attitudes, emotions and personality aspects they seldom appear in isolation: "prosodic activities are not reduced to their basic constituents but treated like word-like totalities; prosody cannot be fully accounted for along individual dimensions such as pitch or stress" (Arndt, 1987 : 251).

M. Teshigawara (2003) suggested two dimensions of voice-based person perception: 1) a warmth / valence dimension, which phonetic properties resemble

features of affective (happy – angry) vocalization, that is, voice quality; 2) a competence (dominance dimension, which phonetic properties resemble features signaling physical strength, i. e. masculinity and maturity), that is Fo and vowel formants. The scientist investigated phonetic properties of vocal stereotypes of good and bad characters in the animated cartoons. Following an auditory analysis of heroes' and villains' voices, a subject of characters varying in degree of laryngeal constriction and / or larynx lowering was chosen as stimuli for a perceptual experiment. The linguist came to the conclusion that the more constricted the larynx was, the less good-looking, loyal, intelligent the speaker was perceived to be.

Laryngeal constriction is involved in the production of such voice qualities as harsh and creaky and is among the characteristics predicted to be present in production of voices with negative emotions. For female voice actors the degree of breathiness was positively correlated with the same positive traits that had been negatively correlated with the degree of laryngeal constriction.

Definitely the prosodic characteristics of the speaking voice influence our perception of a speaking personality. Sometimes we can listen not to what is being said but to the speaker's voice.

E. Sapir recollected: "I remember listening many years ago to an address by a college president and deciding on the spur of the moment that what he said could be of no interest to me. What I meant was no matter how interesting or persistent his remarks were in themselves, his personality could not touch mine because there was something about his voice that did not appeal to me, something revealing as to personality. There was indicated so one gathered intuitively a certain quality of personality, a certain force, that I know could not easily integrate with my own apprehension of thins. I did not listen to what he said, I listened only to the quality of his voice […]. I believe that we are all in the habit of doing just such things and that we are essentially justified in so doing – not intellectually, but intuitively" (Sapir, 1927 : 894).

The vocal stereotypes rooted in some definite speaking community have their reflection in this community's language. The examples from the belles-lettres texts can serve as vivid illustrations.

In the following excerpts from the novel "Angel Pavement" by J. B. Priestly you can find voice characteristics that reflect personages' personality traits:

"That is, he boomed as an afterthought, if there's anything doing"; "Reputations! Of course, they're regulations! He boomed…"; " boomed away"; "Now and again he had heard voices raised, and once the door had opened, so that Mr. Golspie's booming tones had come flying out into the general office…" (J. B. Priestly).

These examples illustrate the leading characteristics of Golspie's voice with the help of the verb "to boom". The verb "to boom" verbalizes deep, resonant voice qualities and increased loudness. Totally this verb and the adjective "booming" are repeated 18 times in his voice characteristics. To add to the effect the author employs the lexical units "resonant", i.e. resounding, singing timbre "bass"(deep sounding, low in tone), and the word "loudest":

*"Mr. Golspie demanded in his resonant bass…"; "Mr. Golspie replied in the tone of a man whose heart was not easily broken" (*J. B. Priestly).

Mr. Golspie speaks too loudly irrespective of the communicative situation and his emotional state, considering the level of loudness of his voice to be normal.

"Mr. Golspie continued, not troubling to lower his voice or rather to moderate it, for it was low enough." (J. B. Priestly). Such speech behavior is the evidence of the low voice culture and of the speaker's low culture in general.

Due to the personage's vocal characteristics the author creates the image of a rude, dominating, wicked person. His appearance is described as follows: *"This solitary passenger was a man of a medium height but of a massive build, square and bulky about the shoulders, and thick-chested… His face was somewhat unusual, if only because it began by being almost bald in the top, then threw out two very bushy eyebrows, and finally achieved a tremendous moustache, drooping a little by reason of its very length and thickness"* (J. B. Priestly).

Mr. Golspie's inner qualities are conveyed with the help of the epithets *"brutal", "rude", "awful", "vile", "cruel", "dominating"*.

Thus, the personage's vocal characteristics and his personality reflect the existing vocal stereotype of a dominating, brutal, big, massive, bulky man, i.e. booming, resonant bass, loud voices are associated with such inner qualities and this type of appearance.

The same negative associations evoke a gruff, husky voice quality:

"His speaking voice, a gruff husky tenor, added to the impression of fractiousness he conveyed. There was a touch of paternal contempt in it, even to the people he liked – and there where men at New Haven who had hated his guts" (F. S. Fitzgerald).

Tom Buchanan's (the character from the novel "The Great Gatsby" by F. S. Fitzgerald) vocal characteristic reflects his brutal appearance (sturdy man, hard mouth, enormous power of that body, cruel body), and his contemptuous, pompous nature (arrogant eyes, supercilious manner, impression of fractiousness, paternal contempt). If to analyze the meaning of the adjective *"gruff"* and *"husky"* that nominate a hoarse voice quality, we find in their structure the semantic component "rough" which, in its turn, has a negative connotation "unpleasant". Thus, these lexical units obtain the negative evaluative pragmatics that totally coincides with the personage's negative characteristic.

It should be noted that in different language communities there are different perceptions of the vocal attractiveness. For instance, in the Spanish language community people perceive such prosodic characteristics as huskiness and a cracked voice quality as pleasant and attractive. Such personality perception can be illustrated by the excerpts from the novel "Polo" by J. Cooper:

"Luke smiled: "You will fall madly in love with Argentina", he said in his deep husky voice, which had a slight break in it"; "Listen, my children, and you will hear", he began in his deep husky drawl…"; "Oh, that deep sloe husky voice. Perdita wanted to collapse into his arms". "Wasn't his fault: Even his deep, slow husky drawl was weakened. It was an airshot. I blocked it." (J. Cooper).

The leading prosodic characteristics of the personage's voice are deep, husky voice qualities with a slight break (i.e. cracked voice quality) and a slow tempo (slow 'drawl"). His voice is perceived as pleasant and attractive as well as his personality (kind, friendly, loyal, etc.).

The following passages exemplify the speaking voice of the female character from "Sons and Lovers" by D. H. Lawrence.

"Cold!" said Miriam, in her musical, caressing voice", "Hello!" she said soft and musical". "I knew it was you."; "Hasn't Clara come?" he asked. "Yes", replied Miriam in her musical tone." "She's reading"; "Oh!" Paul heard her mellow voice call, "isn't it wonderful?"; "mellow sound is pleasant and smooth"; "soft voice is quiet and pleasant to listen" (D. H. Lawrence).

Pleasant and attractive sounding of Miriam's voice is created with the help of such prosodic parameters as melodical component – "musical", low pitch which adds to the gentle sounding – "mellow ", and decreased loudness – "soft".

The personage's inner world is described as follows:

"The girl was romantic in her soul. Everywhere was a Walter Scott heroine being loved by men with helmets or with plumes in their caps. She herself was something of a princess turned into a swine-girl in her own imagination".

"Miriam seems as in some dreamy tale, a maiden in bondage, her spirit dreaming in a land far away and magical. And her discoloured, old blue frock and her broken boots seemed only like the romantic rays of King Cophetua's beggar-maid".

"She was nearly sixteen, very beautiful, with her warm colouring, her gravity, her eyes dilating suddenly like an ecstasy" (D. H. Lawrence).

The author creates the image of a beautiful, tender, romantic girl with a rich inner world, and her personal qualities as well as her appearance are reflected in her pleasant, melodious, mellow, soft speaking voice.

It should be mentioned that sometimes voice characteristics can be deceiving in the personality perception.

The attractive and pleasant voice may belong to a negative personality. The image and the voice of one of the main characters from "The Great Gatsby" by F. J. Fitzgerald can serve as an example:

"I looked back at my cousin, who began to ask questions in her low and thrilling voice. It was the kind of voice that the ear follows up and down, as if each speech is an arrangement of notes that will never be played again. ... there was an excitement in her voice that men who had cared for her found difficult to forget; a singing compulsion, a whispered "Listen…". "Daisy's voice was playing murmurous tricks in her throat".

"The exhilarating ripple of her voice was a wild tonic in the rain. I had to follow the sound of it for a moment, up and down, with my ear alone, before any words came through" (F. S. Fitzerald)

Daisy's voice is depicted as attractive, charming for men, unforgettable. The author foregrounds such prosodic characteristics as the melody: vocal tone fluctuation (*up and down*), its melodiousness (*singing, arrangements of notes*), a low pitch range (*low, murmurous*); and decreased loudness (*whisper, murmurous*). It is interesting to note that the verb *"to murmur"* and the noun *"murmur"* are used 8 times in Daisy's voice descriptions (*choking, murmur, with enchanting murmur, she hinted in murmur, she murmured*, etc.), and, thus, become individual peculiarities of her voice. Practically the same parameters are represented in Daisy's singing voice descriptions (*husky whisper, her voice broke up sweetly in a way contralto voices have*).

In the following description – *"The exhilarating ripple of her voice…"*, the running water sound metaphorically conveys the human voice and implies melodiousness, low tone, mellowness and decreased loudness. Such prosodic characteristics evoke pleasant associations and the personage's voice and personality are perceived as attractive. But gradually the author reveals Daisy's true nature, her voice characteristics are changed from positive to negative.

"*She's got an indiscreet voice", I remarked. "It's full of "– I hesitated. "Her voice is full of money", he said suddenly. That was it. I'd never understood before.*

It was full of money – that was an exhaustible charm that rose and fell in it the jingle of it, the symbols and song of it… High in white palace the King's daughter, the golden girl" (F. J. Fitzgerald).

"The ripple of her voice" having been associated with pleasant sounds of the running water turned out to be "full of money" that actually symbolizes Daisy's inner qualities such as self-interest, hypocrisy, snobbery, which are revealed in the macro-context of the novel.

The next example is taken from S. King's novel "The Green Mile". John Cofe's voice characteristic matches his appearance, but contrasts his personality. His speaking voice is described with the following prosodic parameters: "*deep", "quiet rumble", "thick", "low", "hoarse voice rumbled", "It (voice) made me think of a freshly tuned tractor engine"* (S. King "The Green Mile").

To prove the fact that his voice matches his appearance let us draw your attention to its description: *" the biggest man I've ever seen", "water-barrel of a chest", "captured bear", "ball of a head", "he looked like he could have snapped the chains that held him as easily as you might snap the ribbons on a Christmas present"* (S. King).

If we compare John Cofe's appearance and his voice we can note that a huge, very strong black man speaks in a low, deep, rumbling, hoarse, loud voice associated with a tuned tractor engine.

John Cofe is introduced in the novel as a rapist and a killer of the girls-twins, sentenced to death. At first sight, his speaking voice completely reveals the evil personality. However, there are two occasionalisms "tear-clotted" and "tear-choked" in his speaking voice description. These lexical units verbalize shaking, quivering voice quality which conveys such traits as weakness and sensitiveness, and reflects the human nature that can be easily hurt.

Later on, John Cofe appeared to be a man with a unique gift of healing people, a man who let people's pain and sufferings through himself. John Cofe's soul is full of his own sufferings and fears but in spite of it he is ready to help the

others. Thus, John Cofe's voice matches his appearance but contrasts his personality.

To sum up it should be noted that voice is a reliable source of information about the speaker's personality, vocal stereotypes and vocal attractiveness parameters.

Questions for self-control:

1. What is the etymological connection between the words "persona" and "voice," as mentioned by I. P. Moses?
2. How do intrinsic and extrinsic voice qualities contribute to how a person is perceived?
3. Dwell on the various studies that investigate vocal attractiveness stereotypes. How do vocal attractiveness stereotypes vary in different cultures and different language communities?
4. What do know about the male vocal attractiveness stereotype and the female vocal attractiveness stereotype?
5. How do stereotypes influence judgments about personality based on voice according to Allport and Cantril?
6. How do writers use various descriptions of the personages' voices to shape their personalities?

Discussion questions:

1. Comment on the quotation from E. Sapir's "Speech as a personality trait": "Whether personality is expressed as adequately in the voice as in gesture or in carriage, we do not know. Perhaps it is even more adequately expressed in the voice than in these. In any event, it is clear that the nervous processes that control voice production must share in the individual traits of the nervous organization that condition the personality".

2. Do you believe that there are stable correlations between vocal characteristics and positive / negative personality traits?
3. What vocal characteristics in male and female voices appeal to you? Do your personal preferences differ from the ones of your group-mates? In what way and why?
4. Give the examples of the character's voice descriptions from the belles-lettres texts that illustrate:
(a) how the prosodic characteristics of the character's voices reveal their inner qualities. Do your first impressions of the characters always coincide with your final impressions?
(b) how the prosodic characteristics of the character's voices help to describe their appearance.

2.2.6. Voice as a means of physical and emotional state expression

Besides revealing the identity of the speaker, voice can also provide information about the physical and /or emotional state of the speaker. As Planalp (1998) notes judging from the results of the self-report studies and relying on the voice cues (loudness, tempo) could actually be the most common way in which people infer the other people's emotions in every day life.

The prosodic characteristics of the emotional voice differ from the individual's markers in that they tend to be transient, rather than permanent. They imply, however, that listeners have established a notion of what is the 'normal' articulatory setting for a given speaker and that they can detect deviations from this 'normal' setting, which may be attributed to the physical or emotional changes that have taken place.

In the first instance, we would like to refer to the more transient medical states relating to inflammations of the organs of speech with laryngitis, pharyngitis, nasal catarrh or cold. In the common cold, for example, the glands in the nose are swollen and block the air passage through the nasal tract. This sounds as if the

patient's speech is heavily nasalized. In reality, however, this type of speech is entirely denasal since the air cannot escape via the nose as a result of the blockage. This absence of nasality in speech is easily noticeable and common colds are readily recognised perceptually in for instance telephone conversations.

Alcohol intoxication is another well-known example of a temporary change in the speech of individuals. The consumption of alcohol affects the transmission of neural commands to the speech organs and impacts on their smooth operation. As a result of this, articulation becomes less co-ordinated and precise, giving rise to a slurred impression which is easily recognized by any sober individual in a party of merry people over the legal limit. A survey of the speech features of intoxicated voices is given in Johnson, Pisoni and Bernacki (1990). At the phonetic level, they distinguish between the segmental effects and the suprasegmental effects of the alcohol intoxication. Segmental effects relate to the misarticulation of segments. The most common errors are misarticulation of [r] and [l], and the misproduction of [s] which tends to be realised as [ʂ]. Other processes which are commonly observed are the word-final devoicing of stops ([dEt] instead of [dEd]) and deaffrication ([ʂ˝ʂ] instead of [tʂ˝tʂ]. The most important suprasegmental effect is a reduced speaking rate, which may be the result of the speaker's attempt to compensate for the loss of motor co-ordination when intoxicated. Furthermore, there is an increase in the unvoiced/voiced ratio in the intoxicated speech, a decreased level of loudness and a lower pitch range.

Abuse of the vocal apparatus generally as a result of excessive smoking, drinking or working in a noisy environment can result in a permanent harsh voice quality. It should be noted that this can have sociological implications in that in certain societies 'harsh voice' is associated with lower social status. Women with such a harsh voice quality tend to be perceived as loose in behavior, since in many societies smoking and drinking are regarded as inappropriate behavior for women.

Fatigue is also marked by the voice features in that the mode of phonation can become inefficient, resulting in a whispery voice or in a weak breathy voice (Laver, Trudgill, 1979).

Darwin was one of the first scientists to study the expression of emotions, both in men and in animals and to consider it from the evolutionary perspective in his work of 1872 (later reedited in 1965). However, most of the attention there is devoted to the typical human and animal gestures and physical reactions such as reflexes or patterns of behavior and nothing much is said explicitly about vocal features except the mentioning of cries or shrieks as universal signs for pain and grief.

In discussing the vocal expression of emotion, Bacherowski (1999) distinguishes between source-related and filter-related vocal cues. Source-related cues derive primarily from the vocal fold vibration, and are reflected in speech as variations (and variability) in pitch and loudness. Filter-related effects reflect configurations of the vocal tract that are sometimes associated with internal states; the same utterance will sound different depending on whether the speaker is smiling or frowning. There is a tendency to think of source-related effects as involuntary and more-or-less direct reflections of autonomic functioning voices are influenced by a speaker's affective state.

Specific patterns of autonomic activity and muscular action corresponding to various emotional states produce changes in the acoustic properties of a speaker's voice. While vocal information regarding affective state is often found in the form of prosodic speech, non-speech sounds such as screams, groans, cries, and laughs, also contain a great deal of affective information. Different emotional states are likely to afford different behavioral opportunities, awareness of the emotional state of a speaker can help perceivers guide their behavioral interactions with that speaker in a functional manner. Indeed, vocal cues of affect may be the most common method of inferring other people's emotions [Planalp, 1998].

Anger in English is often conveyed by a harsh voice quality, with a wider pitch range and an increased loudness [Laver, Trudgill, 1979]. When the speaker feels on top of the world, his voice characteristics will be different from a situation where he feels utterly bored: in these cases differences in speech rhythm (fast vs. slow) and pitch range (wide vs. small) can be observed. Breathy voice in women is

associated with the stereotype of ‘sexy’ and this again has sociological implications.

Breitenstein (2001) stated that, when feeling fright or fear, the speaker’s tempo becomes faster, just as the heart beats and breathing increases, which were initially a defense strategy of our bodies when being faced to danger to prepare the body for a fast reaction. Moreover, if we bear in mind that both prosody and emotions are processed in the right hemisphere of the brain (as opposed to linguistic content, which is processed in the left side of the brain), this could be an index supporting the idea that the nervous system in the brain is responsible (independently of will) for certain emotive expressions.

Pakosz carried out an interesting study of what he called emotive intonation, where he classified adjectives that described the emotions in voice and managed to reduce them to nine different groups, by classifying them according to their semantic field in a hierarchical relation of hyperonyms and hyponyms. Out of all his findings what should be highlighted are two of his conclusions: on the one hand, the fact that “the meanings of tones are expressed in discrete categories” [Pakosz, 1983 : 19-20] and on the other hand the fact that “few categories (of emotions) have a unique tonal representation and few contours correspond uniquely to the given categories”. This again matches what was previously said about the expression of attitudes, that in most cases there is no one to one correlation of one single vocal feature with a specific emotion, but rather that the expression of affect (as well as of our personality and attitudes in a given context) is carried out with simultaneous vocal strategies. Vocal markers are more equivocal than unique.

Scherer and Wallbott (2001) carried out the research studying the factors that determine the expression of emotion. They classify these factors into two groups: the so-called “push-factors” and “pull-factors”. According to these authors, push-factors are those triggered by changes in the subsystem of the organism and have a direct influence on the mode and intensity of the motoric expression, they are highly individual and dependent on the organism and are said to be

uncontrolled. If compared with Abercrombie's distinction the push-factors can be said to be reflected in the voice quality aspects. Pull-factors are external socio-normative demands such as the relevant principles that we try to respect in conversation, for example. They are socio-cultural factors that make us either inhibit the expression of an emotion or to feign another emotion.

An example for this can be found in the use of a joyful tone for giving thanks when we receive a present, even if we do not like it. This is motivated by the will to be perceived as polite. Thus, the pull-factors are better represented by voice dynamics featuressince they are more controllable and are socially learnt.

Scherer (2004) carried out the research on the relations between our voice, our emotions and our psyche. He considers four "measurable" vocal dimensions: duration, intensity, frequency and timbre. Regarding three of the emotions he notes that generally joy correlates with higher frequencies, amplitudes and variability in tone; sadness correlates with lower frequencies, lower variability in tone, falling patterns of intonation and less articulation; anger correlates with an overall high frequency and amplitude but decreasing frequency as speech progresses.

The logic or functionality of these observes the tendencies in the measurable vocal dimensions to match the activity dimension of the emotions mentioned: the higher the activity rate of an emotion (joy, anger) the more intensively it is embodied then in vocal dimensions; the lower the activity rate (sadness), the weaker it is marked in vocal dimensions.

Cook (1999) suggested how to distinguish anger from joy by introducing terminology from the music field. He mentions four universals in intonational phenomena perceived by everybody alike: interval dissonance, the movement away from dissonance or toward consonance / harmony, harmonic tension, the movement away from tension (toward major or minor resolution).

According to this author it is the forth universal that helps to distinguish positive human emotions (joy, optimism) from negative ones (sadness, pessimism), which matches the popular conception that major harmonies transmit joy and minor harmonies transmit sadness or gloominess. This idea is at the same time

based on the association of what is big / high with what is positive, as opposed to what is small / low with what is negative.

Breitenstein, Van Lancker and Daum (2001), in an attempt to study the perception of the vocal emotions in German and American English, come to the interesting conclusion that it is "the rate that is the most potent cue in emotion perception in voice" (Breitenstein et al., 2001 :18), whereby a fast tempo is typical of anger and fright and a slow tempo is generally related to sadness. They also found that "activity ratings increased with greater pitch variation of the stimuli", which echoes the activity attitudinal dimension of active vs. passive, so frequently associated with high pitch variation vs. low pitch variation, or, in other words, harmonic voices vs. monotone voices.

Kienast (2002) mentions the following correlations: anger is associated with a high speech rate and clearer vocalization; joy is associated with a slower speech rate and clearer vocalization; sadness implies a slower speech rate, more pauses, laxness and elisions. She also measured laryngeal settings according to the different emotions and found out that anger and joy imply a certain level of raspiness in voice while sadness is manifested more frequently with creaky, aspirated, breathy voices. On the other hand, some scientists (Linblad, 1992; Laver, 1994) note that a breathy voice quality signals intimacy in many languages.

According to Zetterholm (1998) the voice quality, as well as the pitch and the rhythm, plays an important role in giving the impression of different emotions. Her experiment proves that a high pitch and a high intensity are typical for the emotion of anger. The impression is strengthened by the slow speech rate and the very distinct articulation. The speaker's voice quality is taut but it sounds like he is gritting his teeth as if he is irritated. When people are anxious or in a weak position they often use a higher pitch, than they usually do, and sometimes even a breathy voice quality. Indifference and sadness have a low pitch and a low intensity and there is only a small pitch range. The speech rate is rather high with a lax articulation and he sounds really depressed. A creaky voice quality strengthens the impression of the emotion. In the expression of joy the recordings show variations

in intonation and a rather high pitch compared to the recordings with a neutral voice.

C. Gobl and A. Chasaide (2003) came to the conclusion that a lax voice is typical for such emotional states as relaxed, content and intimate, meanwhile a creaky voice quality is associated with sadness. Their research provides strong support for the association of anger with a tense voice. Thus, tense and harsh voice qualities are typical for angry, hostile and confident states. The whispery voice quality is associated with shyness and fear.

It is interesting to note that according to Scherer tense voice signals about joy. Besides Scherer and Johnstone (1999) found out the following correlations between the prosodic parameters and definite emotions. For instance, low pitch is typical for boredom and depression, and high pitch – for happiness and anxiety. The limited pitch range for tense, irritated and anxious speech might reflect the general tenseness in the laryngeal musculature that limits adjustment of the vocal cord tension and larynx position. The pressed voice is characterized by fast glottis closing. Such rapid closing is a sign of increased vocal effort and laryngeal muscular tension. Less damping of harmonics is expected with such phonation, as it is indicated by the lower proportion of the total energy in low frequency bands for irritated and happy speech. As to the tempo the scientists came to the conclusion that a fast tempo is a typical parameter of such emotions as anger, fear and joy; a slow tempo is a characteristic of sadness.

There are researches that prove the existence of the definite acoustic patterns for positive and negative emotions. N. Vitt (1991) states that a low pitch is connected with positive emotions, meanwhile, a high pitch is a signal of the negative emotions, of negative surprise and fear in particular.

The analysis of the belles-letters texts allows to single out the speech situations where the described speaking voice reflects the speaker’s emotional state. This analysis reveals the correlation between some definite emotional states and reactions, and the speaking voice prosodic parameters.

Thus, the typical emotions expressed by the lexical units verbalizing melody are anger, fear, indignation, contempt, threat, and reproach. Sadness and offence are rendered by the monotonous voice. Positive emotions of joy and tenderness are conveyed by the phonation verbs "to chirp" and "to sing-song", and by the adverb "mildly". The following examples illustrate the above-said:

*"Called Tom in paranoid desperation to see if he wanted to go out tonight. 'Sorry,' he chirped, 'I'm taking Jerome to the PACT party at the Groucho Club.' Oh, God, I hate when Tom is happy, confident and getting on well with Jerome…" (*H. Fielding).

*"That was where she was, she was on the bloody roof. 'What's the matter with you?' said Daniel. 'No-thing,' I sing-songed gaily, flopping into the sitting room. 'Just a little tired from the party' " (*H. Fielding).

" 'How are you?' asked Chessie. 'OK', said Ricky flatly. Then he was almost sobbing. 'No, I'm f-f-f-ucking not. I m-miss you.' " (J. Cooper).

Loudness can express a wide range of negative and positive emotions. For a loud voice it is possible to convey practically any positive and negative emotional states. Lowered loudness is typical for sadness, despair, grief, sympathy, anger and tenderness.

For example: *"... Barban cried in a voice that shook everybody, a voice for cavalry: 'Do you want to step out here – we're only a mile from the hotel and you can walk it or I'll drag you there. You've got to shut up and shut your wife up!' "* (F. S. Fitzerald). In this example the character feels angry that is clear from the speech situation. It is noteworthy that the verb *to cry* is very often used with the words directly nominating the emotions of anger and fury (*cried really angry / angrily, furiously, etc.*)

In the next example the loud voice marks surprise with a negative charge: *"I'm a little tired, I think. Probably because I missed my dinner -' 'What?' she exclaimed aghast. 'I was certain you'd had it at Bellevue…' "* (A. Cronin).

Soft and low voice may express anxiety: *" 'I've been looking everywhere for you, Jack,' she said. She spoke softly. 'When I found out you were in a place like this I thought you must be broke or sick…' Joan's dress was black. Her voice was low and serene."* (I. Shaw).

In the following speech situation the character expresses anger in a low voice: *"There was a silence. Then Cindy asserted, low-voiced and savagely, 'Listen to me! You'd better get here tonight, and soon. If you don't come, or if you do come and embarrass me by saying anything of what you did just now, it'll be the end. Do you understand?' "* (A. Hailey).

As to the positive emotions loud voices can render joy, admiration, delight, surprise with a positive charge; soft voices – tenderness:

" 'Darling, Brian,' Her voice was gentle. 'I'm not making a joke. Really, I'm not.'... When they had kissed again, long and passionately, she put her face against his shoulder. ... 'Hold me,' she whispered, 'Hold me.' " (A. Hailey).

" 'Singletons!' I shouted happily. 'Hurrah for the Singletons!' " (H. Fielding).

Tempo is a prosodic parameter that can express very limited range of emotions. Quickened tempo and slow tempo usually render the same emotional states such as sadness, confusion, embarrassment, fear, awkwardness.

For instance*: "The gun pointed very accurately at my chest… The knuckles hit the door again, and a deep voice called: 'Open the door. Police.' Morelli's lower lip crawled up to lap the upper, and the whites of his eyes began to show under the irises. 'You son of a bitch,' he said slowly…"* (J. H. Chase). In this speech situation the adverb "*slowly"* expresses fury. The phrase *'You son of a bitch'* emphasizes the nature of the character's emotional state.

In the following example the nature of the emotion is revealed in the adverb *"angrily"* while the quickened tempo is verbalized by the phonation verb *to sputter*: *"Adrian Nesbitson was struggling to his feet. 'Never! Never! Never!' His face brick-red, the old man sputtered angrily"* (F. S. Fitzerald).

A Quickened tempo as well as a slow tempo can manifest such emotions as embarrassment, confusion, awkwardness: *“ ‘But I want to tell you.’ She was speaking more hurriedly now, a shade less confidently. ‘There hasn’t been anybody else; there couldn’t be. You see… I happen to love you.’ For the first time her eyes were lowered. She went on, ‘I think I did… I know I did… love you, I mean – even before that time in San Francisco.’ ” (*J. Cooper).

The only lexical unit nominating tempo - *to gush* has a positive charge and therefore expresses positive emotions, for instance, such as admiration: *“She had an attractive way of turning up casually… Today she was especially charming in a black coat and skirt with a necklet of rich brown fur about her throat… Freddie gushed: ‘You’re lucky devil, if ever I met one. She’s a nice thing.’ ” (*A. Cronin).

Thus, the means of the tempo verbalization are tended to express negative emotions (except indignation, despair, threat, suspicion) and appeared to be not typical means for the positive emotional states.

The prosodic parameter of voice quality is characterized by the ability to convey a wide range of the emotional states. It should be noted that for the present moment there are no clear data about constant correlations between definite voice qualities and definite emotional states expressed by them. However, some voice qualities are associated with concrete emotions. For instance, the tense voice quality is typical for fury, indignation and repulsion; husky and muffled voices are usually associated with emotionally tensed situations. That fact proves their tendency to show any negative emotions. Dark, gloomy voice qualities are typical for sadness and melancholy. Joy and surprise with a positive charge can be rendered by a breathy voice. On the whole, a high degree of positive estimation and therefore positive emotions are connected with such voice qualities as mellow, velvety, resonant. A high degree of negative estimation and negative emotional states are expressed by tensed, creaky, throaty voices.

The analysis of the original belles-lettres texts allows to come to the conclusion that hoarse, careless and cold voice qualities are typical for contempt;

reproach is usually expressed by tense and bitter / sour voices. Fear is often manifested by husky and shaky voice qualities. Let us illustrate the above-said with the example:

Anger → tight voice quality: *"Hating the other man, his own voice tight with anger, James Howden exclaimed, 'It hasn't all been softness. There's a list from two world wars you may have heard of: St. Eloi, Vimy, Dieppe, Sicily, Ortona, Normandy…' "*(A. Hailey).

Fear → husky and unsteady voice qualities: *"I could hear Roy's breathing coming fast through his short, thick nose, and I wondered if he could hear my heart pounding… 'That's one of them out of the way,' Roy said. His voice was husky and unsteady." (*J. H. Chase).

Contempt → careless voice quality: *"Carlier said to Kayerts in a careless tone: 'I say, chief, I might just as well give him (Makola) a lift with this lot into the store.'... Whenever they mentioned Makola's name they always added to it an opprobrious epithet."* (J. Conrad).

Tenderness → husky voice quality: *" 'I want you, Milly.'... He lifted her head and kissed her…Hesitancy assailed her. 'Brian, no! Please, no!' But she made no effort to pull away…Now she knew she cared. Afterwards, there would be loneliness again; the sense of loss. But now…now… eyes closed, her body trembled… now. 'All right.' Her voice was husky."* (A. Hailey).

Approval → light voice quality: *" 'My!' Milly said. 'You are in a forceful mood.' ... 'it's because sometimes I get downright weary of stupid hicks like Warrender who make political farts and then look for me to clear up the mess.' 'Apart from the vulgarity,' Milly said lightly, 'isn't that a mixed metaphor?' (*A. Hailey).

It should be noted that light, sweet, bright voices can be used by the speakers on purpose to disguise their true negative emotional states, trying to pretend that they feel positive emotions:

‘*I’m not gonna socialize with him’, said Bart rudely. ‘I just want to know if the guy’s any good.’ ‘My husband has so much charm,’ said Chessie lightly. […] smiling evilly, almost toadlike, she (Bibi) turned to Chessie, ‘I know dad’s cute, but how could you dump Ricky? He is to die for. We spent a lot of time together.’ ‘Really?’ Chessie drew slightly faster on her cigarette. ‘He’s being such a wow with all the movie stars he’s coaching’ […] ‘Everyone’s beautiful there.’ ‘You must be the exception,’ said Chessie sweetly, but she was balling her napkin” (*J. Coope).

In this situation the character actually feels irritation and dissatisfaction which she tries to hide speaking in a light, sweet voice.

Thus, voice quality can express practically any emotional states. This conclusion coincides with the results of the phonetic experimental researches.

It is necessary to mention the cases when the lexical units verbalize a combination of the prosodic characteristics in the emotionally colored communicative situations. The spectre of emotions expressed by such lexical units is rather limited. The more prosodic characteristics are verbalized the less emotional states these lexical units express. For example, the lexical units verbalizing melody and tempo, melody and loudness, melody and voice quality can express any negative emotions; meanwhile the words nominating three or four prosodic characteristics express quite limited set of emotions. The lexical units verbalizing melody + loudness + voice quality express anger, despair, surprise and irony; the words nominating melody + loudness + tempo convey anger, fear, despair; melody + voice quality + tempo render anger, fear, contempt, indignation; the lexical units verbalizing four prosodic characteristics melody + loudness + voice quality + tempo express only anger and contempt.

Potential of the lexical units that verbalize the combinations of the prosodic characteristics is conditioned by their semes. It is explained by the fact that definite modulations of the prosodic characteristics are associated with definite emotional states, and it finds its reflection in speech.

The lexical units the meanings of which include the semantic components "increased loudness" in combination with the semantic component "high-pitched" (to scream, to yell, etc.), "quivering" (to bluster), "deep" (to boom, to roar, etc.), "resonant" (to ring, ring), "low-pitched" + "deep" + "hollow" (to bellow, bellow), "high-pitched" + "quickened tempo" (to bark, bark), "high-pitched" + "prolonged" (to wail) demonstrate a strong tendency to express anger and indignation. For instance:

"But his mother had just about gone crazy. Do you want to be one of those nasty-fuckers? she had screamed at him" (S. King). In this example the emotional state of fury is rendered by the phonation verb "to scream" that verbalizes two prosodic characteristics – increased loudness and high pitch ("to cry loudly" + "high, shrill").

In the next fragment such emotions as indignation and irritation are expressed by the phonation verb "to wail" that nominates three prosodic characteristics ("loud" + "high-pitched" + "prolonged"): *'It's too absurd,' Mrs. Dersingham wailed. 'This wretched girl's smashed everything and ruined the dinner, and now she's going off into a fit or something out of sheer temper. And it's all her own fault…' "* (J. B. Priestly).

The combination of such prosodic characteristics as "high-pitched" or "low-pitched" and "long sound" verbalized by the phonation verbs *to moan, to whine, whining, whiney, whine, moaning*, is associated with despair, offence, sadness. As in the following situation – sadness is conveyed by the lexical unit "whining":

"His face fell to an exaggerated sadness. His voice took a whining undertone. 'I ain't had a thing to do today. Maybe I won't have no supper tonight. You see I'm off my regular road" (C. Aiken).

The combination of the diminished loudness and of tense, careless, or shaking voice qualities is also typical for rendering despair, offence, and sadness. For instance, "sheep-voiced" is a combination of such semantic components as

"high-pitched" and "prolonged". With the help of this lexical unit the character's depressed, sad emotional state is expressed in the given example:

"... Jude sheep-voiced out, 'Bridge, are you there? Pick up, pick up. Come on, Bridge, pleeeeeease.' " (H. Fielding).

For the emotions of shame and confusion the combination of lowered loudness and careless or quivering voice quality is typical:

" 'That's all I bloody need,' snarled Perdita. Daisy blushed. 'I'm sorry to barge in,' she faltered. 'I just came to see how Luke was. How are you?' " [330, 481]. In this communicative situation the character expresses confusion speaking in a low, quivering voice that is verbalized by the verb "to falter".

The rest of the negative emotional states can be rendered by various combinations of prosodic characteristics. For instance, reproach can be expressed by the lexical units nominating low pitch and deep voice quality (*to grunt*), by the lexical units nominating high pitch and creaky voice quality (*to grate*), by the phonation verbs verbalizing increased loudness and prolonged sounding (*to howl*), and by the phonation verbs nominating different levels of loudness and low pitch (*to grumble*). It actually means that not all the combinations of the prosodic characteristics have a clear connection with definite emotional states.

At first sight, it seems obvious that a positive or a negative charge of the semantic components defines the emotional states (positive or negative) conveyed by this or that lexical unit. However, lexical units with a positive charge can express negative emotional states. For example, the verb *to twitter* is associated with "a chirping female voice", but can express a negative emotional state in the male speaking voice:

"John felt sure the phrase 'I really couldn't say' had been the vicar's way of avoiding a direct lie [...] 'It's no good, Mr. Bryan,' twittered the vicar, 'it's no good whatever my trying to keep back the facts, which of course anyone in the village would be only too willing to supply. Since you ask I must confess that,

though of course the matter is one of mere – the merest - coincidence, I do admit that under the present – er – happy circumstances – I did prefer not to tell your charming lady that the second unfortunate young woman who was – er – taken so young – the one whom she inquired about – had also –er – died in this house.' " (L. P. Hartley). In this speech situation the male character feels emotional tension, he is disturbed and worried, that is expressed by the phonation verb "to twitter".

In the following situation the emotion of fear is conveyed with the help of the verb *to coo*, that is usually associated with a pleasant type of voice ("to make soft, quiet sounds"):

" 'Ooh, the responsibility!' she cooed with monstrous, buzzing sarcasm, and Johnny finally realized she was afraid. The fear was coming off her in pulsing, noisome waves – that was what was making his headache worse… 'The ree-spon-si-bil-i-tee! Isn't that big of you, my God, yes. I won't have my boy waked up in the middle of the night…' " (H. Fielding).

As for the positive emotional states there is only one clear association of the phonation verbs *to croon, to murmur, to coo* that verbalize diminished loudness and low pitch, and *to mumble* nominating diminished loudness and careless voice quality, with tenderness. For example:

"Tea party was nightmare scenario: me plus roomful of power mothers one of whom had a four-week-old baby. 'Isn't he sweet?' cooed Sarah de Lisle…" (H. Fielding).

" 'Bles-sed pre-cious,' she crooned, holding out her arms. 'Come to your own mother that loves you.' " (S. King).

The rest of the positive emotional states (joy, approval, surprise with a positive charge) can be manifested by the lexical units varying in their semantic components. The only exceptions are the phonation verbs to bark and *to burst* which are typical for the emotion of surprise:

“ ‘Dear Jesus Lord and Savior,’ Brutal whispered. His eyes appeared to be in danger of dropping right out of his face. ‘What?’ Harry almost barked. ‘What?’ ‘The tail! Don't you see it? The tail!’ (A. Hailey).

The emotion of joy can be expressed by the lexical units that verbalize various combinations: “low pitch” + “long sound” (*to moan*), “loud” + “deep” (*to bellow*), “high-pitched” + “loud” (*to trill, to shriek*), “loud” + “resonant” (*to sing*), “quick” + “careless” (*to babble, to gabble*). The emotional state of joy can be true and false, as in the following example, where the character only pretends that she is happy to hear her acquaintance’s voice on the phone:

“Was just on my way out when the phone rang. ‘Bridget, it’s Gary!’ ‘Oh hi!’ I trilled hysterically. ‘Where are you?’ ‘In the nick, aren’t I? Thanks for the card. That was sweet. Sweet. It really means the world.’ ‘Oh, hahahaha,’ I laughed nervously.” (H. Fielding).

Summing up the above-said, we can state that we have managed to single out the set of the definite verbal means typical for definite emotional states which reflect the associations between the main prosodic characteristics (melody, loudness, tempo and voice quality), including their combinations, and the emotional states existing in the English speakers’ minds.

Questions for self-control:

1. How does a person’s physical state influence his / her voice prosodic characteristics? (Dwell on such states as inflammation of the organs of speech, alcohol intoxication, excessive smoking, fatigue).
2. Speak about the source-related and the filter-related vocal cues of the vocal expression of emotions.

3. Describe the prosodic characteristics pattern of such emotions as joy, anger, fear and boredom.

4. What positive and negative emotions are typically expressed by the melody components? Compile the vocabulary of the lexical units verbalizing melody for positive and negative emotions.

5. Dwell on the loudness and the emotions this prosodic characteristic can express.

Discussion questions:

1. Study the typical emotional states expressed by tempo: compare the acquired list of emotions with the lists of emotions expressed by loudness and melody. How does the range of emotions vary in each case? Why?

2. Agree or disagree with the following statement "Voice quality can express practically any emotional state". Prove your viewpoint.

3. How do trained professionals (actors, singers, public speakers) control their vocal expressions to convey specific emotions or physical states effectively?

4. To what extent can you accurately detect and interpret a speaker's emotional state based on vocal cues alone? What factors (e.g. familiarity, cultural background, individual differences) influence your perception?

2.3. Teacher's and lecturer's voice: communicative value

Teacher's accurate voice transmission is very important since it is a factor influencing student's progress. It was found from the precedent study conducted by V. Morton, D.R. Watson that speaker's acoustic quality affects the children's ability of acquiring language and teacher's voice could influence the student's degree of concentration. So the value of teacher's voice is very high in the classroom because it is a major communication tool for the information transmission and it affects the learning ability of students.

Galan (2014), in her study on the use of teachers' voices as an effective teaching tool, found out that vocal techniques significantly impact student engagement and comprehension. The scientist suggests the following techniques for teachers to improve their interaction with children in the classroom:

1. Using Inflection and Vocal Variety – Teachers should express excitement and passion through their voices. Changing the tone and using different expressions help to make lessons more interesting and keep students engaged.

2. Slowing Down Speech – Speaking slowly and clearly allows students to understand better. Pausing between ideas gives children time to think and encourages them to participate.

3. Controlling Volume – Varying voice volume can help emphasize important points. Speaking softly, like a whisper, can grab students' attention and make them curious.

4. Including Sounds and Voices – Adding sounds like music, animal noises, or character voices makes lessons more enjoyable and captures children's imagination.

5. Using Expressive Voice – Teachers should use a kind, supportive, and calm voice to encourage students, especially those struggling with new ideas. A gentle voice can also help calm down noisy classes, while an enthusiastic tone can motivate children.

Galan highlights that voice, tone, and facial expressions are powerful teaching tools. When used effectively, they help students become more engaged and expressive in their own communication.

In her research, Claudia Camargo (2005) analyzes the concept of the teacher's voice and how it develops within the teaching profession. She explores the factors influencing its formation and its significance in the educational environment. The teacher's voice is not merely a matter of speech, tone, or communication style; rather, it represents a combination of professional beliefs, pedagogical experience, and interaction with students. Camargo highlights several key factors that shape the teacher's voice, including education and professional training, personal experiences, the socio-cultural context, and institutional regulations. She emphasizes that the teacher's voice plays a crucial role in education, not only as a tool for delivering knowledge but also as a means of building trust, motivating students, and shaping the classroom dynamic (Camargo, 2005).

Shah (2012) stated that the teachers strongly depend on their voices to the extent that the volume of the voice may not only transmit information but also mood and feelings that will generally impact student's learning.

Morton (1962) also found that voice deficiencies and mannerisms can destroy the teacher's effectiveness. Some teachers have voices that do not seem to fit their physical build.

Henderer (2014), conducted a research on the impact of a teacher's tone of voice on student academic achievement. The study was based on the idea that communication in the classroom is not just about the words spoken but also about how they are delivered. He categorized voice tones based on key emotional qualities such as warmth, anxiety, and irritation. His findings showed that students whose teachers had a warm and sympathetic voice demonstrated greater academic improvement compared to students whose teachers had a cooler, more anxious, or irritated tone. Additionally, he found that teachers who exhibited a warm tone of voice also tended to display higher levels of empathy, regard, and genuineness in their interactions with students. This suggested that tone of voice is not only a reflection of a teacher's emotional state but also an indicator of their overall effectiveness in encouraging a positive classroom environment.

Koch (2017) analyzed teachers' use of voice in early childhood education and explored how different vocal tones influence teacher-child interactions. She stated that teachers take different roles in educational settings when dealing with children and use their voices with different pitches, melodies, and loudness. The scientist singled out four main roles that influence a teacher's voice characteristics, such as mentor, nurturer, controller, and playmate. Each role is associated with a specific pitch, melody, and loudness, which shape how children experience teacher interactions. Teachers in the mentor role typically use low pitch and a low pitch range but with a high or medium volume. They use it with the pedagogical intention to inform, explain, ask questions, demonstrate, or require a specific action from children voluntarily. Those in the nurturer role typically speak in a high pitch and with a high pitch range. The volume is low, the tone soft, and empathy is expressed. The main pedagogical intention expressed by this role is to praise, smile, and encourage, or they offer support and comfort and are typically listening and asking questions in an empathic and soft manner. Teachers who act in

controller roles have such voice characteristics as low pitch and low pitch range, whereas the volume seems louder, the tone more harsh, the speed rate higher and the facial expression serious and slightly disapproving, and often use it to correct, instruct, or scold the children. In contrast, teachers who take on the playmate role use a melodic voice with a high pitch-range, and high volume - features that are similar to a typical, child voice. Koch concludes that understanding and intentionally adjusting vocal tone can improve teacher-child relationships, support emotional development, and create a more engaging learning environment.

Researchers have also found that college students prefer instructors who communicate in a relational manner (i.e., the open, attentive, friendly, and relaxed attributes) over instructors who communicate in an authoritative manner (i.e., the dominant, contentious, and precise attributes). Better instructors are rated as being more dramatic, relaxed, open, impression leaving, and friendly than worse instructors. Furthermore, students report greater amounts of affective, behavioral, and cognitive learning when their instructors are friendly, relaxed, and impression leaving (Littlejohn, 2009).

Moreover, studies on lecture voice and its communicative volume highlight that confident, persuasive, interested, animated, and attractive voices significantly impact student engagement. In the research conducted at Ushynsky University, the communicative properties of lecturer's voice were explored, with a focus on how these properties influence the delivery of lectures. Fifty-three students from the Department of Foreign Languages evaluated key vocal traits essential for effective lecturing. They identified prosodic elements such as pitch, loudness, tempo, and direction of the tone movement, which influence the perceived effectiveness of a lecture. Thus, voice is perceived as confident when it employs mid or low pitch level, normal or narrowed pitch range, falling tones, normal or increased loudness, and mid-tempo. Mid-pitch level, widened pitch range, rising and complex tones, normal loudness, and moderate tempo communicate interest in the lecturer's voice. Animated voice is marked by such perceived characteristics as high or mid-pitch level, normal pitch range, rising and complex tones, increased loudness, and

moderate tempo. Persuasiveness in lecturer's voice is communicated by low pitch level, normal pitch range, falling tones, normal or increased loudness, and mid or slow tempo (Yeremenko, Yumrukuz, 2019).

To wrap up, the teacher's voice plays a vital role in the classroom as a tool for communication, influencing students' engagement and learning. Teachers can effectively use tone, volume, inflection, and expression to capture students' attention, convey emotions, and foster a positive learning environment, ultimately impacting students' academic success and motivation.

Questions for self-control:

1. Dwell upon the vocal qualities essential for a teacher to effectively communicate with students.
2. How does a teacher's voice affect students' ability to acquire language, according to the research by Morton and Watson?
3. What role does the teacher's voice tone play in classroom management and student concentration?
4. Explain how a teacher's voice can influence the emotional climate in the classroom and student engagement.

Discussion questions:

1. How does research on acoustic quality (Morton & Watson) inform our understanding of the relationship between a teacher's voice and students' language acquisition? What specific qualities are most beneficial?
2. In what ways might a teacher's vocal speed and clarity impact students' cognitive load during lesson delivery? How can slowing down speech optimize learning?
3. How do paralinguistic features (e.g., pitch, tone, volume) influence the emotional climate of a classroom? What are the implications for students' affective responses?

4. Considering Henderer's findings, how does the tone of voice indirectly affect academic achievement? What mechanisms might underlie this relationship?

5. How do teachers' expressive vocal qualities shape students' perceptions of their competence and approachability? What are the potential outcomes of positive teacher-student relationships?

6. How do Koch's findings on voice use in early childhood education compare to vocal strategies employed in secondary or higher education? What unique considerations arise in each context?

7. What research methodologies could be employed to further investigate the impact of vocal characteristics on student learning outcomes? What variables would be essential to control?

TASKS AND ACTIVITIES

I. Voice and personality.

1. Read the novel and pick out the descriptions of Daisy's voice characteristics from "The Great Gatsby" by F.S. Fitzerald.

- Do Daisy's voice characteristics match the descriptions of her appearance?
- Analyze Daisy's voice characteristics and give your opinion on her inner qualities. How do Daisy's voice characteristics reflect her personality?
- What are your first and final impressions of this character? How have the personage's voice characteristics influenced your impressions? Portray the character.

2. Watch two screen adaptations of "The Great Gatsby" (directed by Jack Clayton in 1974 https://surl.li/ilungg and directed by Baz Lurman in 2013 https://surl.li/apntdi) and do the following tasks:

- Describe Gatsby's and Daisy's voices.
- Compare the characters' voices of different actors / actresses in the 1974 and in the 2013 screen versions. Note down the differences. Which of the actors' / actresses' voices better reflect the original characters' personalities created by F.S. Fitzerald? Prove your choice.

3. Scan the novel "The Green mile" by S. King for the main character's (John Cofe's) descriptions.

- Write down John Cofe's voice prosodic characteristics.
- Compare the protagonist's appearance and his voice. Why do they correlate? Do his voice prosodic characteristics reflect his inner qualities or not? Portray the character

4. Watch "The Green mile" screen adaptation directed by Frank Darabont in 1999 (https://surl.li/wuwlyn).

- Write the description of John Cofe's speaking voice. Does it coincide with your previous description based on the text?

5. Prepare a poster on one of the following topics:

"Vocal stereotypes in different cultures"

"Vocal characteristics reflecting the speaker's personality"

"Vocal attractiveness stereotypes and the speaker's appearance"

II. Professional voices.

6. Read the novel by A. Hailey "In High Places", pick out the prosodic characteristics of the "political voices" and do the following tasks:

- Compile the list of words used in the political voices' descriptions.
- Use the obtained vocabulary to determine the main prosodic characteristics of "political voice".

7. a) Listen to one of Boris Johnson's political speeches.

- Employ the compiled vocabulary to describe Boris Johnson's political voice.
- Group discussion. What do Boris Johnson's voice prosodic characteristics tell you about his personality? What can you tell about him as a political figure?

b) Listen to one of Donald Trump's political speeches.

- Employ the compiled vocabulary and the vocabulary given in the app. (p.) to describe B. Obama's political voice.
- Group discussion. What do Barack Obama's "political voice" tell you about his personality? What can you tell about him as a political figure?

c) Describe B. Johnson's and D. Trump's "political" voices.

- Can you note similar and distinguishing features of the "British political voice" and "American political voice"?

7. a) Choose and listen to one of Liz Truss' speeches:

- While listening note down Liz Truss' political voice prosodic characteristics (loudness, tempo, melody, voice quality).
- How does Liz Truss' "political voice" portrait reflect her personality? Share your impressions with the group-mates.

b) Choose and listen to one of K. Harris' speeches:

- Describe K. Harris' "political" voice.
- Try to describe K. Harris' personality.

c) Compare British female political voice and American female political voice. Write down their similarities and differences.

III. Voice and nationality.

8. a) Scan the following novels for the descriptions of various national voices and write down their main prosodic characteristics:

- "Angel pavement" by J.B. Priestly;
- "Nightwork" by I. Shaw;
- "Citadel" by A. Cronin.

b) Make a presentation of one of the national voices you have described.

9. Read the novel "Bridget Jones's Diary" by H. Fielding and pick out the descriptions of the lawyer's professional voice.

- What typical prosodic characteristic of the lawyer's voice have you managed to note down? Analyze the semantic value of the lexical units that verbalize these characteristics.
- Watch the screen adaptation of this novel directed by Sharon Magine (2001) and describe the lawyer's professional voice.

10. Watch BBC news programmes and different MTV programmes:

- Compare the voice prosodic characteristics of the news announcers and of the VJs'.
- Depict the news and entertainment programme announcers' typical speaking voice prosodic characteristics.

11. Make a report about the professional vocal stereotypes that exist in the English speaking community.

IV. Voice and emotions.

12. Make a record of your voice and your group-mates' voices in the emotionally coloured situations. Listen to the voice samples and describe the emotions and the voice prosodic characteristics that express these emotions. Compare your results with the results obtained by your group-mates.

13. Conduct a small experiment with your group-mates. One group will record emotionally neutral sentences while expressing different emotions using only vocal cues (without facial expressions). The other group will listen and guess the emotion. Evaluate the accuracy of emotion perception and discuss factors influencing listeners' interpretation.

14. Comparative Study: Human vs. AI Emotion Recognition.

Choose a speech-based emotion recognition AI (e.g., Google's AI) and compare its performance with human listeners in identifying emotions from recorded speech samples.

Steps:

- Collect or find speech recordings with different emotions.
- Ask your friends / relatives / group-mates label them.
- Input them into AI software and compare results.
- Discuss the advantages and weak points of AI in recognizing vocal emotions compared to humans.

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