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The impact of language and culture on recognition of vocal emotions

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Abstract:

The aim of my study is to find out to what extent the understanding of vocal emotions could depend on linguistic and cultural affiliation. The research was based on the understanding of moderately expressed vocal emotions (happiness, anger, sadness,neutrality) of each sentence in Chinese speech without seeing the speaker and Urdu native speakers were asked to recognize the target emotion expressed in sentences that have no knowledge of Chinese language. Also some Urdu sentences were presented to them to see the cultural affiliation of speakers belonging to same culture and backgrounds. It also based on to test the hypothesis of universality and similarity. The listening test was consisting of total hundred students from NUML university of Faisalabad selected randomly out of which thirty were from Chinese class who were learning Chinese as a second language. The results were contradictory to universal hypothesis as most of students were able to understand the emotions of Happiness and Anger at a higher rate and a moderate understanding of Neutral emotion and least understanding of Sad Emotion. Also cultural contrast was seen between people belonging to same culture and backgrounds. This article indicated that genealogical relation of languages and similarity of cultural values are advantages in recognizing vocal emotions and people may have their own thoughts even they are belonging to same culture and backgrounds, but the change of language and culture changes the emotions and create confusions. The article contains the evidence research data that point out various questions and answers of it through practical approach. The study contains the tables and percentages of each emotions understanding by Cross-cultural communication and open gate for further researches by ariseing various questions.

Key words: Cultural affiliation, vocal emotions, Universal hypothesis, Cross-cultural communication, practical approach.

Introduction:

The debate on impact of Language and Culture on understanding vocal communication has been investigating since a long time ago. The fact is that understanding emotions from facial expressions and taking interpretation are quite easy but interpreting emotions from vocal communication is difficult especially in totally different cultures. Many researches found different point of views on this topic. Effective communication goes beyond words,

encompassing body language, facial expressions, and emotions. Personal space, gestures, and eye contact all play a role in connecting with others during conversations. Even if we don't share a language, understanding someone's feelings becomes easier through their tone, facial expressions, and gestures. Research suggests that basic emotions like happiness, sadness, and anger are universally recognizable, but how we express and interpret emotions is influenced by culture and language. In essence, while some emotions are universally understood, the nuances depend on cultural and linguistic contexts.(Altrov 2013, Altrov and Pajupuu 2010, Elfenbein 2013, Kamaruddin et al. 2012, and Pell et al. 2009). Cross-cultural research on the recognition of emotions from oral speech has provided evidence for universality as well as for cultural specificity (e.g. Altrov 2013, Bryant and Barrett 2008, and Jürgens etal. 2013).

The other fact is that there is in-group-advantage in almost every culture. People are able to recognize emotions of their culture very quickly. Tone of once voice is an ultimate way of understanding once emotions. Posed emotions are discouraged in researching this topic. On the other hand, if we see recognition of emotions of different cultures, it's difficult to understand the exact targeted emotions from the vocal sounds. People often mix emotions and do not reach the target emotions which also leads to misinterpreting the communication. Every culture have their cultural specific emotion expressed in different cultures just like the different dialects of language. It's seen that people are not able to understand vocal emotions despite of having same language. Although language express the way we express emotions as well as every language have some different words to various same things so in this way the expression of emotions in every language is also cultural specific.Every culture have their own customs and traditions which also shows that their are subtle differences between every culture. The emotions of happiness and angry are recognized most accurately between different cultures as most of cultures express these emotions almost in same manner as compare to sadness.

The current research was based on recognition of emotions of Chinese native speakers by Urdu native speaking individuals living in Pakistan having no idea of Chinese language. It also involves some Chinese speaking individuals who learn Chinese as a second language. And the affiliation of cultural background in the recognition of Vocal emotions of Chinese and their particular culture. Chinese language is also consider as a difficult language on the world according to a study which also tells that many native Chinese are unable to understand Chinese language properly. Speaking Chinese language is more difficult than writing. The study will deal with two major hypothesis:

1. The hypothesis of universality

2. The hypothesis of similarity

As it is known that the basic emotions (happiness, sadness, angry,neutral) are universal but various previous researches shows distinction in some of the basic emotions. The term emotion refers to complex experience of consciousness, a strong feeling derived from someone's surroundings, mood, and tone. The tone of voice effects a lot in understanding emotions for

example the tone that is slow in speed and lightly uttering the words without putting stress can predict that the person is portraying emotion of sadness wheres the tone that is more joyful,putting stress and loud can potray the emotion of happiness but in anger the sound is loud and words are being stressed so their comes the confusion as well. On the basis of similarity of cultures it is almost easy for people to understand each other emotions but if we see in Pakistan there are probably 15 different cultures and in China probably 56 and every culture has various distinctions from each other and many researches have seen that people leaving in same country but different cultures are also unable to understand each others emotions exactly because of difference of customes,traditions and values. In this case similarity among different cultures of same country is need to be investigated.

The research arises the questions:

1. Whether there is cultural specific emotion utterances?

2. Wether there is difference of recognition based on gender roles?

3.Do people from different cultural and linguistic background identify emotions of Chinese language accurately, without confusing the target emotions with other emotion?

4. Do their is similarity of thought based on similar cultural backgrounds and surroundings?

The questions come to investigation after examining a long previous data. In today's world people of different languages and background are interacting with one another frequently because people want to know about each other cultures and histories. It will be very helpful in understanding almost every culture .

Literature Review:

A study was conducted that introduce a tool for evaluating adults' capacity to interpret emotions conveyed through speech. Following an explanation of how the Diagnostic Analysis of Nonverbal Accuracy-Adult Prosody (DANVAZ-AP) test was devised, five principles were formulated to direct the collection of relevant evidence supporting the validity of the measure. Findings from a series of trials lent credence to all these principles. Thus, it was determined that the DANVA2-AP had adequately fulfilled the basic criteria for demonstrating construct validity. And that DANVA2-AP is different from tests measuring general cognitive abilities. This suggests it's a useful tool for understanding how people perceive emotions in speech. However, future research needs to investigate whether processing auditory information separately affects outcomes compared to other nonverbal channels. Understanding how individual differences in auditory processing impact interpersonal interactions, especially in situations reliant on tone of voice, is crucial.(Baum and Nowicki, 1998)

Speech carries a lot of personal information, including emotions. Studies show that the way we speak gives clues about how aroused we are and how pleasant our emotions are. People are pretty good at guessing emotions from speech, even better than expected. Understanding these aspects of speech involves knowing how individual differences, like unique speech patterns, play a role. Speech acoustics, like tone and pitch, convey personal information beyond just the words spoken, such as gender or

identity. However, it also mentions some limitations in traditional research methods and suggests considering new approaches to better understand this topic.(Bachorowski, 1999)

The consistency found in research regarding the production and perception of emotional speech, despite the numerous factors influencing it. It emphasizes that humans consistently modify their speech to express different emotions, and these emotions are often successfully detected by various populations based on identifiable acoustic parameters. However, it acknowledges the need for further studies to quantify the contribution of culture, language, and social strategy to emotional vocal communication. There are gaps in understanding the relative influence of cultural, linguistic, and social factors on emotional speech, requiring a coordinated interdisciplinary approach for further exploration.(Johnstone and Scherer, 2000)

A study investigates the alignment between theoretical predictions regarding vocal expression patterns in natural emotions and empirical data from actors' portrayals. Professional radio actors depicted various emotions, and judges' recognition accuracy was evaluated. While disgust was less recognized, other emotions achieved an average recognition accuracy of 62.8%. Acoustic analysis of the portrayals revealed significant differences between emotions, generally supporting theoretical predictions. The paper discusses how actors ‘portrayals of emotions through voice can help us understand how emotions are expressed and understood in speech. It highlights the need for improvements in the research methods used. Despite using professional actors, there were significant differences in their portrayals, which affects the reliability of the results. The study also emphasizes the importance of including both male and female actors in future research due to observed gender differences. Additionally, it mentions the potential for studying how emotions are expressed in voice to shed light on expressed in voice to shed light on cultural and gender differences. Overall, the study calls for more comprehensive and systematic approaches to investigating emotion expression in speech, especially considering gender variations and actor diversity.(Scherer *et al.*, 2001)

The main idea is that while some emotions are universally recognized, cultural differences significantly influence how we understand and express emotions. This challenges previous theories and emphasizes the importance of considering both cultural background and language in studying cross-cultural differences in emotion recognition. The study suggests that emotions can be understood differently across cultures, similar to how language dialects vary, highlighting the presence of emotional "dialects" shaped by cultural, social, and geographical factors(Elfenbein and Ambady, 2002)

Studying how speech is related to emotions is tricky because describing emotions is complex. The word "emotion" itself can be tricky, as it might not cover all related feelings. Everyday words for emotions are many and varied, making it hard to categorize them. There are different ways to describe emotions, like biological changes or psychological dimensions like positivity or activation level. To understand emotions better, we need descriptions that consider time and how different emotions interact. Different methods are useful for different goals in studying emotions and speech. However, it highlights a gap in our understanding of how emotions are expressed in everyday interactions, particularly through speech. It suggests that while we can identify various emotional elements in speech, such as anger, distress, or attempts at control, there's a gap in our ability to fully coordinate and understand all these elements in real-time interactions. This gap makes it challenging to accurately interpret the emotional content of speech episodes.(Cowie and Cornelius, 2003)

A study was conducted to better understand how different cultures recognize emotions. They found that cultural differences in emotion recognition were better explained by how far apart the cultures are rather

than by specific cultural traits. This contradicts the idea that certain cultures are inherently better at recognizing certain emotions. The study found that the further apart two cultures are, the harder it is for them to understand each other's emotions. This suggests that distance between cultures, rather than cultural traits, plays a bigger role in how emotions are understood.(Elfenbein and Ambady, 2003)

The thesis suggests that vocal expressions convey discrete emotions, rather than blending into continuous dimensions. The study discusses limitations in the research on vocal expressions. Firstly, the studies had small sample sizes, which might affect how well the results apply to everyone. Secondly, some studies used only one speaker, making it hard to tell if the findings apply broadly. Also, creating synthetic speech for experiments is tricky and has only recently become advanced enough. Additionally, many studies used posed expressions, which may not be exactly like real-life expressions. Figuring out how similar posed and natural expressions are requiring more research. Finally, in real life, expressions are often expressions, which may not be exactly like real-life expressions. Figuring out how similar posed and natural expressions are requiring more research. Finally, in real life, expressions are often a mix of natural and posed, and intentionally acting out expressions can actually make people feel the emotions they're portraying. The thesis suggests that vocal expressions convey discrete emotions, meaning specific emotions like happiness, sadness, etc., rather than just general feelings. Now, researchers need to go beyond this basic understanding and explore more detailed questions, like how different aspects of emotions (like physiology or perception) influence vocal expressions, or how posed and natural expressions relate to each other.(Laukka, 2004)

The paragraph explains a study where researchers looked at how people match emotions in a person's voice with their facial expressions. They used a new test called the Facial Affect Decision Task (FADT). The results showed that when the emotions in the voice and face matched, people were quicker and more accurate at recognizing the emotion. This supports the idea that our brains use similar information from both the voice and face to understand emotions. The FADT could be useful for studying how people process emotions, both in healthy individuals and those with disorders.(Pell, 2005)

Understanding and managing emotions are crucial for adjusting well to different cultures. This study found that being able to recognize emotions, like anger or fear, helps international students adjust positively, while struggling with recognizing certain emotions can lead to difficulties. Being good at both recognizing and handling emotions independently helps with adjustment, showing that they each play separate roles in how well someone adapts to a new culture. The study found that recognizing certain emotions, like anger, can help international students adjust better to a new culture, while recognizing others, like contempt, fear, and sadness, may lead to worse adjustment. This could be because those who are good at recognizing anger may have been raised in families where negative emotions were less expressed, leading to fewer anger incidents in their lives. Conversely, those who are good at recognizing harder-to-identify emotions may be more sensitive to emotional signals and thus more affected by stress. However, the study had limitations, such as a small sample size and the possibility of self-selection self-selection bias among participants who already had experience living in the US. Additionally, the study only measured emotion recognition in others, not in oneself, which could have affected the results. Despite these limitations, the findings suggest that both emotion recognition and regulation independently contribute to intercultural adjustment, with each possibly influencing different aspects of the adjustment process.(Yoo *et al.*, 2006)

Researchers tested if English speakers can understand the emotions conveyed in a foreign language just by listening to the tone. They found that even though English listeners could pick up emotional cues from the tone of Arabic speech, they needed more exposure to the foreign language to fully understand the

emotions compared to their native language. it also examines how people understand emotions conveyed through the tone of a foreign language. It mentions using a task called the Facial Affect Decision Task to measure emotional understanding. The study focuses on two basic emotions, happiness and sadness, to see how English speakers are affected by the tone and length of emotional expressions in a foreign language. The results provide insights into how language and culture influence emotional understanding through tone, and how quickly people process emotions in their own language compared to a foreign one. The study suggests that testing listeners from various language backgrounds and using a wider range of emotions could help understand how people interpret emotions in foreign languages. It found that English speakers might focus more on specific emotional details when hearing emotions expressed in a different language like Arabic. This could be because different languages and cultures influence how emotions are expressed and understood.(Pell and Skorup, 2008)

It was explained that while vocal expressions of emotions are universal, they can be influenced by the structure of the language being spoken, affecting how they're expressed and understood. This study is unique because it compares the acoustic and perceptual aspects of vocal emotions across multiple languages in a rigorous way. By analyzing a large dataset from various speakers, it provides valuable insights into how emotions are recognized across languages and how acoustic features like pitch and speech rate play a role. It discusses the debate around using simulated emotions in research and explains why the study focused on vocal emotions simulated by lay actors. By tightly controlling the stimuli, the study aimed to understand how emotional cues are interpreted independently of language. However, it acknowledges that actors vary in their ability to convey emotions, and cultural differences in acting experience may affect the results. Despite these challenges, the study believes its findings are valuable for understanding how vocal emotions are communicated in real-life situations. However, the study doesn't address how prosody and semantics interact in emotional speech interpretation across languages, leaving room for further investigation in this area.(Pell *et al.*, 2009)

A study on how people from different cultures recognize emotions through sounds like screams and laughs. They found that basic emotions are understood by both Westerners and people from remote Namibian villages, but other emotions are only understood within their own culture. Negative emotions are more universally recognized, while positive ones vary across cultures.(Sauter *et al.*, 2010)

A study discusses the debate over whether emotions are expressed and recognized in the same way across different cultures. It suggests that the lack of clear answers is because previous research hasn't focused enough on the exact processes involved. The authors propose using a new framework to study this, which could help resolve the debate. They argue that while there's not enough data to conclude how emotions are expressed across cultures, there's strong evidence that people from different cultures can recognize each other's emotions well. They also mention research on how belonging to the same cultural group might affect this recognition. Overall, they suggest that a combination of universal mechanisms and cultural differences shapes how emotions are expressed and understood, but more research is needed to understand these processes better. It discusses two main theories about how emotions are expressed: basic emotion theories and componential emotion models. Basic emotion theories suggest that specific emotions like anger or joy have distinct facial expressions, while componential emotion models propose that facial expressions are influenced by individual appraisals and their impact on behavior. Research hasn't strongly supported either theory yet, so future studies should focus on testing them to better understand how cultural influences affect emotion expression. (Scherer *et al.*, 2011)

The analysis of emotional Estonian speech shows that different emotions affect how fast people speak. Joy and anger make speech faster, while sadness slows it down. These differences are more noticeable in

certain parts of sentences, like non-phrase-final words. Emotions also affect the duration of specific sounds in words, especially in words with certain structures. For example, in sad speech, certain sounds become more similar, changing the typical pattern. However, to fully understand how emotions influence Estonian speech, further research is needed to explore other types of words and sounds.(Tamuri and Mihkla, 2012)

The study looked at how kids between 5 and 10 years old understand emotions in people's voices. They found that even 5-year-olds can recognize different feelings in the way people speak. As kids get older, they get better at it. The study suggests that using sounds and speech to test how kids understand emotions could be useful for studying this skill in children of different ages.(Sauter *et al.*, 2013)

This study looked at how people from Chinese and British backgrounds recognize emotions in voice tones. They found that both groups were better at recognizing emotions when they came from their own cultural background. However, they also found that both groups used similar methods to recognize emotions in voices. So, it shows that there are some things everyone understands about emotions in voices, but there are also some differences based on culture.(Paulmann and Uskul, 2014)

The study discusses a study that looked at how people from different cultures react to emotions shown in faces and voices. They found that Chinese participants were more affected by vocal cues when paired with faces compared to English participants. This suggests that cultural differences influence how people process emotional signals from others, showing that cultural practices impact how our brains respond to emotional cues. It suggests that cultural background influences how people perceive emotions, even in the early stages of processing. In this study, Chinese participants showed stronger brain responses to combined facial and vocal cues compared to English participants. This indicates that Chinese individuals might naturally integrate both facial and vocal information when processing emotions, while English speakers may not do so to the same extent. It describes how living in a foreign culture can change the way people perceive emotions, including facial expressions. Individuals who spend a long time in a different culture start to think and behave more like the people around them. The paragraph mentions ongoing research exploring how this cultural immersion affects the processing of emotional cues, such as facial expressions, especially for Chinese immigrants living in North America.(Liu *et al.*, 2015)

A study held where people from different countries listened to sentences spoken in a foreign language and had to understand the emotions without seeing the speaker. The results showed that people from different cultures didn't do well in understanding emotions, except for sadness. This suggests that language and cultural similarities don't always help in understanding emotions in a foreign language.(Altrov and Pajupuu, 2015)

A study where researchers looked at how people from different cultures recognize emotions in voice sounds. They studied 10 global cultures and one isolated village in Bhutan. They found that some emotional sounds were recognized well across all cultures, some were recognized moderately, and some were not recognized universally. This suggests that while some emotions are understood similarly across cultures, there are also differences in how emotions are perceived in the voice.(Cordaro *et al.*, 2016)

This study looked at how people from Australia and India understand emotions in speech. They had actor’s express different emotions, and participants had to guess the situation based on how the actors sounded. The findings suggest that people generally understand emotions similarly across cultures, but there were some differences, especially in how norms influence perceptions. Overall, people can pick up on emotions from speech, and these perceptions are somewhat universal.

This is known as the first study of cross-cultural perception of appraisal dimensions from the voice. However, it encourages research that combines perceptual studies with measurement of objective features of expressions to further investigate the dimensionality of appraisal information in emotional expressions.(Nordström *et al.*, 2017)

A study on how children recognize emotions in spoken language. It found that while kids can recognize emotions in different languages, they are better at it in their native language. As they grow older, they get even better at understanding emotions in their own language. This suggests that our experiences play a big role in how we understand emotions, and it has implications for how children develop in diverse societies. It also highlights that vocal emotion contain pan-cultural perceptual properties and have seen an in-group-advantage. however it argues that linguistic similarity does not influence vocal emotion recognitions.(Chronaki *et al.*, 2018)

There Discussed findings from a study on vocal bursts and emotions. It suggests that vocal bursts convey a wide range of emotions, challenging traditional ideas about how emotions are understood. Unlike common theories, which rely on basic emotions like happiness or anger, the study found that vocal bursts express 24 dimensions of emotion that don't neatly fit into categories. These findings support the idea that emotions are more complex and continuous than previously thought. However, it suggests that future studies in neuroscience and machine learning need to broaden their focus beyond a limited number of emotion categories. Instead, they should explore how the brain distinguishes between a wide range of emotions and represents the continuous variations between them. Similarly, machine learning efforts should consider not only discrete categories but also the acoustic features that convey a diverse array of emotions and the smooth transitions between them.(Cowen *et al.*, 2019)

A study talks about how machines can understand human emotions, with a focus on using brain signals like EEG to recognize emotions accurately. It discusses various methods like feature extraction and machine learning algorithms used for this purpose. It also highlights the importance of EEG in providing real-time and reliable emotional insights compared to other methods like facial expressions or speech. It suggests exploring various machine learning and deep learning algorithms for emotion recognition and indicates several open problems and future research directions in this area.(Zhang *et al.*, 2020)

A meta-analysis that looked at how well people from different cultures can recognize emotions from speech and nonlinguistic vocal sounds. It found that while people can generally recognize emotions across cultures, there's often better accuracy when both the expresser and perceiver are from the same culture. The study also noted that the cultural distance between the two parties affects recognition accuracy, with closer cultures doing better. It supports the dialect theory of emotion and argues that in group advantage may be larger for expressions with positive and negative emotions.(Laukka and Elfenbein, 2021)

A study talks about using Artificial Intelligence to recognize emotions in Chinese speech. The researchers developed a special Deep Neural Network model and used 29 sound features for training. They also found ways to improve accuracy by adjusting audio. The study reached an 88.9% accuracy in recognizing emotions in Chinese short sentences. Overall, their approach could be useful for voice assistants and other dialogue applications in Chinese. However, improving emotion recognition can be done by increasing Chinese speech and emotion data. Gender recognition can also be enhanced by adding gender labels or distinguishing gender during training. Additionally, experimenting with different deep network models like Attention Mechanism and Transformer models, combined with acoustic features, may improve performance.(Lee *et al.*, 2022)

A study talks about how people express sadness in English, which is a big part of how we communicate every day. It shows that people are really good at using language to describe both happiness and sadness. The researchers used different methods to study this, like looking at the meaning of words, how often they're used, and the context they're used in. Understanding how we talk about emotions can help us deal with the different things that make us feel sad or happy every day. Some researchers argue that directly naming emotions isn't as effective as describing someone feeling that emotion. People experience many things that make them sad every day. Understanding how we talk about sadness in language is really important. They use surveys and analyze how words are used both literally and figuratively. This helps them understand how language reflects our emotions.(Abdusattorova, 2023)

his research aims to understand how language, culture, and emotion are connected in Jordan. It uses a method called cross-lingual sentiment analysis to explore this relationship deeply. By comparing how Arabic and English speaker's express emotions, it shows how the language we use affects our cultural identity and emotions. The study finds that English language posts often have higher emotion ratings, highlighting the impact of language on our emotional experiences. It also discusses how linguistic imperialism can influence how we perceive and express feelings. Overall, the research offers valuable insights into how language, culture, and emotion interact in diverse societies like Jordan.

The findings suggest that we need to think deeply about how language dominance can affect people's mental well-being.(jadallah abed Khasawneh *et al.*, 2024)

The research examines the impact of vocally expressed speech on culture and language, focusing on the dialect theory of emotion, which suggests subtle differences in emotional expression across cultures. Two hypotheses will be explored: the universality hypothesis and the similarity hypothesis. A meta-analysis will be conducted to assess the influence of language and culture on vocally expressed emotions. This research paper will deal with special examination of problem that whether there are cultural specific emotion utterances? Also whether there is any difference of recognition based on gender roles? The need here is to find further investigation into how cultural backgrounds specifically influence the interpretation of nonverbal cues for emotions and also whether people are able to accurately comprehended vocally expressed emotions.

Methodology:

The research was held in survey design method. Simple Random Sampling was used in collection of data. Survey material analyzed and derives from the Chinese language. The corpus contains 1,2,3,4 sentences read by a female voice. These sentences (all different) have been taken randomly from daily speech. The voice has not been any particular emotion while reading the sentences, assuming that any sentence evokes a certain mood, which sounds in the reading voice. The sentences were delivered to the people individually in voiced form who don't know about Chinese language and were asked to identify the particular emotion expressed in the voice. They were asked to decide whether the sentence sounded joyful, angry, sad, or neutral. For the present study the researche was for joyful, sad, angry and neutral sentences with an emotion identification rate of no less than 55% . The sentences were:

Sentences	Translation	Emotions
1.她不是我的老师.	She is not my teacher	Neutral
2.yayyy我很高兴	yayy I am very happy	Happiness

3.去死吧	Go to the hell	Anger
4.它伤害了我太多	It's hurt me too much	Sad

According to the results of research most of people knowing Urdu language very well and having no idea about Chinese language, recognized the Chinese sentence emotions UpTo 55% with most accurately recognized emotion of happiness and anger and moderate rate at neutral emotion and least recognized emotion of sadness.

Parameter dynamics:

The mean intensity from strongest to weakest: Happiness>Anger>Neutral>Sadness

The other aim of research was to see the Cultural Affiliation of language and emotions recognition. In which people of Urdu Native speaking asked to express their emotions to some particular sentence that were delivered to them in Urdu voice.The purpose of this task was to see the in- group - advantage. The sentences were:

1. گئیں۔ مل خوشیاں کی جہانوں دونوں مجھے

2.ہے؟ کیسا رہنا دور سے خاندان

3 .ہیں کررہے بات بارے میں کے کردار میرے وہ

4 ہے۔ نہیں ٹیچر میری وہ.

The results show that most of the people speaking Urdu language understand the exact target emotions expressed in the sentences. The results were above than 65% but there comes a turn when many of the people regardless of same cultures and background have their personal thinking on the emotion of sadness. Which shows that culture do have effects on people perception and emotions.

Results:

The research survey was taken place in NUML university of Faisalabad. Hundred students were chosen for the research that were selected randomly out of which thirty were from Chinese class who were learning Chinese as a second language and other seventy were Urdu native speaker having no idea of Chinese language. The above mentioned eight sentences were presented to them in female neutral voice. The results were not according to the expected chance but not so bad also. It was about 55% out of hundred.

Most of students were able to understand the emotions of Happiness and Anger at a higher rate and a moderate understanding of Neutral emotion and least understanding of Sad Emotion. Which shows that many people were able to understand the emotions of happiness and anger at a greater level even having no idea about Chinese language.

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The other four sentences show satisfactory results as most of the students understand the target emotions in Urdu sentences with a percentage of 25% of students that were not agree to certain sentences that shows some people still have their own thoughts about various regardless of same culture and background.

The table shows the accurate percentage and responses of participants:

Emotions in Chinese sentences	Response emotions	Number of respondants out of 70
Neutral	40%	28
Happiness	75%	53
Anger	60%	42
Sadness	28%	20

The remaining thirty students who were learning Chinese as a second language we're almost able to recognize each emotion accurately because of the familiarity of the language that enhances the value of knowing a different language.

The other part of research is taking place according to the targeted emotion except the emotion of sadness, as students were asked the question in their native language Urdu that how it is to live away from your family which definitely carries the emotion of sadness according to Pakistani culture as families are much connected to each other but most of the students agree with emotion of happiness which shows a contrast between the cultural values and background of Pakistani Punjabi culture and shows that people do have their own thoughts and opinion regardless of cultural affiliation and same language.

Table 2:

Emotions in Urdu language	Response emotions	Number of respondants out of 100
Happiness	90%	90
Sadness	63%	63
Anger	90%	90
Neutral	76%	75

Hence the answer of the very first question that whether there are cultural specific emotion utterances proves to be right that shows there are cultural specific emotion utterances, every culture have specific style of expressing emotions.

The second question highlights the importance of gender roles which highly supports that females are much good in recognition emotions than males. They understand emotions more accurately and quickly than males.Also males have some distinction of emotions within their own culture that shows contrast with their own culture while females emotions accurately and according to their culture specific traditions and customs.

Third question highlights the aspect that without familiarity with any foreign language no one can understand accurately emotions of one another. Which means there will be no communication among people who don't know about the language of each other. In this research the results were surprising as most of the people were able to understand the emotions of happiness and anger above than chance probability. Which shows that somehow people feels the emotions even it's not in there language.

The research agree to the point that there is similarity of emotion recognition based on cultural background and surrounding. Most of the people living in same culture have similar utterance of emotions.

Discussion:

The aim of the study was to test hypotheses of universality and similarity: to see whether cultures that speak different languages and have different cultural values will be able to recognize vocal emotions with an accuracy better than chance probability without confusing them with other emotions; and to verify whether cultures with similar cultural values and of the same language branch perform similarly in emotion recognition.

The findings of this study clearly shows that language and culture do have impact in understanding the emotions completely but people can assume according to their perception or understandings. As the research shows it all by all mentioning the procedure, results and findings that Vocal emotions ae better understand by knowing the language and culture of that particular language. People of same language and culture understand each other emotions more accurately and fastly then different languages. The depth of the emotions even only understood by the people who have knowledge of that language. Every language has their own specific words, pronunciation, and structure. Chinese is a completely different language than Urdu still the results are much satisfactory as shown in table 1. Even most of the students were listening Chinese language for the first time still they were able to decide the emotions quite similar especially the emotion of happiness and anger.

Several cross-culture studies have shown better recognition for negative emotions like sadness or anger (e.g. Jürgens et al. 2013, Pell et al. 2009, Scherer 2011, and Thompson and Balkwill 2006).The influence of language and culture on the understanding of vocal emotions represents a captivating and multidimensional research topic that delves into the intricate interplay between linguistic nuances and cultural contexts in the understanding of emotional expressions. Language serves as a powerful medium through which individuals communicate and express their feelings, with different languages often programming emotions in unique ways. Cultural variations further contribute to the complexity of this phenomenon, as cultural norms, values, and social practices shape individuals' emotional perceptions. Investigating how linguistic structures and cultural frameworks impact the recognition and interpretation of vocal emotions holds significant

implications for fields such as psychology, linguistics, and cross-cultural communication. This research not only enhances our understanding of the universality or cultural specificity of emotional expressions but also provides insights into the intricate mechanisms that underlie interpersonal communication across diverse linguistic and cultural landscapes. By unraveling these complexities, researchers can contribute to the development of more culturally sensitive communication models and interventions, fostering better cross-cultural understanding and cooperation.

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References:

Abdusattorova, B. 2023. REVEALING EMOTION OF JOY AND SADNESS. INTELLECTUAL EDUCATION TECHNOLOGICAL SOLUTIONS AND INNOVATIVE DIGITAL TOOLS 2: 165-169.

Altrov, R. & H. Pajupuu 2015. The influence of language and culture on the understanding of vocal emotions. Eesti ja soome-ugri keeleteaduse ajakiri Journal of Estonian and Finno-Ugric Linguistics 6: 11-48.

Bachorowski, J.-A. 1999. Vocal expression and perception of emotion. Current directions in psychological science 8: 53-57.

Baum, K.M. & S. Nowicki 1998. Perception of emotion: Measuring decoding accuracy of adult prosodic cues varying in intensity. Journal of Nonverbal Behavior 22: 89-107.

Chronaki, G., M. Wigelsworth, M.D. Pell & S.A. Kotz 2018. The development of cross-cultural recognition of vocal emotion during childhood and adolescence. Scientific reports 8: 8659.

Cordaro, D.T., D. Keltner, S. Tshering, D. Wangchuk & L.M. Flynn 2016. The voice conveys emotion in ten globalized cultures and one remote village in Bhutan. Emotion 16: 117.

Cowen, A.S., H.A. Elfenbein, P. Laukka & D. Keltner 2019. Mapping 24 emotions conveyed by brief human vocalization. American Psychologist 74: 698.

Cowie, R. & R.R. Cornelius 2003. Describing the emotional states that are expressed in speech. Speech communication 40: 5-32.

Elfenbein, H.A. & N. Ambady 2002. On the universality and cultural specificity of emotion recognition: a meta-analysis. Psychological bulletin 128: 203.

Elfenbein, H.A. & N. Ambady 2003. Cultural similarity's consequences: A distance perspective on cross-cultural differences in emotion recognition. Journal of Cross-Cultural Psychology 34: 92-110.

jadallah abed Khasawneh, Y., A. Khasawneh & M.A.S. Khasawneh 2024. Cross-Lingual Sentiment Analysis: Comparative Study of Opinion Expression Across Different Languages. Migration Letters 21: 548-560.

Johnstone, T. & K.R. Scherer 2000. Vocal communication of emotion. Handbook of emotions 2: 220-235.

Laukka, P. (2004). Vocal expression of emotion: discrete-emotions and dimensional accounts (Acta Universitatis Upsaliensis).

Laukka, P. & H.A. Elfenbein 2021. Cross-cultural emotion recognition and in-group advantage in vocal expression: A meta-analysis. Emotion Review 13: 3-11.

Lee, M.-C., S.-C. Yeh, J.-W. Chang & Z.-Y. Chen 2022. Research on Chinese speech emotion recognition based on deep neural network and acoustic features. Sensors 22: 4744.

Liu, P., S. Rigoulot & M.D. Pell 2015. Cultural differences in on-line sensitivity to emotional voices: comparing East and West. Frontiers in human neuroscience 9: 311.

Nordström, H., P. Laukka, N.S. Thingujam, E. Schubert & H.A. Elfenbein 2017. Emotion appraisal dimensions inferred from vocal expressions are consistent across cultures: a comparison between Australia and India. Royal Society open science 4: 170912.

Paulmann, S. & A.K. Uskul 2014. Cross-cultural emotional prosody recognition: Evidence from Chinese and British listeners. Cognition & emotion 28: 230-244.

Pell, M.D. 2005. Nonverbal emotion priming: evidence from the 'facial affect decision task'. Journal of Nonverbal Behavior 29: 45-73.

Pell, M.D., S. Paulmann, C. Dara, A. Alasseri & S.A. Kotz 2009. Factors in the recognition of vocally expressed emotions: A comparison of four languages. Journal of Phonetics 37: 417-435.

Pell, M.D. & V. Skorup 2008. Implicit processing of emotional prosody in a foreign versus native language. Speech Communication 50: 519-530.

Sauter, D.A., F. Eisner, P. Ekman & S.K. Scott 2010. Cross-cultural recognition of basic emotions through nonverbal emotional vocalizations. Proceedings of the National Academy of Sciences 107: 2408-2412.

Sauter, D.A., C. Panattoni & F. Happé 2013. Children's recognition of emotions from vocal cues. British Journal of Developmental Psychology 31: 97-113.

Scherer, K.R., R. Banse & H.G. Wallbott 2001. Emotion inferences from vocal expression correlate across languages and cultures. Journal of Cross-cultural psychology 32: 76-92.

Scherer, K.R., E. Clark-Polner & M. Mortillaro 2011. In the eye of the beholder? Universality and cultural specificity in the expression and perception of emotion. International Journal of Psychology 46: 401-435.

Tamuri, K. & M. Mihkla 2012. Emotions and speech temporal structure. Linguistica Uralica 48: 209.

Yoo, S.H., D. Matsumoto & J.A. LeRoux 2006. The influence of emotion recognition and emotion regulation on intercultural adjustment. International Journal of Intercultural Relations 30: 345-363.

Zhang, J., Z. Yin, P. Chen & S. Nichele 2020. Emotion recognition using multi-modal data and machine learning techniques: A tutorial and review. Information Fusion 59: 103-126.