



**International  
Journal of Society, Culture & Language  
IJSCL**

Journal homepage: [www.ijsc.net](http://www.ijsc.net)  
ISSN 2323-2210 (online)

## **Language, Emotion and Metapragmatics: A Theory Based on Typological Evidence**

**Lin Zhu<sup>1a</sup>**

---

### **Abstract**

Humans are equipped with some universal or language-specific abilities to recognize emotions. However, because of the different emotional contents in diverse languages and the relevant cultural differences, humans with different cultural backgrounds own different metapragmatical abilities to recognize and express emotions. A hypothesis concerning emotional effects about intonation and particle is proposed, testified by typological evidence and then extended to the relevant language phenomena. The linguistic systems utilizing emotional experiences might be more in a language with high emotional contents, and the expressions concerned with emotional metapragmatical operation might be more complicated. Furthermore, high emotional contents in languages and more emotional metapragmatical abilities of the speakers lead people to pay more attention to the emotional contents, and thereby tend to develop collectivistic cultures. On the other hand, variant culture display rules regulate emotional expression and understanding, revealing the very intricate interaction between language and culture.

### **ARTICLE HISTORY:**

Received September 2015  
Received in revised form December 2015  
Accepted December 2015  
Available online December 2015

### **KEYWORDS:**

Language  
Emotion  
Metapragmatics  
Typology  
Culture

© 2015 IJSCL. All rights reserved.

---

---

<sup>1</sup>PhD, Email: [linnzero@shnu.edu.cn](mailto:linnzero@shnu.edu.cn)

Tel: +862164321630

<sup>a</sup>Shanghai Normal University, China

## 1. Introduction

The existence of Whorf effect, which supports that one's native language shapes one's ways of cognition and perception, has been debated for many years. The relationship between language and perception and cognition is the classic debate in linguistics. The side of linguistic relativity holds that, one's perception and cognition are shaped by the semantic categories in one's language (Sapir, 1985; Whorf, 1956). However most of the studies suggest that, conceptual effects of language affect perception and cognition and take no account of emotional effects of language (e.g., Athanasopoulos, Damjanovic, Krajciová, & Sasaki, 2011; Roberson, Park, & Hanley, 2008; Thierry, Athanasopoulos, Wiggett, Dering, & Kuipers, 2009; Winawer et al., 2007). Language is a communicating mechanism for conceptual information and emotional information, which serve as the cognition and communicating function about the world and internal feelings. While most of the current studies focus on conceptual effects of language, very few studies emphasize the emotional contents of language (Guttfreund, 1990). Nevertheless, there exist some neutrally motivated computational models and theories about the interaction between emotional contents of language and cognition (Perlovsky, 2004, 2006, 2009).

This paper emphasizes the emotional effects of language and the underlined neutral mechanisms to support the emotional effects of language and demonstrates the interaction between language and culture through typological investigation. The following section reviews the interaction of language and emotion, the neutral mechanisms and operations of emotional effects, and their relationship with culture.

## 2. Theoretical Framework

### 2.1. Language and Emotion

From the viewpoint of language evolution, the

most important difference between animal vocalizations and human languages is the separation of concepts and emotions. Animals' vocalizations are mostly controlled by an ancient emotional center in the limbic system (Lieberman, 2000), and they cannot use vocalizations separately from emotional-behavioral situations (Mithen, 2007). For animals, the vocalizations fuse conceptual and emotional information, rather than separate them as in humans. The separation of conceptual and emotional contents might be the origin of human language and the conceptual and emotional mechanisms of human languages are significantly different from animal vocalizations (Mithen, 2007). Moreover, when languages evolved to conceptual contents, the emotional contents might be reduced.

Emotional contents of language are low and perhaps not noticeable in everyday speech. Nevertheless, the emotional contents of language play a key role in language models and cognition. According to Perlovsky (2004, 2006, 2007, 2009), if the emotional contents are high in the language model, there would be no room for language development in the highly emotional language models. On the contrary, if the language models are lacking in emotional contents, there will be no motivational force to converse and develop. Emotional contents in language are represented by sound primarily. If the sounds of language change slowly and emotionality is preserved to a large extent, it will result in cultural stability at the price of stagnation. Otherwise, if the sounds of language change very fast without excessive emotionality, it will lead to ambiguity of meanings. And at the same time the culture develops and spreads very fast. But the loss of emotionality also leads to ambiguity of meanings and the culture might face internal uncertainty. In addition, conceptual contents of languages might be borrowed through different cultures, while emotional contents might not be easy to be borrowed. Therefore, emotional contents of language are

significant in language models; emotional contents and conceptual contents play a key role in language evolution and evolution of cultures.

Emotion in this paper refers to an inborn, non-adaptive mechanism of internal sensors, which measures vital body parameters such as blood pressure, body temperature, etc. The neural basis for generation and expression of emotion involves amygdala, thalamus, and hippocampus (Damasio, 1994, 1999). The thalamus filters the external sensory data and the hippocampus regulates the input of memories of past experiences. Then, the amygdala directs the body to act based on the combination of sensory data with past experience. This results in an instantaneous physical reaction which is called emotion, and then, evaluation of emotion places a label on the process (Damasio, 1994, 1999). Some studies demonstrated that, emotion is preceded by an autonomic behavioral reaction.

There are two 'roads' in the generation of emotion. One is the 'low road' which leads directly from sensory stimulus to action through the amygdala. The other is the 'high road' which proceeds from sensory stimulus to the frontal cortex for evaluation before reaching the amygdala. The first road is to react quickly before immediate danger, and the 'high road' helps to evaluate situations and reach suitable reactions. The mechanism of emotion generation and expression is essential for making decisions, and if the amygdala is damaged, the subjects are unable to make reasonable decisions (Damasio, 1994, 1999). One of the results is that, they cannot evaluate others' reactions and cannot produce proper linguistic responses.

When we turn to human languages, the situation about making linguistic choice is similar. Speakers often need to make instantaneous decisions about their pragmatic choices which are termed as metapragmatic function (Silverstein, 2004). Metapragmatics is a kind of mechanisms of instantaneous use of linguistic variants, enacted automatically to some extent.

The T-V distinction of second person pronouns in European languages is a proper instance. When making decisions about the T or V form, the speakers must take into account many factors such as social status, relative age, context, etc. However, the native speakers or eligible learners might choose the appropriate linguistic form without engaging in complex appraisal in his immediate choice. The mechanism of emotional autonomic reaction is analogical to this kind of metapragmatic operations (Silverstein, 2004).

Pragmatic behavior would be more complex when involving interpersonal encounters which include social hierarchy, relative intimacy, etc. In any given language, speakers need to acquire proper language skills; otherwise, they might be inept to social communication. This kind of language instantaneous reaction is spontaneous and the application of choosing proper forms is an automatic pragmatic behavior (Silverstein, 2004).

## 2.2 Emotion and Culture

Humans typically utilize multiple information channels to express and understand emotions, such as sounds and faces (Grandjean, Banziger, & Scherer, 2006; Paulmann & Pell, 2011). Faces appear to display emotional information automatically, and people everywhere have the abilities to understand emotions from faces. Faces appear to display emotional information and reading emotion in faces is natural and intrinsic to some extent. Many studies have investigated whether subjects of different cultures can recognize expressions of emotion on the faces of others (Ekman, Sorenson, & Friesen, 1969; Izard, 1971, 1994). These studies indicate that, individuals in different cultures are able to accurately recognize emotional displays of the face independent of different cultural backgrounds. Thus, these studies argue that, emotional display involves universal principles. The emotion categories are grounded in neural circuits through natural evolution and expressed

by behavioral signals involving facial expressions. So, people seem to be born with the abilities of expressing and reading some basic emotion categories from faces automatically.

While some other studies suppose the role of language in emotion perception from the face (Barrett, Lindquist, & Gendron, 2007), it is the conceptual effect of language contribution to the construction of the emotional perception which dynamically reconfigures information from the face that is processed, not emotional contents in language. Some other studies indicate that, understanding the meanings of action and emotion words and concepts involve the cortical motor system (Pulvermüller & Fadiga, 2010; Moseley, Carota, Hauk, Mohr, & Pulvermüller, 2012). The meanings of both action words (Kemmerer, Castillo, Talavage, Patterson, & Wiley, 2008; Pulvermüller, Härle, & Hummel, 2001; Shebani & Pulvermüller, 2013) and emotion words (Moseley et al., 2012) are embodied in cortical motor systems. The link between emotions and the words may be established by way of actions and cortical motor systems are the vehicle of emotion expression. The meaning of emotion words is established by the use of the words in action contexts such as facial expressions and emotional behaviors (Kemmerer et al., 2008; Moseley et al., 2012; Pulvermüller et al., 2001). So, they postulate that, these actions are critical for the meaning and become incorporated in the neural network representing the meaning of these emotion terms (Moseley et al., 2012). During this process, the word comes to be associated with the internal feeling it describes, activating neurons in limbic structures involved in processing the emotions (Pulvermüller & Schumann, 1994). That is to say, as for emotion related words, semantic or conceptual cues in languages are related to facial cues.

Besides face expressions, language as an essential method to emotion recognition is represented by emotional contents in language

primarily. Concepts and emotions are separated in human language; nevertheless, emotions are still present in language. According to Perlovsky (2004, 2006, 2007, 2009), emotional contents of language are often carried by vocal cues, phonological, and syntactic cues. Some studies support that processes of vocal emotion recognition involve universal principles (Nicholson, Takahashi, & Nakatsu, 2000; Pell, Paulmann, Dara, Alasseri, 2009). In a study conducted by Pell et al. (2009), pseudo-utterances from native speakers of English, German, Hindi, and Arabic were rated by subjects from the same languages. Next, emotion recognition and acoustic patterns were analyzed. The results showed that, listeners can accurately detect and categorize emotional states from speakers. The authors argue that, the parameters such as the mean, variance in fundamental frequency, and speech rate, determine the vocal expressions of basic emotions on a large scale, which might be universal. However, some other studies (Scherer, Banse, Wallbott, 2001; Vanbezooijen, Otto, & Heenan, 1983) report an in-group advantage, as vocal emotions that are simulated by speakers of the same language are more accurately identified compared to speakers of a different language. Therefore, beyond universality, social aspects and language specific prosodic features are also important in recognizing emotions (Beaupre & Hess, 2005; Elfenbein, Beaupre, Levesque, & Hess, 2007; Thompson & Balkwill, 2006). On the side of phonological and syntactic cues carrying emotions, they are language-specific emotional contents. I may conclude that, the universal abilities of emotion recognition from some vocal cues are in correspondence with emotional contents in language. And the language-specific abilities include emotion recognition from vocal cues, phonological, and syntactical cues which are related to emotional contents in language as well.

As have I mentioned above, the mechanism of emotional automatic reaction is analogical to

linguistic metapragmatical operations. I suggest that, more metapragmatical abilities often occur with more emotion reactions and more emotional contents in the language. Due to high emotional contents in language, people might pay more attention to the emotional communication based on language, which might result in more operations on linguistic metapragmatical mechanisms. Also, there is an inclination to depend on emotional contents more than facial cues in language, thus people who speak high emotional languages would be sensitive to vocal cues.

In addition to language effect, cultures play a part in the procession of emotions as well. A lot of key studies imply that cultures vary in how the process emotions from different information sources (Kitayama & Ishii, 2002; Tanaka et al., 2010). These studies support that, during multichannel emotion perception, East Asians are more sensitive to vocal information, whereas Westerners are more sensitive to facial or semantic cues (Kitayama & Ishii, 2002; Tanaka et al., 2010). To explain these cultural differences, it is suggested that, display rules play a central role in emotion perception (Engelmann & Pogosyan, 2013; Ishii, Reyes, & Kitayama, 2003). In contrast to Western individualist cultures, East Asian collectivist cultures consider harmonious social relations as most important (Hall & Hall, 1990; Scollon & Scollon, 1995). These display rules are adopted by these groups, such as, East Asia cultures tend to control facial expressions than Westerners, and inclined to avoid eye contact than Westerners (Matsumoto, Yoo, & Fontaine, 2005, 2008; McCarthy, Itakura, & Muir, 2006, 2008). Thereby, it is possible that, East Asians rely more on vocal cues than faces to read and express emotions.

It has been mentioned above that, semantic or conceptual cues in languages are related to facial cues, I may conclude, Westerners might rely more on conceptual contents in language

but not emotional contents. On the contrary, East Asians depend more on emotional contents in language. I propose that, due to high emotional contents in languages and vocal cues relying more on linguistic metapragmatical abilities than facial cues, people might pay more attention to the emotional contents and emotion communication, and thereby, tend to develop collectivist cultures. Thus, East collectivist cultures are more sensitive to vocal information whereas Western individualist cultures are more sensitive to facial cues.

To conclude from the above studies, humans are equipped with some universal or language-specific abilities to recognize emotions and metapragmatical abilities and to choose proper linguistic forms. The universal abilities involve emotion recognition from facial cues and some vocal cues which are bound with conceptual and emotional contents in languages. The language-specific abilities include emotion recognition from vocal cues, and phonological, syntactical cues which are related to emotional contents in languages. The metapragmatical abilities are about instantaneous decisions about linguistic and pragmatic choices which have the same neural mechanisms as emotion cognition. Furthermore, because of the different emotional contents in diverse languages and the relevant culture difference, people tend to make use of different linguistic categories employing varying emotional experience. I suggest that, due to high emotional contents in languages, people might pay more attention to the emotional communication based on language and result in more operations on metapragmatical mechanisms and development of collectivistic cultures. Accordingly, the relevant automatic metapragmatical abilities across different language groups and cultures are distinguished as well. On the other hand, variant culture display rules regulate emotional expression and understanding, such as East Asia collectivistic cultures tend to control facial expressions than Western individual cultures which lead to the

sensitivity on vocal cues and boosting emotional contents in these languages in return. The interplay between language and culture manifests to be very intricate.

### 3. Intonation and Grammatical Particle

Emotions and concepts are present in language separately, and humans have some universal metapragmatic abilities to understand emotional contents. Emotional contents of language are often carried by language sounds primarily, such as intonation, prosody, or melody. By means of these vocal cues, humans are capable of conveying emotions to others, and allow the expression of affection to be interpreted by others (Perlovsky, 2004, 2006, 2007, 2009). A large number of studies have demonstrated that vocal intonations correlate with emotional expressions (Juslin & Laukka, 2003; Scherer, 2003).

The use of rising intonation in yes-no questions is one of the characteristic vocal cues in the majority of human languages and the specific combinations of intonation and linguistic categories might influence the attribution of affect-loaded attitudes (Scherer, Ladd, & Silverman, 1984). This frequently used method of choosing rising intonation to express interrogative emotional states employs straightforward and automatic metapragmatic abilities. It is possible to turn a declarative sentence into a yes-no question simply by using a rising contour. In some languages, the rising intonation is the only way to turn a sentence with the form of a declarative into a question, such as in Greek. Besides rising intonation, yes-no questions are formed in various grammatical ways across languages, such as special word order in English, special verb morphology in Greenlandic language, grammatical particle in Russian. On the expression of emotion in language, there are some languages which conveniently provide grammatical marking for emotional states in speaking. Compared with rising intonation alone,

making instantaneous decisions about choices from these various grammatical ways to form yes-no questions might need more automatic metapragmatic operations in these languages. It should be conjectured that, grammatical ways showing more emotional metapragmatic operation do not mean that a language only utilizing the way of intonation to form yes-no questions has low emotional contents. Because although emotional contents are often carried by intonation, it is merely one aspect related and there exist many other influencing factors. Therefore, only the comparison of intonation and grammatical ways in the same language makes sense.

Focusing largely on grammatical particle, I put forward a hypothesis which suggests that, in contrast to rising intonation, grammatical particle may rely more on emotional metapragmatic abilities in a language with both grammatical particle and intonation. Grammatical particle is a kind of grammatical marking for emotional state which needs more metapragmatic operations compared with intonation on this function. Thus, if speakers need to make instantaneous decisions about their choices of intonation and/or grammatical particle or the function of grammatical particle exceed over intonation in a language, the language might potentially have high emotional contents, indicating collectivist or stagnating cultural tendency more or less and inclination to utilize more instantaneous metapragmatic operations.

I provide some examples which show this kind of tendency through a typological investigation below. These languages are from different language families, but show some universal tendency of emotional metapragmatic abilities of humans

#### 3.1. Mandarin Chinese

In Mandarin Chinese, yes-no questions may be formed with rising intonation, grammatical

particle and may take an A-not-A form, but the other two forms are co-occurrent with rising intonation. The grammatical particles sound weak and might be dropped, thus expressing interrogative meaning might be carried by rising intonation alone. Nevertheless, the grammatical particles might affect the intonation too. For instance, yes-no questions with grammatical particle take a slightly lower register than those without the particle (Lee, 2005). The main reason is that, with grammatical particle part of the act of questioning is done by syntax, and intonation becomes less crucial. Using grammatical particle without intonation will not change the interrogative meaning, although it sounds strange. That indicates grammatical particle plays some part in Mandarin, and the emotional contents, and metapragmatical operations are high in Mandarin Chinese. The examples with and without question marker are given in (1) and (2).

(1) 他\_去\_吗?

Ta\_qu\_ma?

He\_go\_Q

“Does he go?”

(2) 他\_去?

Ta\_qu?

He\_go

“Does he go?”

### 3.2. Cantonese

In contrast to Mandarin, Cantonese shows different patterns about intonation and grammatical particles. Firstly, the grammatical particles do not sound weak and the intonation of question is influenced by the tones of grammatical particles. In the majority situation, if using question marker, yes-no questions need not add a final rising intonation but flat intonation. Cantonese may express interrogative meaning merely with grammatical particles but not intonation. An example is given in (5), in which the question marker “吗” is similar to “吗” in Mandarin.

(5) 佢\_去\_吗?

k'Øy13 hØy33 ma33?

He\_go\_Q

“Does he go?”

Although yes-no questions may be formed by changing the declaratives intonation to be a rising intonation, the question with the question marker cannot use a rising intonation. The tone of the question marker is same as the intonation of the question, which is a level intonation.

Secondly, in contrast with Mandarin, there are some more grammatical particles carrying specific grammatical meanings and implying different interrogative meanings in Cantonese (Fang, 1996). According to Fang (1996), 12 grammatical particles might be appeared in yes-no questions. In the following question, marker “啊” implicates that, the speaker want to receive confirmation from the listener. And the other question marker “咩” implicates that the speaker thinks “he goes” is a reality, and wants to confirm it.

(6) 佢\_去\_啊?

k'Øy13 hØy33 a21?

He\_go\_Q

“Does he go?”

(7) 佢\_去\_咩?

k'Øy13 hØy<sup>33</sup> m ε<sup>55</sup>?

He\_go\_Q

“Does he go?”

It can be concluded that, compared with intonation, grammatical particles are more important in Cantonese than in Mandarin Chinese. Since Cantonese is one of the dialects of Chinese, Cantonese and Mandarin are very similar in many aspects, due to limited influencing factors between these two very close languages, I try to compare their emotional contents. According to my hypothesis, I believe that, Cantonese has more emotional contents and metapragmatical operations and the culture develops slower than Mandarin Chinese.

### 3.3. Japanese

Japanese is an East Asian language spoken primarily in Japan. It is considered to be a branch of Altaic. In Japanese, yes-no questions may be formed either simply by a rising intonation or by attaching the question particles. Japanese forms prototypical yes-no questions by adding a question particle *ka* to the declarative sentences. The grammatical particle might be dropped in casual conversation with a declarative form and final rising intonation.

(8) たべましたか?

Tabē -mashita ka?

Eat -PAST Q

“Have (you) eaten?”

(9) たべました?

Tabē -mashita?

Eat -PAST?

“(You) have eaten?”

If the form is “noun/adjective *desu ka*”, *ka* cannot be dropped. And the intonation changing might indicate different interrogative meaning. However, if changing the *desu* form to be simple form, *ka* may be dropped. Example (10) is illustrative.

(10) 奥さんは日本人ですか?

Ao ku san wa Nihon jin desu ka?

Wife-Top Japanese Copula-Polite Q

“Is (your) wife Japanese?”

\*奥さんは日本人です?

\*Ao ku san wa Nihon jin desu?

Wife-Top Japanese Copula-Polite

“Is (your) wife Japanese?”

奥さんは日本人?

Ao ku san wa Nihon jin?

Wife-Top Japanese

“Is (your) wife Japanese?”

It can be seen, the interaction between grammatical particle and intonation is an intricate and dynamic process which displays not only competition as in Mandarin but cooperation, thereby, needs more emotional metapragmatic operations.

### 3.4. Korean

In Korean, yes-no questions are formed with grammatical particle and rising intonation. In (11), with absence of grammatical particle, the rising intonation is necessary.

(11) 가요?

gayo?

go Polite Marker

“Will (you) go?”

However, grammatical marking for emotional states in speaking evolved to be prerequisite and intonation reduces to some extent in Korean in the respective form. The grammatical marking is essential to grammar and interrogative meaning and cannot be dropped. This reveals more compulsory usage of metapragmatic operations. An example is provided in (12).

(12) 갑니까?

gamnikka?

go Q

“Will (you) go?”

### 3.5. Persian

Persian is an Iranian language belonging to the Indo-Iranian sub-branch of the eastern branch of the Indo-European language family. In Persian, the word order of declaratives and their yes-no questions counterpart is the same and the act of questioning is done by change of intonation. It is the intonation pattern which directs the sentence into Question Form. Formal style yes-no questions can be formed with the placement of the question particle *aya* in front of the sentence (and less often in the middle). As observed by Mahjani (2003), yes-no questions with *aya* take a slightly lower register than those without the particle and intonation becomes less crucial. This trade-off is similar to Mandarin Chinese, that is, the grammatical particle might affect the intonation.

In the following yes-no question counterpart of declarative and formal question form with *aya*, the enclitic *-ra* marks an object noun phrase for



specificity and is conversationally pronounced as *ro*.

(3) šagerdá mizá-ro avórdæn?

students tables-RA brought

“Did the students bring the tables?”

(4) Aya šagerdá mizá-ro avórdæn?

Q students tables-RA brought

“Did the students bring the tables?”

### 3.6. Javanese

Javanese is the Austronesian language with the largest number of speakers. In Javanese, yes-no questions are formed with grammatical particle, word order, various discourse markers, and rising intonation. The intonation of yes-no questions are also shown in WH questions and some statements (Robson, 1991, 1992) which suggests the intonation is not the most important method to express interrogative meaning. At the same time, the various ways to form yes-no questions lower the importance of intonation and grammatical particle.

The languages mentioned above are mainly from different language families but all have considerable highly emotional metapragmatical operations and the speakers have high emotional metapragmatical abilities to deal with grammatical markings. It should be pointed out that, because it is just a speculative and potential tendency and there are so many other influencing factors, it is not easy to evaluate emotional contents and metapragmatical abilities precisely.

## 4. Metapramatics and Culture

### 4.1. Other Metapramatical Operations

From the above evidences about typological investigation, I may conclude that, if a language uses intonation and grammatical particle to express interrogative emotional states, grammatical particle needs more metapragmatical operations. In these languages, speakers need to make instantaneous decisions about their choices of

intonation and/or grammatical particle. The language might potentially have high emotional contents and the inclination to utilize more instantaneous metapragmatical abilities. The languages mentioned above might have considerably high emotional contents and show more metapragmatical operations. Also, the substantive metapragmatical mechanisms can be remarkably similar though they are from different language families. I have already discussed that, humans with different cultural backgrounds are equipped with different metapragmatical abilities to recognize emotions, and the relevant metapragmatical abilities are different as well. In line with this generalization, I supposed that, the linguistic categories and systems utilizing emotional experiences might be more complicated in a language with high emotional contents, and the expressions concerned with emotional metapramatical operations might be more elaborate.

Through the investigation of the previous section, I may assume that, both Japanese and Korean languages have very high emotional contents utilizing considerable metapramatical operations. Thereby, I could conjecture that, expressions making use of emotional metapramatical operations and making automatic decisions based on emotion might be more complicated in these two languages. There exist a lot of more elaborate systems to aid speakers to assess relative social status and choose proper attitudes. In Japanese, such elaborate systems employ complex variant forms in diverse contexts and the ability to take the perspective of the other and choose proper variant is spontaneous. The polite speech, *keigo* (敬語), which is a case in point, is divided into respectful speech (*sonkeigo*, 尊敬語) and humble speech (*kenjōngo*, 謙讓語). The use of *keigo* involves evaluating the relative status of the other person and mastering a variety of vocabulary in indicating affective dimensions.

For example, the simple verb “to do” in

Japanese, has a neutral form, a humble form and an elevated form. All mean “to do” but reflect differential social status as follows.

Neutral form: *する suru*

Humble form: *いたす itasu*

Respectful form: *なさる nasaru*

Another dimension of keigo is the polite

**Table 1**

*Levels of Politeness in Japanese*

Informal	Polite	Formal	Polite formal
これは本だ <i>kore wa hon da.</i>	これは本です <i>kore wa hon desu.</i>	これは本である <i>kore wa hon de aru.</i>	これは本であります <i>kore wa hon de arimasu.</i>

In Korean, there are special nouns or verb endings used to speak of people who are superior in status. All verbs and adjectives can be converted into an honorific form by adding the infix *-시-* (-si-) or *-으시-* (-eusi-) after the stem and before the ending to respect the referent. While the relationship between speaker and audience is reflected in speech levels which are used to show respect to a speaker’s audience. There are seven speech levels in Korean and each level has special verb endings to indicate the formality of a situation. The imperative form of the verb is adding the suffix of each level to form the different levels of verb.

The seven levels of verb *하다* (hada “to do”) are given as follows.

The most respectful form: *하나이다 hanaida*

Respectful and formal polite form: *합니다 hamnida*

Middle level polite form: *해요 haeyo*

Neutral form, semi-formal form: *하오 hao*

Neutral form, familiar form: *하네 hane*

Plain style: *한다 handa*

Intimate form: *해 hae*

It is interesting to see that, Persian has a pragmatic vocabulary similar to Japanese indicating different relative social status as well. Persian has neutral, elevated, and humble

language, *teineigo* (丁寧語), the use of the verb “*desu*” and the verb ending “*masu*”. There are two levels of politeness in Japanese, polite and formal, and they can be combined which is given in Table 1. In addition, Japanese use the *teichōgo* (丁寧語) and *bikago* (美化語) to refer to the beautiful speech.

expression and the mechanism is like Japanese. The assessment of whether the linguistic expression is taking place in an intimate inside setting or a public outside setting may govern the use of elevated or humble expressions.

For example, the simple verb “to say” in Persian, has a neutral form, a humble form, and a respective form.

Neutral form: *goftan*

Humble form: *arz kardan*

Respectful form: *farmudan*

Like Japanese, Korean, and Persian, Javanese also has a linguistic expression system with elevated, humble, and neutral forms. In addition to elevated and humble forms, Javanese has three other levels of politeness. Javanese speech levels including *Ngoko* (informal speech), *Madyā* (intermediate between *ngoko*, and *krama*), *Krāmā* (polite and formal speech), *Krama iggél* (other-raising honorific), *karma andhap* (self-lowering honorific). Javanese has the additional dimension of speech, similar to Japanese defined by the terms *alus* and *kasar*. *Alus* is “smooth, beautiful” speech. *Kasar* is “rough, direct” speech. The assessment of whether the linguistic expression is taking place in inside/outside setting is similar to Persian, and using beautiful/rough speech is similar to Japanese. In a word, the use of different styles is

complicated and requires very high emotional abilities and thorough knowledge of Javanese culture.

The verb “to tell” in Javanese, which has neutral forms, a humble form, and respective forms is provided.

Ngoko (informal speech): akôn

Madyâ (intermediate between ngoko and krama): kèn

Krâmbâ (polite and formal speech): kèng kè n/puréh

Krama iggél (other-raising respective form): dawoh

karma andhap (self-lowering humble form): ng-atu-r-i

As seen in the comparison of Japanese, Persian, and Javanese above, they all have high emotional contents and the substantive mechanisms of pragmatic linguistic choice can be remarkably similar. The Japanese, Persian, and Javanese paradigms look very much alike, although the languages in question are not at all related but the native speakers of these languages are all equipped with similar metapragmatical abilities to assess relative social status and choose proper linguistic expressions.

Besides speech levels, there are some other relevant linguistic phenomena indicating the high emotional metapragmatical operations and abilities. The existence of high frequency of ellipsis of subject is common in the language with high emotional contents. In Korean, Oh (2007) found about 60% ellipsis of first person arguments and 75% ellipsis with second person arguments, including but not limited to subjects. For Japanese, based on a survey of available literature, Nariyama (2003) concluded that, subject ellipsis (of all persons) in Japanese conversation tends to run at around 70% or higher. For Javanese, according to Ewing (2014), the subject ellipsis is 67% for first person and 83% for second person. Oh (2007) suggested that, ellipsis should be taken as the default for

Korean. Nariyama (2003) and Ewing (2014) took a similar approach to Japanese and Javanese, suggesting that, ellipsis is unmarked. One of the possible reasons of the high frequency of ellipsis of subject in these languages might be that the different verb forms in speech levels reveal the subject and the ellipsis would not affect understanding. Ewing (2014) supposed that, because ellipsis is very common due to its role as a discourse grammatical device, speakers are able to easily take advantage of ellipsis as a way of marking social relationships through avoidance of explicit pronominal use when this is expedient.

To summarize, the more emotional contents exist in a language, the more emotional experiences linguistic categories and systems employ. The substantive metapragmatical mechanisms can be remarkably similar in these languages, and they might possess more complicated expressions corresponding to emotional metapragmatical mechanisms. Furthermore, the speakers of these languages make their linguistic choices instantly based on the emotional metapragmatical abilities.

#### 4.2. Language and Culture

The implementation of these structures in speech relies both on different social and cultural strategies and different sets of cultural information. Because of the different emotional contents across languages and culture differences, people tend to make use of diverse methods employing emotional experience; thereby, their metapragmatical abilities across different cultures are distinguished. As I have assumed in the previous sections, due to high emotional contents in languages and more emotional metapragmatical abilities of the speakers, people might pay more attention to the emotional contents and make more use of pragmatic inferences and soft vague expressions and thereby tend to develop collectivist cultures (Parvaresh & Dabghi, 2013; Yen-Liang, 2013). It is interesting to see that, the languages with

high emotional contents I talk about all have the features of collectivist culture or parallel tradition and the cultures develop with relatively slow speed.

Japanese and Koreans have been considered collectivistic in their social behavior, in comparison to U.S. Americans. It has been argued, that Japanese are 'collectivistic', in that their notion of 'self' is determined in relation to others in a specific context. Also their collectivistic orientation does not go beyond their in-group members (Markus & Kitayama, 1991). Hamaguchi (1982) referred to a typical Japanese as a 'contextual man'. On the other hand, the Korean culture given more enduring and profound impact of Confucianism than Japanese seems to place a high value on extensive reciprocal relationships with others that often transcend an immediate context. Such human relationship is formed around the concept of mutual obligation between the participants (Oliver, 1993).

China is the origin of Confucianism and Chinese culture is a typical collectivistic culture. However, Japanese and Korean cultures are more collectivistic than Chinese culture. Japanese and Koreans emphasize context and interpersonal relationship more than the Chinese. It is a very interesting topic receiving hot disputes from a lot of distinctive viewpoints. I put forward a hypothesis from the relationship between language and culture. That is, in contrast to Japanese and Korean, emotional contents in Chinese might be less which results in a relatively high speed in cultural development and less traditional preservation. Although it is not easy to evaluate emotional contents in languages precisely, there exist some cues to obtain conjectural conclusion. The interaction between grammatical particle and intonation in Japanese is an intricate and dynamic process more than in Mandarin Chinese. Both Japanese and Korean have complicated polite speech systems, whereas

Mandarin Chinese only has limited polite lexical forms. But why are emotional contents in Chinese less than Japanese and Korean? A tentative explanation might be that Chinese is a tone language. The existence of lexical tones in Chinese may have rendered lexical processing more effortful and postponed the integration of emotional voice tone with the semantic cues. That is to say, vocal cues provide assistance with processing conceptual content and reduce the original function of emotional recognition. Thereby, Mandarin Chinese speakers would be more sensitive to conceptual contents in language and the face cues compared with Japanese and Koreans. The tone features in Arctic Chinese might not be an original feature, and the emergence of tone in Arctic Chinese might be a possible method to reduce emotions and help to accelerate the development of culture.

It has also been argued above that, Cantonese has more emotional contents and metapragmatical operations and the culture develops slower than Mandarin Chinese. This conclusion is consistent with the split between rice culture and wheat culture of South China and North China respectively, and it might be a possible reason to account for their differences.

Persian culture is a combination of eastern, western and traditional culture, which have tried to maintain a balance for a long time. It has the powerful ability to absorb cultural elements from outside and to domesticate them by integrating some of them into itself.

Javanese culture mostly grows and is sourced from the kingdom, thus Yogya and Solo as two major centers of Javanese kingdom are as the central points of Javanese culture. Self-awareness is essential and it is clearly revealed in such a large tolerance possessed by the human Java. One feature that really stands out in Javanese culture is the ability to absorb cultural elements from other cultures and then to develop the culture of Java itself. Harmony and

respect in social life, in touch with the surrounding nature and God remain unchanged elements. The continuous efforts to seek a balance in human life are the core of Javanese culture; coexisting with nature and connecting to God would eventually bring balance.

To sum up, the above languages with high emotional contents often have the features of collectivist cultures or traditional features and their cultures develop with relatively slow speed. High emotional contents in languages and more emotional metapragmatical abilities of the speakers lead people to pay more attention to the emotional contents and tend to develop collectivistic cultures. On the other hand, variant culture display rules regulate emotional expression and understanding which reveal the very complicated interaction between language and culture.

## 5. Concluding Remarks

Humans are equipped with some universal or language-specific abilities to recognize emotions and metapragmatical abilities to choose proper linguistic forms. The universal abilities involve emotion recognition from facial cues and some vocal cues which are in correspondence with conceptual and emotional contents in language. The language-specific abilities include emotion recognition abilities from vocal cues and phonological, syntactical cues which are related to emotional contents in language. The metapragmatical abilities are about instantaneous decisions about linguistic and pragmatic choices which have the same neural mechanisms as emotion cognition. More metapragmatical abilities often occur with more emotion reactions and more emotional contents in the language.

Language is essential to emotion recognition; thereby humans have some universal metapragmatical abilities to recognize emotions by language. However, due to the different emotional contents in diverse languages and the

relevant culture differences, humans with different culture backgrounds are equipped with different metapragmatical abilities to recognize and express emotions. Generally speaking, emotional contents of language are often carried by language sounds, especially intonation. Nevertheless, through typological investigation, I conclude that, grammatical particle is a kind of grammatical marking for emotional state which needs more metapragmatical operations compared with intonation in this function.

The languages with high emotional contents often occur with considerably high emotional metapragmatical operations. The expressions making use of emotional metapragmatical operations in making automatic decisions based on emotion might be more complicated as well. With high emotional contents in their languages, people might pay more attention to the emotional contents and utilize more emotional metapragmatical mechanisms. Consequently, the linguistic categories employing emotional experiences might be more in the languages, and there might be more elaborate systems to aid speakers to assess ages, relative social status, relative intimacy, etc., and make immediate pragmatical choices.

Moreover, the implementation of these structures in speech relies both on different social and cultural strategies and on different sets of cultural information. Due to high emotional contents in languages and more emotional metapragmatical abilities of the speakers, people might pay more attention to the emotional contents. The languages with high emotional contents often have the features of collectivist cultures or parallel traditions. On the other hand, variant culture display rules regulate emotional expression and understanding. Thus, the interplay between language and culture manifests to be very intricate.

The relationships among language, emotion, and culture proposed in this paper are only a first step requiring much more typological evidence

and theoretical development. More research is needed to account for the detailed interaction of language and emotion and how the metapramatics hold the part in the procession. Moreover, neural mechanisms and cultural display proposed in this paper are but an initial step in this line of research. Future research should address the emotional contents of language and the emotional metapragmatical abilities connecting neural and cultural mechanisms of emotions.

## References

- Athanasopoulos, P., Damjanovic, L., Krajciová, A., & Sasaki, M. (2011). Representation of color concepts in bilingual cognition: The case of Japanese blues. *Bilingualism: Language and Cognition, 14*, 9–17.
- Barrett, L. F., Lindquist, K. A., & Gendron, M. (2007). Language as context for the perception of emotion. *Trends in Cognitive Sciences, 11*(8), 327–332.
- Beaupre, M. G., & Hess, U. (2005). Cross-cultural emotion recognition among Canadian ethnic groups. *Journal of Cross-Cultural Psychology, 36*(3), 355–370.
- Damasio, A. R. (1994). *Descartes' error: Emotion, reason and the human brain*. New York: Grosset/Putnam.
- Damasio, A. R. (1999). *The feeling of what happens, body and emotion in the making of consciousness*. New York: Harcourt Brace.
- Ekman, P., Sorenson, E. R., & Friesen, W. V. (1969). Pan-cultural elements in facial displays of emotion. *Science, 164*(3875), 86–88.
- Elfenbein, H. A., Beaupre, M., Levesque, M., & Hess, U. (2007). Toward a dialect theory: Cultural differences in the expression and recognition of posed facial expressions. *Emotion, 7*(1), 131–146.
- Engelmann, J. B., & Pogosyan, M. (2013). Emotion perception across cultures: The role of cognitive mechanisms. *Frontiers in Psychology, 4*, 1–10.
- Ewing, M. C. (2014). Motivations for fist and second person subject expression and ellipsis in Javanese Conversation. *Journal of Pragmatics, 63*, 48–62.
- Kemmerer, D., Castillo, J. G., Talavage, T., Patterson, S., & Wiley, C. (2008). Neuroanatomical distribution of five semantic components of verbs: Evidence from fMRI. *Brain and Language, 107*(1), 16–43.
- Kitayama, S., & Ishii, K. (2002). Word and voice: Spontaneous attention to emotional utterances in two languages. *Cognition & Emotion, 16*(1), 29–59.
- Fang, X. (1996). The interrogative particles in Cantonese. *Dialectology, 1*, 56–60.
- Grandjean, B. T., & Scherer, K. R. (2006). Intonation as an interface between language and affect. *Progress in Brain Research, 156*, 235–247.
- Gutfreund, D. G. (1990). Effects of language usage on the emotional experience of Spanish\_English and English\_Spanish bilinguals. *Journal of Consulting and Clinical Psychology, 58*, 604–607.
- Hall, E. T., & Hall, M. R. (1990). *Understanding cultural differences: Germans, French and Americans*. Intercultural Press Inc, Yarmouth, ME.
- Hamaguchi, E. (1982). *Kanjinshugi no shakai Nihon* [Japan, the society of between-ness]. Tokyo: Tokyo Keizai Sinposha.
- Ishii, K., Reyes, J. A., & Kitayama, S. (2003). Spontaneous attention toward content versus emotional tone: Differences among three cultures. *Psychological Science, 14*(1), 39–46.
- Izard, C. E. (1971). *The face of emotion*. New York: Appleton-Century-Crofts.
- Izard, C. E. (1994). Innate and universal facial expressions: Evidence from developmental and cross-cultural research. *Psychological Bulletin, 115*(2), 288–299.
- Juslin, P. N., & Laukka, P. (2003). Communication of emotions in vocal expression and music performance: Different

- channels, same code? *Psychological Bulletin*, 129, 770–814.
- Lieberman, P. (2000). *Human language and our reptilian brain*. Cambridge: Harvard University Press.
- Lee, O. J. (2005). The prosody of questions in Beijing Mandarin. Unpublished doctoral dissertation, Ohio State University, USA.
- Mahjani, B. (2003). An instrumental study of prosodic features and intonation in Modern Farsi (Persian). Unpublished master's thesis, University of Edinburgh, Scotland.
- Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review*, 98, 224–253.
- Matsumoto, D., Yoo, S. H., & Fontaine, J. (2008). Mapping expressive differences around the world: The relationship between emotional display rules and individualism versus collectivism. *Journal of Cross-Cultural Psychology*, 39(1), 55–74.
- Matsumoto, D., Yoo, S. H., Hirayama, S., & Petrova, G. (2005). Development and validation of a measure of display rule knowledge: The display rule assessment inventory. *Emotion*, 5(1), 23–40.
- McCarthy, L. K., Itakura, S., & Muir, D. W. (2006). Cultural display rules drive eye gaze during thinking. *Journal of Cross-Cultural Psychology*, 37(6), 717–722.
- McCarthy, L. K., Itakura, S., & Muir, D. W. (2008). Gaze display when thinking depends on culture and context. *Journal of Cross-Cultural Psychology*, 39(6), 716–729.
- Mithen, S. (2007). *The singing Neanderthals*. Cambridge: Harvard University Press.
- Moseley, R., Carota, F., Hauk, O., Mohr, B., & Pulvermüller, F. (2012). A role for the motor system in binding abstract emotional meaning. *Cerebral Cortex*, 22(7), 1634–1647.
- Nariyama, S. (2003). *Ellipsis and referent tracking in Japanese*. Amsterdam: John Benjamins.
- Nicholson, J., Takahashi, K., & Nakatsu, R. (2000). Emotion recognition in speech using neural networks. *Neural Computing and Applications*, 9(4), 290–296.
- Oh, S. (2007). Overt reference to speaker and recipient in Korean. *Discourse Studies*, 9, 462–492.
- Oliver, R. T. (1993). *A history of the Korean people in modern times: 1800 to the present*. Newark, DE: University of Delaware Press.
- Parvaresh, V., & Dabghi, A. (2013). Language and socio-cultural worlds of those who use it: A case of vague expressions. *Iranian Journal of Society, Culture & Language*, 1(1), 74–88.
- Paulmann, S., & Pell, M. D. (2011). Is there an advantage for recognizing multi-modal emotional stimuli? *Motivation and Emotion*, 35(2), 192–201.
- Pell, M. D., Paulmann, S., Dara, C., Alasserri, A., & Kotz, S. A. (2009). Factors in the recognition of vocally expressed emotions: A comparison of four languages. *Journal of Phonetics*, 37(4), 417–435.
- Perlovsky, L. I. (2004). Integrating language and cognition. *IEEE Connections*, 2(2), 8–12.
- Perlovsky, L. I. (2006). Toward physics of the mind: Concepts, emotions, consciousness, and symbols. *Physics of Life Reviews*, 3, 23–55.
- Perlovsky, L. I. (2007). Evolution of languages, consciousness, and cultures. *IEEE Computational Intelligence Magazine*, 2(3), 25–39.
- Perlovsky, L. I. (2009). Language and cognition. *Neural Networks*, 22(3), 247–257.
- Pulvermüller, F., & Schumann, J. H. (1994). Neurobiological mechanisms of language acquisition. *Language Learning*, 44(4), 681–734.
- Pulvermüller, F., Härle, M., & Hummel, F. (2001). Walking or talking? Behavioral and neurophysiological correlates of action verb processing. *Brain and Language*, 78(2), 143–168.
- Pulvermüller, F., & Fadiga, L. (2010). Active perception: Sensorimotor circuits as a cortical basis for language. *Nature Reviews*

- Neuroscience*, 11(5), 351–360.
- Robson, S. O. (1991). *Patterns of variation in colloquial Javanese*. Centre of Southeast Asian Studies, Monash University, Clayton, VIC.
- Robson, S. O. (1992). *Javanese grammar for students*. Centre of Southeast Asian Studies, Monash University, Clayton, VIC.
- Roberson, D., Pak, H. S., & Hanley, J. R. (2008). Categorical perception of color in the left and right visual field is verbally mediated: Evidence from Korea. *Cognition*, 107, 752–762.
- Sapir, E. (1985). *Culture, language and personality: Selected essays by Edward Sapir*. Berkeley: University of California Press.
- Scherer, K. R. (2003). Vocal communication of emotion: A review of research paradigms. *Speech Communication*, 40, 227–256.
- Scherer, K. R., Ladd, D. R., & Silverman, K. E. A. (1984). Vocal cues to speaker affect: Testing two models. *Journal of the Acoustical Society of America*, 76, 1346–1356.
- Scherer, K. R., Banse, R., & Wallbott, H. G. (2001). Emotion inferences from vocal expression correlate across languages and cultures. *Journal of Cross-Cultural Psychology*, 32(1), 76–92.
- Scollon, R., & Scollon, S. W. (1995). *Intercultural communication: A discourse approach*. Oxford: Blackwell.
- Shebani, Z., & Pulvermüller, F. (2013). Moving the hands and feet specifically impairs working memory for arm-and leg-related action words. *Cortex*, 49(1), 222–231.
- Silverstein, M. (2004). “Cultural” concepts and the language-culture nexus. *Current Anthropology*, 45(5), 621–652.
- Tanaka, A., Koizumi, A., Imai, H., Hiramatsu, S., Hiramoto, E., & DeGelder, B. (2010). I feel your voice: Cultural differences in the multi-sensory perception of emotion. *Psychological Science*, 21(9), 1259–1262.
- Thierry, G., Athanasopoulos, P., Wiggett, A., Dering, B., & Kuipers, J. R. (2009). Unconscious effects of language-specific terminology on preattentive color perception. *Proceedings of the National Academy of Sciences of the United States of America*, 106, 4567–4570.
- Thompson, W. F., & Balkwill, L. L. (2006). Decoding speech prosody in five languages. *Semiotica*, 158(1–4), 407–424.
- Vanbezoijen, R., Otto, S. A., & Heenan, T. A. (1983). Recognition of vocal expressions of emotion - a 3-nation study to identify universal characteristics. *Journal of Cross-Cultural Psychology*, 14(4), 387–406.
- Winawer, J., Witthoft, N., Frank, M. C., Wu, L., Wade, A. R., & Boroditsky, L. (2007). Russian blues reveal effects of language on color discrimination. *Proceedings of the National Academy of Sciences of the United States of America*, 104(19), 7780–7785.
- Whorf, B. L. (1956). *Language, thought, and reality*. Cambridge: MIT Press.
- Yen-Liang, L. (2013). Vague language and interpersonal communication: An analysis of Adolescent intercultural conversation. *International Journal of Society, Culture & Language*, 1(2), 69–81.