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A cross-linguistic comparison of the propositional content of laughter in American English and Central Thai

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Abstract: Research suggests that laughter can serve several communicative functions beyond indicating mirth, and as such, may hold propositional meaning. The present study analyzes cross-linguistic differences in the propositional content of laughter in American English and Central Thai television shows. A framework for classifying laughter by propositional content was first developed by drawing on existing literature and bottom-up analysis of the laughter found in American English and Thai shows. The framework includes categories of positive valency, negative valency, and humor, along with subcategories of disbelief, support, expressive, and pride. A multi-modal corpus of laughter was then created by compiling all laughter instances in the first 100 min of three American English television shows and three Thai television shows. The meanings of all 848 laughter instances in the corpus were categorized by propositional content of laughter. Results show that humor laughter and negative-support laughter are more frequent in American English, and positive-support laughter and negative-pride laughter are more frequent in Central Thai. These findings provide further evidence that laughter contains propositional content because they indicate that laughter use is subject to cross-linguistic variation that aligns with existing linguistic patterns and cultural values.

Keywords: American English; Central Thai; laughter; meaning; propositional content

1 Introduction

Laughter is a social phenomenon that has been shown to occur in all languages and cultures (Edmonson 1987; Gregg 1928; Wood and Niedenthal 2018). In addition to being a response to humor, laughter also serves several communicative functions, such as expressing agreement (Ginzburg et al. 2020), disbelief (Clift 2016;

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Ginzburg et al. 2020; Sacks 1992), and superiority (Hobbes 1967 [1651]; Morreall 2008), among others. Because of the social functions it serves, some researchers have indicated that laughter is a communicative action in and of itself, and further, that laughter contains propositional content (Clift 2016; Holt 2011; Mazzocconi et al. 2020).

The concept that laughter contains propositional content augments early theories that laughter occurs only instinctually (Darwin 1872; Leonardi et al. 2016; Yim 2016). By investigating this claim cross-linguistically, researchers may gain insight as to the extent to which laughter contains propositional content as well as the differences in its function across languages (Ginzburg et al. 2020; Mazzocconi et al. 2020). However, few studies have examined this issue cross-linguistically, and fewer have examined it quantitatively.

The present study compares the function of laughter in American English to Central Thai in a corpus-based study by assuming all instances of laughter contain propositional content. Because no corpora of natural language production exist in Thai, two corpora of scripted television shows in American English and Thai were compared. The findings provide preliminary evidence that laughter is used to convey differential propositional content across these two languages.

2 Theoretical framework

Laughter is a socialized behavior (Edmonson 1987; Provine 2000) that emerges as early as 10 weeks old (Nwokah et al. 1994). By the age of three years old, 93 percent of infant laughs occur in groups (Gregg 1928). Laughter as a social phenomenon distinguishes laughter from unconscious bodily functions such as sneezing and hiccupping (Ginzburg et al. 2020). It is also highly individualized in that laughter from specific individuals can be recognized and identified by others (Edmonson 1987). While laughter is considered a universal, innate human characteristic (Bryant et al. 2018; Provine 2001), the questions of how, why, and when laughter occurs have been scrutinized by researchers and philosophers for centuries (e.g., Aristotle 2000 [350 BCE]; Bergson 1900; Gervais and Wilson 2005; Hobbes 1967 [1651]; Kant 1987 [1790]; McComas 1923; Plato 2000 [375 BCE]; Szameitat et al. 2009b; Trouvain and Truong 2017). It wasn't until recent years that researchers have begun to shift from considering laughter an extrinsic feature of communication to considering it an integral aspect of language with "compositional construction of meaning" (Ginzburg et al. 2020: 39).

Many agree that laughter often occurs in conjunction with humor (Dynel 2020; Gervais and Wilson 2005; Savage et al. 2017; Yim 2016). However, researchers have faced issues conceptualizing humor. Theories such as humor resulting from the

dispelling of tension (Freud 1928), the perception of superiority (Hobbes 1967 [1651]), or, popularly, incongruity (Attardo 1994; Filani 2021; Mulkay 1988; Raskin 1985; Suls 1977) may explain many standard jokes in English, but they do not account for all naturally occurring instances of humor and subsequent laughter in conversation (Holt 2011). For example, incongruity, and particularly the element of surprise that regularly accompanies it, does not explain why people may laugh at the same instances repeatedly even though they already know the punchline (Long and Graesser 1988). Thus, Glenn (2003: 24) remarks that the belief of a “causal, stimulus-response relationship from humorous event to perception of humour to laughter” overlooks the complex uses of laughter as a discursual tool. Holt (2011: 396) agrees there is no “straightforward causal relationship between laughter and humorous discourse in interaction,” and further, that “much laughter in interaction does not arise from the presence of humour in any straightforward way.” Conversation analysts therefore distinguish between laughter and humor by naming the instance that triggers an instance of laughter a ‘laughable’ (Glenn 2003; Holt 2011).

While humorous laughables certainly occur (Gervais and Wilson 2005), research has shown that laughter serves several communicative functions beyond indicating mirth. In fact, McComas (1923) even suggests that laughter evolved as a method of communicating pleasure before primitive humans had the physicality required for articulate speech. Today, laughter can be used in English to signify topic continuation (Bonin et al. 2014; Holt 2010) or topic change (Bonin et al. 2014; Holt 2010, 2011), acknowledge a dispreferred response (Gavioli 1995), communicate disbelief (Clift 2016; Ginzburg et al. 2020; Sacks 1992), show agreement or disagreement (Ginzburg et al. 2020), express feelings of tension (Haakana 1999, 2002) and relief (Berlyne 1960; Spencer 1860), and express superiority (Hobbes 1967 [1651]; Morreall 2008) or humility (Glenn 1991/1992; Jefferson 1985). Further, Clift (2016) categorized all laughter of these types by either affiliation or disaffiliation. Affiliative laughter is laughter as an action that “endorses the stance or perspective expressed by a prior speaker” (Clift 2016: 2) and brings a group socially closer (i.e., ‘laughing with’) (Ginzburg et al. 2020; Glenn 2003). Disaffiliative laughter, on the other hand, expresses the speaker’s disapproval or disagreement, thus leading to social distance (i.e., ‘laughing at’) (Clayman 1992, 2001; Glenn 2003; Romaniuk 2013). Another classification of laughter regards valency, which is the emotion interlocutors portray while laughing. Szameitat and colleagues (2009a) show that laughter is a form of nonverbal vocalization, along with affective bursts such as crying and screaming (Schröder 2003) and interjections such as *hooray* (Dietrich et al. 2006), that can convey emotion. In their experiment, participants classified the valency of laughter sounds into positive valency, or

emotion (joy and tickling), and negative valency (taunting and *schadenfreude*) by hearing recordings of laughter instances (Szameitat et al. 2009a).

Because laughter has various discursive uses, researchers have begun to acknowledge laughter as “*an action* [emphasis added] in its own right, the occurrence of which may have nothing to do with the presence of humour” (Holt 2011: 393). Other researchers concur, stating that laughter has a “nuanced relationship with the *actions* [emphasis added] it implements” (Clift 2016: 2; see also Glenn and Holt 2013; Jefferson 1985). Laughter as an action bears striking resemblance to illocutionary force in speech act theory. Ginzburg et al. (2020: 8) also explicitly mention that laughter is indeed tied to “verbally expressed speech acts.” According to speech act theory, a locutionary act (or utterance) causes a locutionary force (action) and perlocutionary effect (effect in the real world) (Austin 1962; Searle 1969). One prerequisite of illocutionary force is that the utterance holds propositional content through a locutionary act. Thus, Ginzburg et al. (2020: 8) argue that laughter contains “propositional content ... [so] that it can be used as a stand-alone utterance” (see also Mazzocconi et al. 2020). The propositional content of laughter incorporates information from the immediate context, and it communicates stance (Schegloff 1996) as well as other communicative features such as disagreement, superiority, and humility, as discussed previously (i.e., Ginzburg et al. 2020; Jefferson 1985; Morreall 2008).

By containing propositional content, laughter is thereby capable of flouting Gricean maxims. According to Grice (1975), utterances may flout maxims of quality, quantity, manner, and relation when they are not true, informative, clear, or relevant, respectively (Derakhshan and Eslami 2020). Flouting Gricean maxims can lead to nonliteral meanings that are inferred, or implicated, through contextual clues by the interlocutors (Derakhshan and Eslami 2020; Grice 1975; Hopkinson 2021). For instance, Ginzburg and colleagues (2020) demonstrate that laughter, or lack thereof, can be instrumental in flouting the maxim of quantity. When someone smiles instead of laughs in response to a joke, the smile is a lowered response that carries the implicature that the joke was not funny by flouting the maxim of quantity and/or manner (Ginzburg et al. 2020). Similarly, laughing at a seemingly inappropriate time flouts the maxim of relation and can carry additional implicature (Ginzburg et al. 2020). While implicature is contextualized and potentially ambiguous (Taguchi 2009), so too is laughter. According to scholars, “the quasi-syntactic properties of laughter are ... potentially ambiguous” (Edmonson 1987: 29), and “virtually any utterance or action could draw laughter, under the right (or wrong) circumstances” (Glenn 2003: 49). The facts that laughter can be ambiguous as well as flout maxims of quantity, manner, and/or relation bolsters the theory that laughter contains propositional content. However, evidence that the use of laughter varies by language would provide

further support that laughter contains propositional content (Ginzburg et al. 2020). Taguchi (2009) reinforces this notion by demonstrating that indirect forms of communication vary in construction and use cross-linguistically.

Some studies have investigated cross-linguistic differences in the form of laughter. One such study suggests that phonological differences in laughter across languages do not exist. Through study of laughter in Dutch, English, French, German, Greek, Gu'jerati, Italian, Japanese, Navajo, Portuguese, Quiche, Russian, Spanish, Tzotzil, Yiddish, Yoruba, Yucatec, Zapotec, and Zuni, Edmonson (1987) presumes that the phonology of laughter is not linguistically nor culturally coded. In fact, he shows that Tzotzil and English have commonalities in laughter phonology in that high front vowels demonstrate more self-consciousness and low back vowels and nasals demonstrate more assertiveness (Edmonson 1987). On the other hand, one recent study suggests different laughter sounds can communicate different meanings across languages (Levisen 2019). For example, in Dutch /hæhæ/ implies *schadenfreude* by feeling gratification at another's pain (Levisen 2019), yet this same sound can carry broader meaning in English. Further studies show the form of laughter in sentence placement differs between Italian and English (Gavioli 1995). While laughter marking a dispreferred response is regularly turn-final in Italian, it is often turn-initial in English (Gavioli 1995).

The studies above are some of the few that have examined the form of laughter cross-linguistically. However, even fewer cross-linguistic studies of the function of laughter have been conducted, and among them, only one quantitative analysis has been undertaken. The study that investigates differences in the function of laughter across languages was conducted by Mazzocconi et al. (2020). They tagged each instance of laughter from naturally occurring speech in the DUEL French corpus ("Disfluency, exclamations and laughter in dialogue"; Hough et al. 2016), DUEL Chinese corpus (Hough et al. 2016), and the spoken BNC ("British National Corpus"; Leech et al. 1994). After a total of 814 min of data collected and observed, the researchers drew several conclusions. While some of these conclusions may be related to differential conversational structures of the corpora used in data collection (i.e., the DUEL corpus features task-based discussions while the BNC features unstructured conversations), they provide preliminary insights as to the nature of laughter across languages. One difference between French, Chinese, and British English is that laughter with high arousal, or high laughter intensity, occurs extremely rarely in French and Chinese (both less than 1.5% of all laughs), but it occurs fairly frequently in British English (13.15% of all laughs). Additionally, laughter that co-occurs with speech was found to occur significantly more often in Chinese than in French and British English (Mazzocconi et al. 2020). The researchers found commonalities in laughter as well, in that laughter related to pleasant incongruity such as jokes and general humor occurs most often, and

laughter related to pragmatic incongruity such as sarcasm occurs rarely in all languages investigated (Mazzocconi et al. 2020). This pivotal study was the first to examine both the form and function of laughter quantitatively across languages. Its findings indicate that laughter usage differs in some respects between languages.

The present study adds to Mazzocconi et al.'s (2020) findings by comparing the propositional content of laughter in other languages. The study analyzes American English and Central Thai quantitatively in order to determine whether cross-linguistic variation in the function of laughter exists between these two languages. The present study furthers the concepts developed in Mazzocconi et al. (2020) by focusing on the propositional content each instance of laughter conveys rather than the contextual features that contribute to it. English and Thai were selected as languages of comparison because they belong to disparate language families and cultural traditions, which may yield more striking contrasts in the use of laughter. While English is an Indo-European language and the U.S. is a largely individualistic culture, Thai belongs to the Tai language family and Thailand is a largely collectivistic culture (Knutson et al. 2003; Smyth 2014).

3 Method

Three Central Thai television shows and three American English television shows were sources for data collection. All instances of laughter from the first 100 min of each series were recorded and tagged according to a framework which classifies laughter by its propositional content.

3.1 Data collection

A multimodal corpus of American English and Central Thai was compiled in order to investigate differences in the propositional content of laughter between languages. Although naturally occurring, spontaneous conversation would provide the most conclusive evidence of cross-linguistic laughter usage, no corpora of this kind exist in Thai. Therefore, the corpus used in the present study consists of television shows found on the video streaming platform Netflix. This allowed for the construction of a corpus with comparable strata as both the Thai and English strata featured near-identical language creation and goals. Also, the use of television shows allowed the corpus to be multimodal in that phonology, facial expressions, gestures, and utterances were utilized when determining the meaning of each laughter instance.

Table 1: Television shows for data collection.

	Central Thai television show	American English television show
Romantic TV comedy	แม่หมดเจ้าเสน่ห์ The Charming Stepmom	Friends from College
Romantic TV drama	สงครามนางงาม Beauty and the Bitches	Soundtrack
Comedy	เพื่อนรักบัดดี้ Bangkok Buddies	New Girl

Three television shows from each language were selected based on their genre (Romantic TV Comedy, Romantic TV Drama, and Comedy) as determined by Netflix. All shows featured main characters who were native speakers of the relevant dialect, and none included laugh tracks nor improvisation. Only shows produced within the past 10 years were included in order to reflect current language uses. After applying these specifications, series were selected based on similarity of plot line. For example, because shows about the performing arts were available in both Thai and American English Romantic TV Dramas, these series were selected. The shows used as data sources are shown in Table 1.

All instances of laughter in the first 100 min of each series were recorded, for a total of 600 min of data. Laughs were identified following these criteria:

1. Only audible laughs on screen were analyzed. This is because audible laughs could be objectively identified as laughter, whereas inaudible instances could be subjectively judged as either laughter or smiling. Also, only laughter on screen was recorded because the full context, including who is laughing, was necessary to accurately determine its propositional content.
2. Laughter in groups of four or more people was recorded as only one laughter instance. This was done because large groups were impossible to count, and attempting to do so would have skewed the data.
3. Prolonged laughter was tagged as one laugh. This was done because a long period of laughter without stops was characterized by the same propositional content throughout its duration. Laughter that was separated by short spurts of speech, on the other hand, was recorded as separate instances of laughter.
4. Laughter that occurred in a flashback of a previous scene in the series was not tagged. This was done to avoid analyzing the same sample twice.

After identifying laughter in shows based on these specifications, laughs were tagged as the most appropriate propositional content in the framework described below.

3.2 Framework for classifying laughter

A framework that includes possible propositional content of laughter was compiled by conducting a content analysis and drawing on empirical research. For the content analysis, all conversations with laughter in the shows were first transcribed along with the propositional content each laugh conveyed. A content analysis of all transcripts with laughter and their propositional content allowed laughter types to be separated into several broad categories and subcategories. This categorization was then narrowed down to more specific categories and naming conventions based on distinctions made by previous researchers.

Categories include positive valency (Szameitat et al. 2009a), negative valency (Szameitat et al. 2009a), and humor (Gervais and Wilson 2005; Savage et al. 2017; Yim 2016). The humor category was not divided into further subcategories that represent theories of humor because doing so was not a main focus of the present study; rather, the focus was to quantify how laughter is used in conveying various meanings beyond humor. The remaining categories, then, were divided into subcategories of disbelief, support, expressive, and pride that repeat in both positive and negative valency categories.

The propositional content of positive-disbelief and negative-disbelief as “I’m pleasantly surprised” and “I’m unpleasantly surprised,” respectively, align with Clift (2016), Ginzburg et al. (2020), and Sacks’ (1992) findings that laughter can communicate disbelief. The propositional content of positive-support and negative-support as “I agree/understand” and “I don’t agree/understand,” respectively, align with Ginzburg et al.’s (2020) finding that laughter can communicate agreement as well as disagreement. The propositional content of positive-expressive and negative-expressive as “I’m happy” and “I’m uncomfortable,” respectively, align with Spencer’s (1860) finding that laughter can express relief and Haakana’s (1999, 2002) finding that laughter can express feelings of tension. Finally, the propositional content of positive-pride and negative-pride as “I’m proud of myself / I’m superior” and “I’m humble / I’m seeking validation,” respectively, align with Hobbes (1967 [1651]) and Morreall’s (2008) findings that laughter can communicate superiority and Glenn (1991/1992) and Jefferson’s (1985) findings that laughter can communicate humility. Thus, to the author’s knowledge, all major pragmatic functions explored in the previous literature on laughter, with the exception of marking topic changes or topic continuation (Bonin et al. 2014; Holt 2010, 2011), are incorporated into this framework of propositional content of laughter. Table 2 depicts the framework used in this study.

Table 2: Laughter as implicature framework.

Category	Subcategory	Implicature
Positive valency	Disbelief	I'm pleasantly surprised.
	Support	I agree/understand.
	Expressive	I'm happy.
	Pride	I'm proud of myself/I'm superior.
Negative valency	Disbelief	I'm unpleasantly surprised.
	Support	I don't agree/understand.
	Expressive	I'm uncomfortable.
	Pride	I'm humble/I'm seeking validation.
Humor	Humor	This is funny.

This framework differs from the taxonomy for classifying laughter recently created by Mazzocconi et al. (2020) in that it features the propositional content of laughter rather than its contextual triggers and pragmatic functions. Thus, most of the pragmatic functions of laughter developed in Mazzocconi et al.'s (2020) taxonomy are also encapsulated in this framework. For example, the pragmatic function of laughter that marks hyperbolic language (Mazzocconi et al. 2020) aligns with the propositional statements of “I’m pleasantly surprised” and “I’m unpleasantly surprised” in the present framework. Similarly, the pragmatic function of softening troublestelling from Mazzocconi et al. (2020) is encompassed in the propositional statement of “I’m humble/I’m seeking validation.”

Examples for each subcategory from the corpus are shown below.

3.2.1 Disbelief

The disbelief subcategory exists in both laughter with positive and negative valency. An example of positive-disbelief laughter is shown in Table 3. In this example, the positive surprise one friend feels is expressed in a laugh.

Table 3: Positive-disbelief laughter.

Context	Two female friends chat at a furniture store
Original	A: I know what I'm going to do. I'm going to buy you this bed ... Happy housewarming.
dialogue	B: No, Sam, that is insane. We *laugh* don't even have an apartment yet.

Table 4: Negative-disbelief laughter.

Context	Two female friends chat
Original dialogue	A: You guys are trying to have a kid? B: Well, we're trying. It's not getting us anywhere, so it's time for science. A: Whoa *laughs* Ethan with a kid, it's, um ... hard to imagine.

An example of negative-disbelief laughter is shown in Table 4. In this conversation, interlocutor A is unpleasantly surprised, and her laughter exhibits this surprise and accompanying negative judgment.

3.2.2 Support

Similarly, support laughter occurs with positive and negative valency. In positive-support laughter, the implicature is that of agreement or understanding (as shown in Table 5 in its original Thai along with English translation). In this example, interlocutor B laughs in replacement of the words “sure” or “ok” to show agreement.

In negative-support laughter, the speaker disagrees or admits lack of understanding (see Table 6). In this case, the laughter of interlocutor B conveys the meaning “That’s not true” or “I don’t agree.”

3.2.3 Expressive

Expressive subcategories indicate the speaker’s specific emotive state across positive and negative valencies. The example of positive-expressive in Table 7

Table 5: Positive-support laughter.

Context	Two male friends chat at a restaurant
Original dialogue	A: ใช้เวลานานขนาดนี้ ให้ฉันสั่งก่อนก็แล้วกัน นะ B: *laugh* ลุงอยากกินอะไรลุงสั่งเลย
Dialogue transliteration	A: chai/ welaa naan kanat nii/ hai/\ chan/ sang\ gohn\ goh/\ leow/ gan na/ B: lung yak\ gin arai lung\ sang\ luey
Leipzig gloss	A: ใช้ เวลา นาน ขนาด-นี้ ให้ ฉัน สั่ง ก่อน ก็แล้วกัน นะ use time long size-this let me order before then AUX 'That took a while. I'll just order first.' B: *laughs* ลุง อยาก กิน อะไร ลุง สั่ง เลย uncle.2 want eat what.Q uncle.2 order AUX *laughs* 'What do you want, then?'

Table 6: Negative-support laughter.

Context	Two male friends jog together to relieve stress
Original dialogue	A: What if I was wasting my time? Maybe I should have been figuring out my life like you.
dialogue	B: *laughs* I don't have anything figured out.

Table 7: Positive-expressive laughter.

Context	Two female friends receive news that they will be moving on to the next round in a competition
Original dialogue	A: เข้ารอบแล้ว เข้ารอบทั้งคู่เลย ดีใจอะ โอ้มายก๊อด *laughs*
Dialogue transliteration	A: kao/\ rob/\ leow/ kao/\ rob/\ tang/ kuu/\ luey diijai ah/ oh/\ mai got/\
Leipzig gloss	A: เข้า รอบ แล้ว เข้า รอบ ทั้งคู่ เลย enter round PST enter round both.CLF AUX 'We made it! We both made it!' ดีใจ อะ โอ้ มาย ก๊อด *laughs* glad AUX oh my God 'I'm so glad! Oh my God!' *laughs*

exhibits the speaker's happiness, in which interlocutor A emphasizes her happiness through laughter.

Negative-expressive laughter, on the other hand, emphasizes uncomfortable feelings through laughter. Table 8 provides an example.

3.2.4 Pride

Pride as a subcategory also falls into both positive and negative valency categories. Positive pride indicates the speaker's pride or superiority, and negative pride

Table 8: Negative-expressive laughter.

Context	One female customer chats with the male vendor after realizing she does not have cash to pay for her order
Original dialogue	A: *laughs* ไม่รับแล้วได้ไหมคะ
Dialogue transliteration	A: mai/\ rab/ leow/ dai/\ mai/\ ka/
Leipzig gloss	A: *laughs* ไม่ รับ แล้ว ได้ ไหม คะ NEG receive PST can Q AUX *laughs* 'Could I cancel my order now?'

Table 11: Humor.

Context	One man and one woman who are married chat while driving their moving van
Original	A: You know, whenever we get together, it gets so competitive and immature.
dialogue	B: What? With our friends? Why would that happen? They're only our best friends. What can possibly go wrong? *laughs* A: *laughs*

interlocutor B makes a sarcastic joke, and both A and B laugh to signify they think the joke is funny.

3.3 Data analysis

Two researchers tagged all instances of laughter in the corpus for the propositional content they convey. Due to the intermodal nature of this corpus, taggers accounted for spoken utterances surrounding each instance of laughter along with other contextual features such as facial expressions and tone of voice when determining which laughter subcategory best characterized each instance. Despite the help of these contextual features in determining the most appropriate propositional content of each laugh, several instances of laughter could be seen as ambiguous (see Edmonson 1987; Glenn 2003). In these cases, the taggers chose what they deemed to be the most likely option. Twenty percent of the corpus was tagged by both researchers to determine interrater reliability. This portion of the corpus used to establish interrater reliability includes excerpts from both the English and Thai strata. The researchers' interrater reliability was 84%, which is considered an acceptable level of agreement (Plonsky and Derrick 2016).

The first tagger, a PhD student in applied linguistics, tagged 80% of the corpus. The second tagger, an undergraduate research assistant with a background in linguistics, tagged 20% of the corpus. The final number of laughter instances was 848, including 451 instances in the American English strata and 397 instances in the Thai strata. The data was normed to 500 laughs so that results could be compared cross linguistically.

4 Results

The number of instances for each category normed to 500 laughs and rounded to the nearest full number are depicted in Figure 1. As shown, both Thai and English

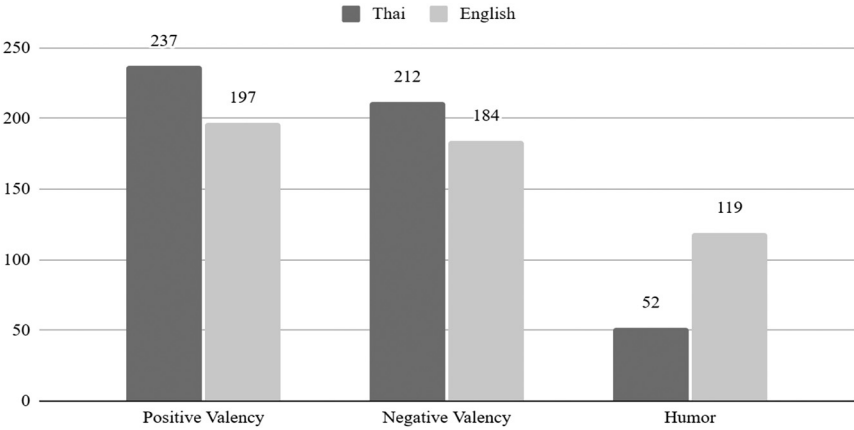


Figure 1: Normed laughter counts by category.

television shows utilize laughter with positive valency most frequently, with 237 positive laughter instances in Thai and 197 positive laughter instances in English. Laughter with negative valency is next most frequent: 212 negative laughter instances in Thai and 184 negative laughter instances in English. Laughter that reacts to humor is least common in both languages yet is noticeably less frequent in Thai than in English. Thai television shows use 52 laughter instances to indicate humor, compared to 119 laughter instances to indicate humor in English.

The number of instances for each subcategory normed to 500 laughs and rounded to the nearest full number are depicted in Figure 2. Some subcategories of

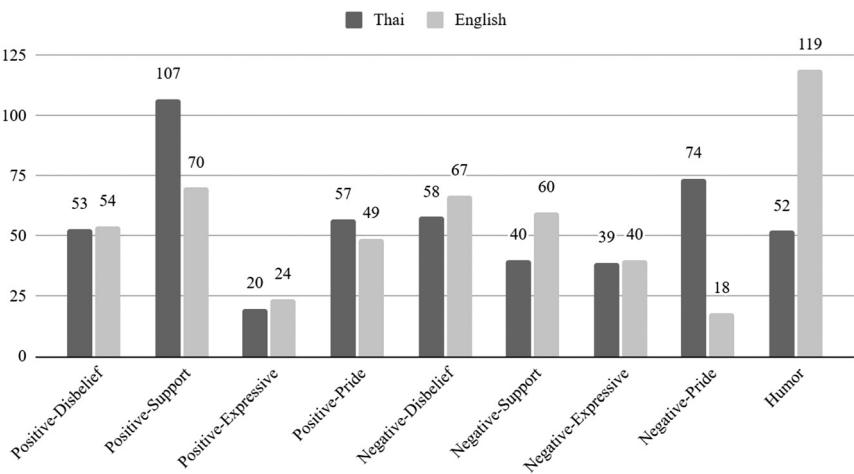


Figure 2: Normed laughter counts by subcategory.

propositional content of laughter contain similar patterns between Thai and English television shows, namely positive-disbelief (53 laughter instances in Thai and 54 laughter instances in English), positive-expressive (20 in Thai and 24 in English), positive-pride (57 in Thai and 49 in English), negative-disbelief (58 in Thai and 67 in English), and negative-expressive (39 in Thai and 40 in English). Other subcategories suggest differences between Thai and English, including positive-support (107 laughter instances in Thai and 70 laughter instances in English), negative-support (40 in Thai and 60 in English), negative-pride (74 in Thai and 18 in English), and humor (52 in Thai and 119 in English).

5 Discussion

The results above indicate various differences in the use of laughter between television shows in English and Thai. Most notably, the propositional content of laughter in English related to humor as well as disagreement and lack of understanding occurs more regularly than in Thai. On the other hand, the propositional content of laughter in Thai related to humility as well as agreement and understanding occurs more often than in English. These results illustrate cross-linguistic variation in the function of laughter between English and Thai, which supports the idea that laughter contains propositional content (see Ginzburg et al. 2020). It is important to keep in mind that these findings reflect differences of laughter in scripted interactions (due to the nature of the corpus used for analysis) and therefore may not fully represent the use of laughter in spontaneous, unplanned conversation in these two languages. More study would be needed to determine whether the findings are generalizable to all language contexts.

Laughter signifying agreement and understanding is more common in Thai television shows while laughter signifying disagreement and lack of understanding is more common in English television shows. This may be due to the predominant cultural traditions of collectivism and individualism, respectively. Because Thailand is considered a collectivist culture in which harmony within groups is highly valued (Smith et al. 1998), some consider that native Thai speakers may prefer to avoid disagreement and therefore conflict (Paletz et al. 2018). The lower rates of indicating disagreement through laughter could be an attempt to boost in-group harmony and limit face-threatening acts, particularly because threatening an interlocutor's face could affect their entire social circle ("group face"; Beom 2010). On the other hand, the United States is regarded as a predominantly individualistic culture that values individual interests and successes more than the group's (Beom 2010). Paletz and colleagues (2018) state "In individualistic cultures, team members express more conflicts and benefit from it,

compared to in collectivistic cultures that emphasise harmony” (98). Laughter is only one strategy among many that interlocutors use to express agreement or disagreement (Guodong and Jing 2005), yet the finding that laughter use aligns with the linguistic and cultural traditions of American English and Central Thai further testifies that laughter contains propositional content. This is because the patterns of laughter follow the language’s existing linguistic patterns and thereby communicate analogous meaning.

However, it is also possible that the extent to which agreement and disagreement is expressed through laughter in the corpus relates to the characters who interact in the television shows. Because speakers of most, if not all, languages adjust politeness strategies when disagreeing with superiors (Gruber 2001; Guodong and Jing 2005; Rees-Miller 2000), it is possible that the patterns of laughter evidenced in the corpus in terms of agreement is reflective of characters in the television shows and their interactions. Collectivist cultures tend to be impacted by power differentials in their use of politeness strategies to a greater extent than individualistic cultures (Smith et al. 1998), so further investigation is needed to determine whether social roles impact the use of laughter in agreeing and disagreeing.

Humor laughter is more common in American English than Central Thai. This fact aligns with research that shows Western cultures, including U.S. culture, have a tradition of embracing humor (Martin and Ford 2018). According to many Western cultures, humorous people are more attractive (e.g., Fraley and Aron 2004; Regan and Joshi 2003), capable (e.g., Priest and Swain 2002; Sternberg 1985), and psychologically healthy (Allport 1961; Martin and Ford 2018). As such, a sense of humor is typically a desired personality trait (Maslow 1968; Mintz 2008). Although laughter and humor do not always occur in conjunction (Holt 2011), the positive perspective of humor in the U.S. may have contributed to the greater proportional use of humor laughter in American English shows. Few studies about humor and laughter in Eastern cultures, in particular Thai culture, have been conducted. The prevailing philosophy in Thailand is Theravada Buddhism, which is practiced by 95% of the population (Pagram and Pagram 2006). According to one scholar, the principles of Theravada Buddhism align neatly with the concept of humor because of its emphasis on “self-confidence, love, and autonomy” as well as the ability to “look onto life and to laugh happily without neglecting sometimes awful situations” (Gurtler 2002: 11). While Buddhist thought encourages humor, the collectivist culture of Thailand may discourage certain types of humor (Kuiper et al. 2004; Yue et al. 2016). Thus, Thailand’s prevailing Buddhist beliefs that encourage humor may be influenced by its largely collectivist culture that discourages humor (Chen et al. 2013; Martin and Ford 2018; McCann et al. 2010),

leading to the less frequent use of laughter in relation to humor in Thai television shows.

The fact that differences in the laughter instances used to signify humor exist in the corpus and coordinate with prevailing cultural philosophies of the two languages provides further support that laughter does contain propositional content. This is because laughter is used differentially to emphasize humor more often in English and less often in Thai. Further research about the use of laughter in relation to humor across cultures could provide more information about the appropriateness of responding to humor with laughter in various languages.

Lastly, the finding that laughter signifying humility and/or seeking validation is more common in Thai than in English aligns with Thai cultural values and therefore demonstrates that laughter may contain propositional content. According to Pagram and Pagram (2006: 5), “reticence and humility are highly valued” in Thailand, and Cedar (2006: para. 5) agrees that Thai culture “values humility and modesty.” In contrast, Western cultures, such as U.S. culture, had largely considered humility as a source of weakness until recently in fairly specific contexts like religion (Exline and Geyer 2004). The sharp contrast in expectations of humility between Thai and U.S. cultures are further demonstrated by Western teachers who expect students to participate vocally in class by volunteering to speak (Ellwood and Nakane 2009), while students from Eastern cultures are more likely to participate by being attentively silent in order to showcase modesty (Stickney 2010). Therefore, different cultural values in humility may lead laughter to be used with validity-seeking content more often in Thai than in American English.

Additionally, the humility already essential to Thai word choice may transfer to Thai laughter. Expression of humility is built into the Thai language through pronoun usage. A popular blog to Thai language learners living in Thailand, ExpatDen, teaches that Thai speakers should express “modesty” by using a “humble pronoun” (Juyaso 2015: para. 12). Although humility is also incorporated into the English language through, for example, the use of Mr. and Ms., the word choice and application of humble pronouns in English are both limited, whereas each pronoun choice in Thai reflects the interlocutors’ humility. Thus, it follows naturally that laughter that conveys humility is also used frequently as a discursal tool in scripted Thai conversations. The frequent inclusion of laughter marking humility in Thai, then, can be attributed to both cultural and linguistic differences between English and Thai. Because this pattern of laughter use follows existing cultural and linguistic expectations, the idea that laughter contains propositional content to communicate various messages and emphasize different points is strengthened.

6 Conclusion

By analyzing 848 instances of laughter in context across television shows in American English and Central Thai, several findings indicate that laughter contains propositional content. First, the propositional content of each laugh could be categorized as a specific laughter type from three categories (positive valency, negative valency, and humor) and four subcategories (disbelief, support, expressive, and pride). This suggests that laughter carries propositional content because it has the capacity to communicate meaning. Second, the distribution of laughter's propositional content varies between American English and Central Thai television shows; specifically, humor laughter and negative-support laughter are more frequent in American English, and positive-support laughter and negative-pride laughter are more frequent in Central Thai. This demonstrates cross-linguistic variation in the function of laughter, which provides further evidence that laughter is an integral part of these languages.

6.1 Limitations and further research

One considerable limitation of this study is that the nature of laughter is ambiguous (Edmonson 1987; Glenn 2003). Although each instance of laughter was recorded carefully over multiple viewings by two researchers, an observer's understanding of the propositional content of each laugh may not align with the speaker's intention, and one laughter instance may also contain multiple messages (see also Mazzocchi et al. 2020). Future investigations should account for ambiguity in the propositional content of laughter, possibly by recording primary and secondary messages of each instance.

Additionally, the present study was somewhat limited in that it investigated only the propositional content of laughter, when in fact laughter contains various other features, including phonology (e.g., Mischler III 2008), demonstration of affiliation or disaffiliation (e.g., Clift 2016), position in relation to the laughable (e.g., Mazzocchi et al. 2020), position in relation to others' laughter (e.g., Jefferson 1985), and position in relation to the topic of conversation (e.g., Bonin et al. 2014) among others. Studies that examine these other aspects of laughter production may contribute to scholars' understanding of language and laughter. Cross-linguistic studies would be especially beneficial. For instance, from this sample of data, it appears that laughter particles occurred rarely in Thai, while laughter has been shown to occur as laughter particles interspersed within words in English ("interpolated particles of aspiration"; Potter and Hepburn 2010). The seeming

lack of laughter particles in Thai is perhaps due to the tonal and/or monosyllabic nature of Thai language (Encyclopaedia Britannica 2013), but more quantitative research of cross-linguistic features of laughter and how they interact is needed to confirm or refute this possibility.

Finally, because the data used for analysis in the present study consisted of scripted and planned language, the findings may not be generalizable to other interactions in English and Thai. More studies could therefore examine whether they are in fact generalizable, in particular to unplanned conversation.

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