A Prototype of English Metaphorical Expression of Emotions Used by Thai Undergraduate Students

Piyanuch Laosrirattanachai
Piyapong Laosrirattanachai

Abstract

This study aimed to find English prototype metaphorical expressions of the primary emotions proposed by Parrott (2001). One-hundred respondents (50 English major students and 50 non-English major students) were asked to give one metaphorical expression for each of six emotions. After that, the metaphorical expressions repeatedly given were contained in five-scale GOE rating questionnaires. The GOE rating questionnaires were distributed to 500 university students to identify the prototype of six emotions' metaphorical expressions. The results were: [LOVE IS SONG], [JOY IS FUEL], [SURPRISE IS MAZE], [ANGER IS FIRE], [SADNESS IS DARKNESS], and [FEAR IS WEAKNESS].

Keywords: metaphorical expression, emotion, prototype

Introduction

In 1975, Eleanor Rosch and her team carried out an experiment surveying the best example of three categories, that is, bird, vegetable, and tool. The participants were her psychology students. The experiment is now well-known as the origin of prototype theory. The point is, her experiment had an enormous impact on many fields including cognitive semantics. Prototypicality is very useful for categorizing concrete things. However, Evans (2000) and Wierzbicka (1990) argued that it is still unclear whether prototype should also be useful for categorizing abstract nouns, relations and process, for instance. To avoid the argument, Herskovits (1986) used the term "ideal" instead of prototype in her study. In Linguistics, since there are many words used in daily life sharing nearly the same meaning, linguists have tried using prototype theory to identify what word is the prototype of the words sharing the common meaning. In addition, in the experiment carried out by Rosch, the observed data were concrete nouns. There is still some room left to carry out the experiment on abstract nouns. Metaphor used in language, an interesting topic, should be analyzed using prototype theory. The problem is what kind of metaphor and where the data should be analyzed.

Humans are born with emotions. From the first time a child opens its eyes, it cries, maybe because it is surprised, angry, or afraid. Even as the child grows up to be a little kid, emotions remain. For example, the kid may say "I love you, mum." "I'm sad, my toy is broken." However, when that person grows into an adult, the expressions used change, maybe "You are my star, honey." Lakoff and Johnson

(1980) claimed this phenomenon is metaphorical and insisted that non-literal meanings are used in everyday life in their book *Metaphors we Live By*. Furthermore, they claimed that metaphor was composed to serve three different purposes of usage: to simplify a complicated message, to express an opinion in a more compact way, and to express a vivid idea (Fainsilber & Ortony, 1987). When considering both emotion and metaphor, we see that both are with us every day. Since emotion is a part of everyday life for humans, metaphorical expression can be used to represent the feeling we are concerned with. This argument extends the propositions of Davitz (1969) and Davitz and Mattis (1964) that emotional terms are described through the use of metaphorical expression since a purely literal meaning cannot deliver some subjective thoughts to receivers while a metaphor can generate the imagery of particular expressions (Davitz, 1969; Davitz & Mattis, 1964). Collecting data from novels is one good way, but in our view, the results would reflect an individual or merely a group of authors. In this study, the data were collected from non-native English speakers studying at university to see how they used a metaphorical expression when talking about a set of emotions.

Research questions

1. What are the metaphorical expressions used for referring to emotions by undergraduate students?
2. Can they be categorized into superordinate, basic, and subordinate levels? If yes, in which basic level is each metaphorical expression categorized?
3. What are the prototype metaphorical expressions of the six emotions?

Literature Review

Metaphor

Words can have both denotative meaning and metaphorical meaning. Ullman (1962, pp. 162-163) claimed that figurative meaning comprises two elements: tenor and vehicle. For example, a swan is a kind of bird, but when we say "She is like a swan," this does not mean she is really a swan, but it means she is polite and has a good manner. Here, "she" is a tenor and "swan" is a vehicle. Nida (1975, p. 126) further claimed that metaphorical meaning is used to expand meaning and makes up the relationship between the base meaning and figurative meaning of the different semantics domain. Lakoff and Johnson (1980) proposed that non-literal meanings are used in everyday life, indicating that non-literal meaning is as frequently used and important as literal meaning. They explained that a conceptual metaphor is used as a tool for humans to understand one conceptual domain in terms of another. Forceville (2006) stated that we use metaphor to comprehend abstract and complicated concepts in terms of a simpler one, so that a speaker often uses a concrete, tangible or less complex concept to understand an abstract, intangible or

complex concept. Kovecses (2010, p. 4) explained a conceptual metaphor by proposing a convenient shorthand to the view of metaphor as "CONCEPTUAL DOMAIN A IS CONCEPTUAL DOMAIN B". Thus, this is about mapping two domains in the mind. These two domains are composed of "source domain" and "target domain." The source domain is used to comprehend the target domain. See some examples below.

Target	➔	Source
LIFE	is	JOURNEY.
ARGUMENT	is	WAR.

Many scholars have studied metaphorical meaning in language in various contexts. For example, Angkurawaranon (1984) studied the connotative meaning of the word "Phuuying" (woman) in modern Thai songs by using componential analysis. The results showed that there were positive and negative connotative meanings of the word "Phuuying" used in modern Thai songs, depending on the language users being male or female.

Prototype Theory

Prototype theory was originally based on Eleanor Rosch's experiment (1973; 1978). The concept of prototype theory is that any category comprises many members. However, there is only one member that can be the best example which we consider as the "prototype." The rest of the members can only be considered if they sufficiently resemble the prototype. Rosch carried out the experiment using a Goodness-of-Exemplar (GOE) Rating. The participants were asked to rate a large number of members, species of bird in this particular case, into categories 1 to 7. The member considered the best exemplar was rated as 1 while the members considered the worst exemplar were rated as 7. The results showed that robin was the best exemplar which was labelled as the prototype of bird. On the other hand, ostrich was the worst exemplar. Cruse (2011, pp. 129-130) also conducted an experiment on exemplar vegetables. He claimed that potato and carrot might be the best exemplar or prototype of vegetables in contrast to lemon which is claimed as the worst exemplar of vegetables.

Apart from a GOE rating, there are cognitive behavior correlations known as prototype effects as shown below.

1. Order of mention – Under time pressure, the member being first mentioned has a high chance of being the prototypical member.
2. Overall frequency – The more frequently mentioned, the greater the chance to be the prototypical member.
3. Order of acquisition – The member known or acquired first tends to be the prototypical member.

4. Vocabulary learning – Learning is easier when the learned topic is derived from the prototypical member.
5. Speed of verification – The more speed used to verify the member, the more chance to be the prototypical member.
6. Priming – The members are accepted more quickly when they are closer to the prototypical member.

Rosch et al. (1976) stated that there is an inclusiveness level used to provide optimum cognitive economy called the basic level. See the example of Rosch et al. (1976) in Table 1.

Table 1. Example of a taxonomy used by Rosch et al. (1976)

Superordinate level	Basic level	Subordinate level
FURNITURE	CHAIR	KITCHEN CHAIR
		LIVING-ROOM CHAIR
	TABLE	KITCHEN TABLE
		DINING-ROOM TABLE
	LAMP	FLOOR LAMP
		DESK LAMP

Source: Rosch et al., 1976 as cited in Evans & Green. 2006, p. 257

A category can be divided into three levels: superordinate level, basic or generic level, and subordinate level. The superordinate level provides less detail, the basic level, situated in the mid-level, provides inclusive details, and the subordinate level provides more detail. The current study used the GOE rating to find the prototype of the metaphorical expressions used to refer to six primary emotions. Furthermore, the superordinate level, basic level, and subordinate level were used to categorize the used metaphorical expressions.

Emotion

Human beings live with many kinds of emotions from the time they are born. Evidence that shows people have emotions are expressions such as "I love you," and "I'm angry." Although we all have emotions innately, the definitions of emotions are still various. Emotion was first defined and categorized by Descartes between 1596 and 1650 in his book *The Passions of the Soul*. Descartes categorized the emotions called "primitive passions" into six passions comprised of: wonder, love, hatred, desire, joy, and sadness. In 1872, Charles Darwin classified emotions into six basic emotions: happiness, surprise, fear, disgust, anger, and sadness. Later, Ekman and Friesen (1971) classified emotions into six primary emotions based on

facial expression: anger, disgust, fear, happiness, sadness, and surprise. Plutchik (2001) proposed eight basic emotions of joy, sadness, anger, fear, anticipant, surprise, disgust, and trust. In the same year, Parrott (2001) proposed six primary emotions: love, joy, surprise, anger, sadness, and fear. The current study adopted Parrott's theory as the frame for the six primary emotions since it is one of the latest and the emotions contained in the list are basic and generally known.

Research Methodology

Respondents and data collection

There were two sets of participants. The first group comprised 100 respondents, 50 from an English major and 50 from a non-English major. The respondents in the first group were chosen from the English and non-English major students purposely. There is no evidence to confirm that English and non-English major students would give similar or different English metaphorical expressions for emotions. Thus, this needed to be tested. The responses given by English major students may be or may vary from those given by non-English major students. The respondents in the first group provided the ground data of the emotions' metaphorical expressions.

The second group comprised 500 respondents studying at the undergraduate level. They rated the provided metaphorical expressions to identify the prototype metaphorical expressions of the six emotions. The questionnaires were not distributed in paper form but rather using Google on the worldwide web to facilitate access and analysis by the respondents and researchers. However, differently from Rosch's questionnaire, the current questionnaire used a five rating scale rather than seven as too many choices could bore the respondents and their answers might then be biased as they might simply want to finish the questionnaire rather than giving an authentic response.

Data analysis

The six primary emotions proposed by Parrott (2011) were applied since they cover the generic emotions of humans. The sample of 100 respondents (50 from an English major and 50 from a non-English major) were asked to give a metaphorical expression for each emotion by providing the pattern, for example, "LOVE IS ____." Their responses were categorized by following the inclusiveness level of prototype theory. According to Lakoff and Johnson (1980), metaphor is used in everyday life and when considering the way of speaking individually, each person has their own way of saying anything. This means the metaphorical expressions collected from the 100 respondents would be somehow both similar and different from each other. To find the prototype metaphorical expressions of each emotion, we chose the first 10 metaphorical expressions with the highest frequency given by respondents. The 10 metaphorical expressions of each emotion (60 in total) were

contained in the GOE rating as it was not be possible to carry out the GOE rating with 600 questions. As a result, the questionnaires with 60 questions were distributed to 500 respondents. The metaphorical expression with the highest score for each emotion was labelled as the prototype metaphorical expression of that emotion.

Findings

Metaphorical Expressions from 100 respondents

The English metaphorical expressions given by the English major and non-English major students were different and had variety. The results supported Lakoff and Johnson (1980) who claimed that people always use metaphor in everyday life. This means that people can create any metaphor they want. However, the creation should fit with the native speaker. Non-native English speakers, Thais in this case, might not find such a fluently used metaphor when speaking English. Furthermore, they mostly lacked English vocabulary knowledge. The proportions using different and shared metaphorical expressions are shown in Table 2.

Table 2.   Numbers of different and similar metaphorical expressions

		LOVE	JOY	SURPRISE	ANGER	SADNESS	FEAR
English major	**Different**	38 (76%)	38 (76%)	31 (62%)	28 (56%)	21 (42%)	28 (56%)
	Similar	12 (24%)	12 (24%)	19 (38%)	22 (44%)	29 (58%)	22 (44%)
Non-English major	**Different**	24 (48%)	20 (40%)	33 (66%)	22 (44%)	13 (26%)	29 (58%)
	Similar	26 (52%)	30 (60%)	17 (34%)	28 (56%)	37 (74%)	21 (42%)
English and non-English major	**Different**	44 (44%)	43 (43%)	53 (53%)	39 (39%)	23 (23%)	50 (50%)
	Similar	56 (56%)	57 (57%)	47 (47%)	61 (61%)	77 (77%)	50 (50%)

As can be seen in Table 2, the proportions using different and similar metaphorical expressions differed. When comparing the results from two groups of students with dissimilar majors, it is noticeable that the major of study influenced their use of English in delivering expression. English major students mostly created different metaphorical expressions. That is to say 5 out of 6 were distinctively recognized and compared things and only 24% of the respondents shared some similarities. In the case of LOVE, for example, the shared metaphorical expressions comprised MAGIC (2), FLOWER (2), BOOK (2), POISON (2), COLOR (2), and GIFT (2). The significance of this point can be considered as English major students' language capability in generating and using English to variously express their notions rather than non-English major students mainly creating similar metaphorical expressions;

only one type of expression had the higher number of frequency that was SURPRISE.

For the non-English major students, SADNESS was outstanding with 74% of the responses sharing sets of metaphorical expressions. The first top-five frequent metaphorical expressions of SADNESS were RAIN (15), DARKNESS (5), SONG (2), CANDLE (2), and SEA (2).

Last, combining the results from both cases showed that approximately half of the responses of each emotion shared some similarities. This showed some possibility of identifying the prototype metaphorical expressions for the six emotions. The ten most frequent metaphorical expression are shown in Table 3.

Table 3.   Ten most frequent metaphorical expressions given by respondents

LOVE	JOY	SURPRISE	ANGER	SADNESS	FEAR
MAGIC (10)	FUEL (6)	MAZE (12)	FIRE (27)	RAIN (19)	DARKNESS (26)
FLOWER (5)	LIGHT (6)	TUNNEL (4)	POISON (8)	DARKNESS (9)	MIRROR (5)
STAR (4)	RIVER (5)	GIFT (4)	LAVA (7)	POISON (5)	CURSE (2)
BOOK (3)	FLOWER (4)	DOOR (4)	DEVIL (5)	SONG (6)	WEAKNESS (2)
CHOCOLATE (3)	WEATHER (3)	SMOKE (3)	BOMB (3)	EMPTINESS (4)	FOREST (2)
SONG (3)	SKY (3)	FIREWORK (3)	STORM (3)	FOGGY (4)	INVISIBILITY (2)
OXYGEN (3)	BALLON (2)	MAGIC (2)	ACID (2)	FEVER (3)	DOOR (2)
POISON (2)	BUFFET (2)	THUNDER (2)	SWORD (2)	BEAST (3)	SNAKE (2)
COLOUR (2)	DESSERT (2)	BOOMERANG (2)	HELL (2)	CANDLE (2)	POISON (2)
GIFT (2)	WIND (2)	GAME (2)	SUN (2)	SEA (2)	WEAPON (2)

Table 3 shows that, of the six emotions, ANGER and FEAR were the most frequently used metaphorical expressions, with FIRE (27) and DARKNESS (26) for ANGER and FEAR, respectively. The ten most used metaphorical expressions from each emotion were contained in the GOE rating and distributed to 500 respondents to develop radial networks of the primary emotions.

Metaphorical expressions categorized by the three levels of prototype theory

Before developing the results of the GOE rating, all the metaphorical expressions of the six primary emotions were categorized following semantic domains. Since there is no such clear semantic domain used as a frame for classifying emotions' metaphorical expressions into different domains, three

linguists were asked to confirm the classification. In cases of disagreement, the linguists were asked to negotiate the final classification as shown in Table 4.

Table 4. Superordinate, basic, and subordinate levels of six emotions' metaphorical expressions

Superordinate level	Basic level	Subordinate level
LOVE	LIVING THING	FAMILY, LIFE, HEART, KID, MOM
	PLACE AND ENVIRONMENT	FLOWER, SKY, ROSE, MOON, MOUNTAIN, RAINBOW, AIR, CACTUS, LIGHT, OXYGEN, STAR, SUNNY, WATER
	THING	BOOK, MONEY, GIFT, BALLOON, GLASS, KNIFE, PERFUME, SHIT SHOES, SONG
	EDIBLE THING	CHOCOLATE, CANDY, POISON, CAKE, HONEY, STARBUCKS, SWEETS
	ANIMAL	BUTTERFLY, FLAMINGO
	WEATHER	WARMTH
	SPORT	FOOTBALL
	ACTION	HUG, GIVING, LIE, FOOTBALL
	ABSTRACT TERM	HAPPINESS, ADDICTION, BEAUTY, BRAVE, COLOUR, PURE, COMPLICATED, DREAM, EXPECTATION, FEAR, FREEDOM, MAGIC, GHOST, SPIRIT, BEING TOGETHER
JOY	LIVING THING	FAMILY, FRIEND, LIFE, DOG, BUTTERFLY, PARENTS,
	ACTION	SMILE, EATING, LAUGH, TRAVEL, GAME, SHOPPING,
	PLACE AND ENVIRONMENT	SKY, FLOWER, CLOUD, HEAVEN, SEA, SUN, WIND, COAST, GALAXY, HOUSE, LIGHT, OXYGEN, RAINBOW, RIVER, WATER, BREEZY
	THING	BALLOON, BAG, CLOCK, COTTON, FIREWORK, FUEL, GIFT, ICE, TOY, WATCH
	EDIBLE THING	DESSERT, FOOD, BUFFET, CANDY, CHOCOLATE, PIZZA, SHABU,
	ABSTRACT TERM	ADDICTION, ATTITUDE, BEST, COLOURFUL, ENERGY, HAPPY, HAVING, JOY, LOVE, MEMORY, PEACE, SHADOW, SUCCESS,

Superordinate level	Basic level	Subordinate level
SURPRISE	LIVING THING	FRIEND, CLOWN, CUPID, HUMAN, JOKER, ME, MONKEY, PERSON, TIGER, WING
	ACTION	GAME
	PLACE AND ENVIRONMENT	RAINBOW, MAZE, SKY, WIND, ABYSS, CLOUD, EARTHQUAKE, FLASH, LIGHT, METEOR, MOVIE, PARTY, WINDY, RAIN, ROCK, SMOKE, SPACE, STAR, STORM, THUNDER, TUNNEL, UNIVERSE, WATERFALL, WEATHER, ZOO
	THING	GIFT, FIREWORK, BALLOON, ALCOHOL, BONFIRE, BOOMERANG, CURTAIN, DOOR, GLASS, MONEY, PRESENT, THING, TOY
	EDIBLE THING	SOUR
	OCCASION	BIRTHDAY, FUTURE, ACCIDENT
	ABSTRACT TERM	UNEXPECTATION, CHALLENGE, CONCIDENTALITY, DOUBTNESS, DREAM, EMOTION, LOUD, MAGIC, MEMORY, SUDDEN
ANGER	LIVING THING	DEVIL, BEE, CAT, DOG, GIANT
	ACTION	LIE, BOILING, GAME, PLAY, SLEEP
	PLACE AND ENVIRONMENT	FIRE, SUN, STROM, SUNLIGHT, HELL, ROCK, CACTUS, LAVA, MOUNTAIN, RAIN, SEASON, STONE, STORM, TRAFFIC, WATER
	THING	BOMB, ACID, BONFIRE, FIREWORK, GUN, NUCLEAR, SWORD
	EDIBLE THING	POISON
	ABSTRACT TERM	HUNGRY, HOT, AGGRESSIVENESS, ARGUMENT, CRAZY, DARKNESS, GHOST, DISADVANTAGE, IMPULSIVENESS, INSANITY, LATENESS, OFFENSIVENESS, QUIETNESS, UNMANAGABILITY, BARRIER
SADNESS	LIVING THING	BIRD, BEAST, DOG, FATHER, LIFE, YOU
	PLACE AND ENVIRONMENT	RAIN, MOON, HOLE, OCEAN, RAIN, SEA, CEMETARY, FOGGY, HELL, METEOR, RIVER, SNOW, WATER
	THING	CANDLE, MONEY, SONG
	EDIBLE THING	MEDICINE, POISON

Superordinate level	Basic level	Subordinate level
	ABSTRACT TERM	DEATH, LOSS, DARKNESS, EMPTINESS, LONELINESS, POOR, BLACK, GRADE, NIGHT, TEAR, BREAK, DESPAIR, DISAPPEAR, DISAPPOINTMENT, GLOOM, EMPTINESS, EXPERIENCE, FEVER, HOPE, IMAGINATION, MISTAKE, SINK, QUIETNESS
FEAR	LIVING THING	DOG, SNAKE, AMPHIBIAN, ELEPHANT, MOM, PIGEON, REAPER, SNAIL, TIGER, TURTLE
	PLACE AND ENVIRONMENT	COLD, FOREST, WALL, CHASM, MOON, MOUNTAIN, OCEAN, RAIN, STONE, SUNLIGHT, TSUNAMI, WATERFALL, WAVE
	THING	BUBBLE, DOOR, KEY, KNIFE, LOCK, MIRROR, ROPE, THING, WEAPON
	EDIBLE THING	POISON
	ABSTRACT TERM	DARKNESS, GHOST, DEATH, BLACK, FAILURE, LOVE, WEAKNESS, BAD, HEAT, LONELINESS, BARRIER, CURSE, FALLING, FAST, GRAY, HALLUCINATE, SMELL, ILLEGAL, INVISIBILITY, LONELINESS, NARROW, OVERTHINKING, SILENCE, UNKNOWN, WITHOUT

From Table 4 it can be concluded that respondents mostly gave English metaphorical expressions using an ABSTRACT TERM to refer to emotions, followed by PLACE AND ENVIRONMENT. Some doubts might arise because this result differs from the claims by many scholars that "metaphor is used to comprehend abstract and complicated concepts in terms of a simpler one." However, if we change the focus from "an abstract term to an abstract term" to "an abstract term to a simpler abstract term," this might be understandable.

Radial networks representing the metaphorical expressions of six primary emotions

To determine the prototype metaphorical expression of each emotion, the one with the highest rating score was labelled as the prototype. When considering the scores of each emotion, the maximum and minimum value were different. Thus, we proposed an equation to rank the prototype level as follows.

$$RV = \frac{MAX - MIN}{R - 1}$$

Where   RV   = Range value
MAX = Maximum rating score
MIN = Minimum rating score
R   = Number of scales used in the GOE
         Rating

After applying the equation, the highest-point metaphorical expression was put in the center, and the lower the point was, the farther from the center of the radial network the metaphorical expression was labelled as shown in Figure 1.
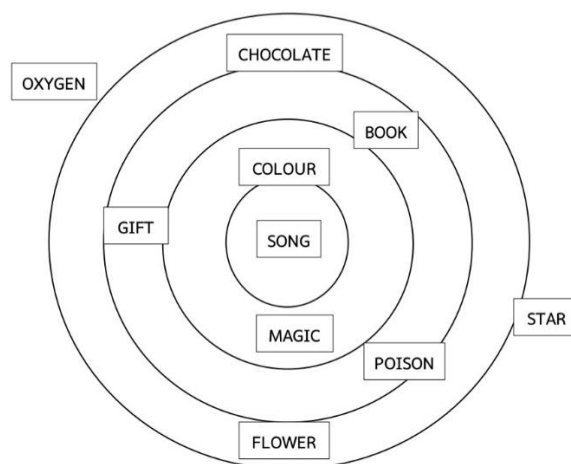

Figure 1.   The radial networks of [LOVE IS _____]

The prototype of LOVE's metaphorical expression was SONG. LOVE can be interpreted and perceived in a wide range of ways including both positively and negatively. In a similar way, SONG has a variety of styles such as love song, sad song, and happy song which directly affect the listeners' feelings, inclusive of affection. This point parallels with relevant studies showing how song lyrics have an effect on feeling, opinion, and behavioral action. One interesting point is that song is capable of producing and encouraging listeners to internally feel affection and aggressiveness as well as external expressions (Fischer & Greitemeyer, 2006; Greitemeyer, 2009).

When compared to COLOR, LOVE can be pink, white, black, or red. Perception of color from each person's view is unique. For example, grey can elicit a negative feeling if one is having a bad day with awful weather; white can remind one of positives such as a state of simplicity and cleanness (Kaya & Epps, 2004). Furthermore, LOVE can generate the emotion that something is exciting and enchanted such as MAGIC. Thus, LOVE is as GIFT, the special stuff people want to receive; LOVE can be needed as with OXYGEN but can be harmful as with POISON.
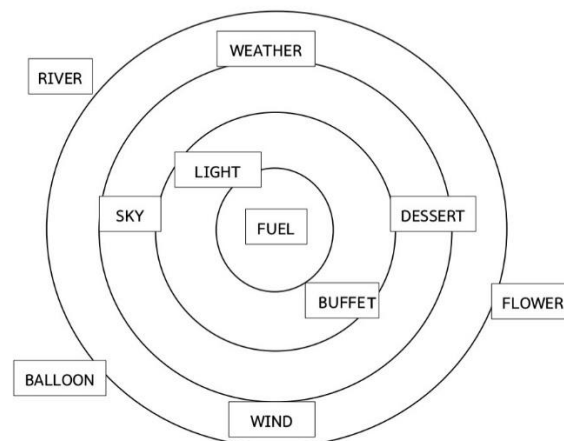
Figure 2.   Radial networks of [JOY IS _____]

As shown in Figure 2, the prototype of JOY's metaphorical expression reflected that JOY was positive and could help people to become better or stronger regarding former weakness. For example, compare PEOPLE as VEHICLE, JOY is FUEL. Without FUEL, VEHICLE could not go any further. LIGHT can illuminate surroundings and make things bright is parallel with how JOY takes a vivid and glowing side of life to people, which fills them with happiness. Food is another necessary factor for all living creatures. BUFFET and DESSERT can remind people of a joyful moment while eating their preferred meal. On the other hand, a natural setting was less called to mind when the feeling of JOY was posed. Embracing oneself with peaceful SKY, WIND, and RIVER seems to be ideal scenery that can create a joyful moment.
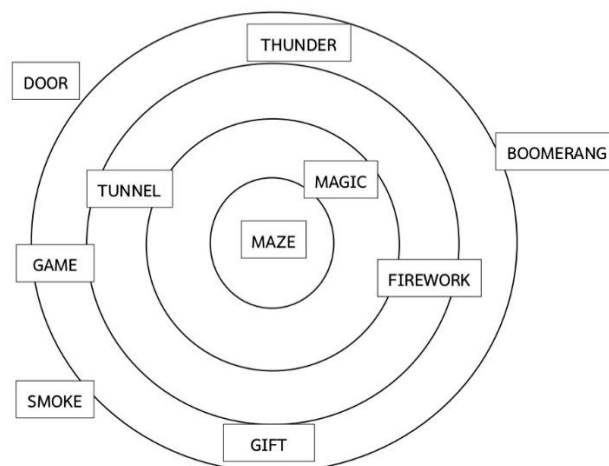

Figure 3.   Radial networks of [SURPRISE IS _____]

As shown in Figure 3, SURPRISE's metaphorical expressions always referred to some things that were unsolvable, difficult to find a way out of, or something that suddenly happened. The MAZE was chosen to be the prototype of SURPRISE's metaphorical expression. MAZE and SURPRISE, share a common feeling, they can influence people's internal emotion as being stuck in a MAZE can make them

surprised as things are not that easily predicted. Similarly, SURPRISE can result in the thought of TUNNEL as one may feel like they are in the middle of nowhere, and will never know what they will encounter ahead. SURPRISE was also compared with MAGIC as people may think of the latter as an occurrence of uncommon and special things, which is similar to the sense that we are amazed by SURPRISE. To a lesser extent, SURPRISE was seldom thought to be an object; that is, DOOR. Before entering a room, one sometimes has no idea what is behind that door; likewise, one may be unconscious while in the condition of SURPRISE.
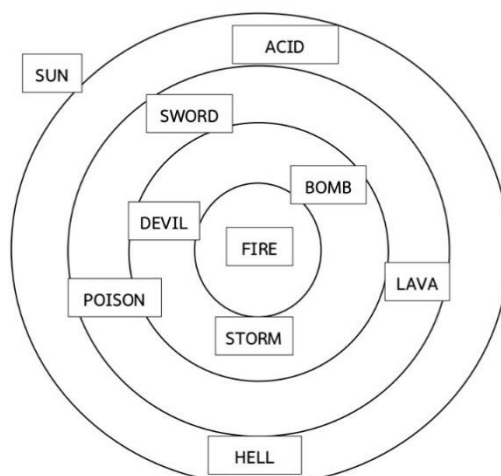

Figure 4.   Radial networks of [ANGER IS _____]

As shown in Figure 4, ANGER's metaphorical expressions often mean something hot or bad, and can cause damage to life. FIRE was the prototype of ANGER's metaphorical expression. Just as FIRE is heat and burns things, angry people are normally hot-tempered and not readily able to deal rationally with situations. Interestingly, even though SUN can recall the same state of hot and heat as FIRE, it was less compared to ANGER. Because of ANGER, people might unconsciously misbehave and do awful things and act like the DEVIL. What is more, this intense feeling can devastate circumstances, and this was expressed through BOMB and STORM.
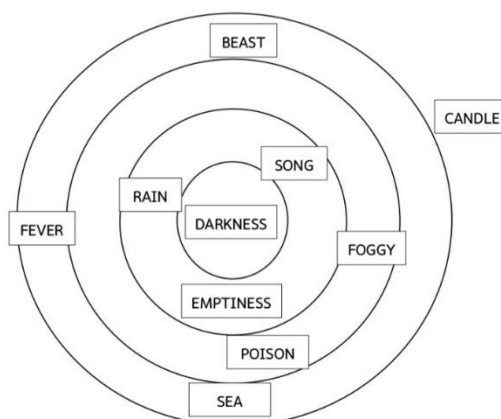

Figure 5.   Radial networks of [SADNESS IS _____]

As shown in Figure 5, DARKNESS was the prototype of SADNESS' metaphorical expression, followed by RAIN, SONG, and EMPTINESS. People viewed SADNESS as a terrible thing that makes life darker. RAIN was also interesting since people compared RAIN to TEAR which is a visual sign was when people cry. Lyrics in SONG may make people recall some misery or bring back an old sad story. SADNESS was also compared to the state of EMPINESS in the sense that one may feel lonely and sorrow when one is alone or even living by oneself. CANDLE as a less frequent trend of metaphorical expression seemed to be the representation of SADNESS. People's unhappiness was seen as the dim light of CANDLE. Although it is a basic source of light needed in darkness, it cannot result in people clearly seeing things that remain in the darkness.
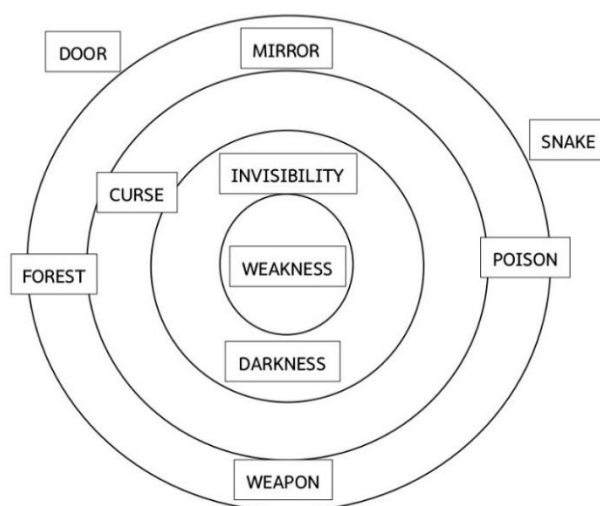

Figure 6.   Radial networks of [FEAR IS _____]

As shown in Figure 6, the prototype of FEAR's metaphorical expression was WEAKNESS. As a matter of fact, WEAKNESS is one of the symptoms of FEAR. Thus, people might think that FEAR is WEAKNESS because one does not fear if one is strong enough. There is also a cognitive linkage between FEAR and sight; that is, INVISIBILITY and DARKNESS. We can assume that people might be afraid and feel insecure when they cannot see things including being in a dark place. Additionally, people may not directly be scared of DOOR, but rather of the unknown and anonymous things they suppose are behind it.

The prototype of English metaphorical expression of six emotions can reflect the term of respondents' cognition showing an individual's perception, the way they see the world including attitude toward emotions. Two main aspects of English metaphor production, to be categorized, might be considered retrieving from "Common cognition" and "Thai's cognition." The former involved with any issues or terms that were generally perceived by the general public. SONG, for example, could be regarded as the universal feature – regardless of a nationality – a kind of

language people speak or even English proficiency, they cross the boundary of culture and linguistics through music. Similarly, SONG was metaphorically compared to LOVE and SADNESS, which is based on individual's life experience whether it was in such a positive or negative manner. "Thai's cognition," the latter, might be included to describe Thai's cognitive issue that is Thai idiom. ANGER is FIRE, for instance, found in this study was close to Thai idiom (โกรธเป็นฟืนเป็นไฟ). This signified respondents' cognitive term relating to what they know or learn from their own mother language and culture as well as meaning transfer between Thai and English. Interestingly, animals are significantly relevant or mentioned in Thai idiom but only one type of animal was compared to emotion in this study, that is FEAR is SNAKE. Rather, natural environment was highly seen in the metaphorical expression: [JOY is LIGHT, SKY, WEATHER and RIVER], [LOVE is FLOWER and STAR], [SURPRISE is THUNDER], [ANGER is STROM, LAVA, and SUN] and [SURPRISE is RAIN, FOGGY, and SEA].

Discussion and Conclusion

The results of emotions' metaphorical expressions from the 100 respondents suggest that approximately half of respondents had different or unique metaphorical expressions while the other half had some similarities. This reflected that even though the non-English major students had not had the chance to learn about and use as much English knowledge and culture as the English major students, they were still capable of using metaphors. Considering metaphorical expression by metaphorical expression, it seemed that not everyone could understand what the answer should be. All of them knew that [LOVE IS JOURNEY] is a metaphor, but when it came to their turn to create the metaphorical expression, some of them did not know what to present. Instead, they gave some answers as a way of interpreting the English word instead, such as [SURPRISE IS UNEXPECTATION].

The results showed that the positive metaphorical expressions were mostly chosen for positive emotions. In the same way, the negative metaphorical expressions were mostly chosen for negative emotion. For the positive emotions, SONG was chosen to be the prototype metaphorical expression of LOVE and FUEL for JOY. On the other hand, FIRE was chosen to be the prototype metaphorical expression of ANGER, DARKNESS for SADNESS, and WEAKNESS for FEAR. However, SURPRISE was an exception. It could be both positive and negative depending on the situation.

Ranking the metaphorical expressions in each emotion highlighted that there was a variety of metaphorical expressions – positive, negative, and neutral. Hall's (1904) statement that adolescence was the time of "storm and strife" could explain this phenomenon. Teenagers' emotions could shift from absolute happiness to extreme sadness rapidly, like being on an emotional rollercoaster. Azab (2018) mentioned that the brain has two main parts, with the limbic brain being responsible for the

emotional system and the frontal regions being responsible for the logical system. In the early teen years, the limbic brain is underdeveloped and disconnected from the rational brain areas. However, the limbic brain is developed much later, when entering the adult stage. This could explain why teenagers, the Thai graduate students in the current study, expressed various metaphorical expressions for the six emotions.

It can be seen from the results that the majority of English major students shared a substantially lower number of similar responses regarding metaphorical expression compared to the non-English major students. Specifically, five out of the six types of metaphorical expression were differently expressed by English major students. Contrastingly, almost all metaphors toward expression (excluding only one type) were similar among the non-English major students. Some possible reasons behind this might be the factors that a limitation in foreign language production is likely to exist among the non-English major students who have had less opportunities to learn, practice, and use English in class or learning circumstances. This viewpoint confirms Lakoff (1987) with respect to the abstract concept of time, as the use of metaphor depends on the creator's background, experiences, and norm (Lakoff, 1987). On the other hand, the English major students might have greater capability toward language use, educational background, and learning experience to visualize and compare expressions to other terms, so that their notions or even terms selected are more varied. Apart from the educational factor, it cannot be denied that the formation of metaphorical expression is grounded in people's vocabulary and background knowledge (Kiseleva & Trofimova, 2017) as well as in thought and opinion (Lakeoff, 1987).

The concept of cognitive term in this study can extend that proposed by Katz and Ortony (1987) regarding the use of metaphor in expressing emotions by learners in psychology major at University of Illinois. In this study, personal experience was one factor influencing students with Thai nationality to metaphorically express their emotions whereas term of experience mattered in the study of Katz and Ortony. That is to say non-Thai participants with more English proficiency were capable of generating metaphors to compare events to both positive and negative emotions with a greater number and distinct qualities when they thought of relevant life experiences. Also, they created *frozen or dead metaphors*: frequently used metaphors later becoming an expression with brand new meaning such as *warm feelings* and *burning sensations inside* (Fussell & Moss, 1998; Katz & Ortony, 1987). This aspect might be parallel with the phenomenon of Thai students comparing things in English but similar to Thai idiom such as ANGER is FIRE and LOVE is POISON. Nevertheless, the dissimilar point of studies' results is that factor of English capability was seen as significant in the metaphor production process, but Fussell and Moss's research as well as the study of Katz and Ortony pointed out that a level of feeling related to a level of metaphorical expression. In other words, the intense feeling tended to produce a higher number and quality of metaphors (Fussell & Moss, 1998; Katz & Ortony, 1987).

As a whole, as some main concepts of metaphorical expression were identically expressed by learners, the idea of prototype can be utilized in learning and teaching figurative devices, especially metaphors. When it comes to expression, including the numerous types of emotions not mentioned in this study, the use of a simpler abstract term, place and environment, and thing are suitable basic-level prototypes of metaphorical expression rather than an animal, the weather, and sport. Using an example from the research results, LOVE can be compared to MAGIC to show how it is extraordinary and delightful which may be more understandable than describing LOVE as FOOTBALL, for not everyone is a follower of this kind of sport, so they might not perceive the positive meaning of love.

Since the respondents of this study were undergraduate students, the results are derived directly from this age group. It would be useful to expand the study by gathering more data from other age groups such as secondary school students, adults, and the elderly. The results from such study may show some interesting points or differences. Furthermore they may show some shared believes and culture through the emotions' metaphorical expressions.

A limitation of this study was that the respondents were asked to give the answers in single words. If they were given a chance to provide and explain the metaphorical expressions, we would understand more about their ideas.

References

Angkurawaranon, S. (1984). The Connotative Meaning of the word "Phuuyin" from metaphor in modern Thai songs (Master's thesis). Faculty of Arts, Chulalongkorn University, Bangkok.

Azab, M. (2018). *Why are teens so emotional?*. Retrieved from https://www.psychologytoday.com/us/blog/neuroscience-in-everyday-life/201810/why-are-teens-so-emotional.

Cruse, A. (2011). *Meaning in language: An introduction to semantics and pragmatics.* Oxford: Oxford University Press.

Davitz, J. R. (1969). *The language of emotion.* New York: Academic.

Davitz, J. R., & Mattis, S. (1964). The communication of emotional meaning by metaphor. In Joel Robert Davitz (Ed.) *The Communication of Emotional Meaning* (pp. 157-176). New York: McGraw-Hill.

Darwin, C. (1872). *The expression of the emotions in man and animals.* John Murray.

Descartes, R. (1989). *The passions of the soul: an English translation of Les Passions de l'âme.* Indianapolis: Hackett Pub. Co.

Ekman, P., & Friesen, W. V. (1971). Constants across cultures in the face and emotion. *Journal of Personality and Social Psychology*, *17*(2), 124.

Evans, V. (2000). The structure of time: Language, meaning and temporal cognition (Doctoral dissertation). Dept. of Linguistics, Georgetown University.

Evans, V., & Green, M. (2006). *Cognitive linguistics: An introduction.* Edinburgh: Edinburgh University Press.

Fainsilber, L., & Ortony, A. (1987). Metaphorical uses of language in the expression of emotions. *Metaphor and symbol*, 2(4), 239-250.

Fischer, P., & Greitemeyer, T. (2006). Music and aggression: The impact of sexual-aggressive song lyrics on aggression-related thoughts, emotions and behavior toward the same and the opposite sex. *Personality and Social Psychology Bulletin*, 32, 1165-1176.

Forceville, C (2006). "Non-verbal and multimodal metaphor in a cognitivist framework: Agendas for research." In G. Kristiansen, M. Achard, R. Dirven and F. Ruiz de Mendoza Ibàñez (Eds.) *Cognitive linguistics: Current applications and future perspectives.* Berlin/New York: Mouton de Gruyter, 379-402.

Fussell, S. R., & Moss, M. M. (1988). Figurative language in descriptions of emotional states. In S. R. Fussell and R. J. Kreuz (Eds.), *Social and cognitive approaches to interpersonal communication*. Mahwah, NJ: Erlbaum.

Hall, S. (1904). *Adolescence: Its psychology and its relation to physiology, anthropology, sociology, sex, crime, religion, and education.* Appleton: New York.

Herskovits, A. (1986). *Language and spatial cognition: An interdisciplinary study of the prepositions in English.* Cambridge: Cambridge University Press.

Katz, L. F., & Ortony, A. (1987). Metaphorical uses of language in the expression of emotions. *Metaphor and Symbolic Activity*, 2(4), 239-250.

Kaya, N., & E, H. H. (2004). Relationship between color and emotion: A study of college students. *College Student Journal*, 38(3), 396-405.

Kiseleva, S., & Trofimova, N. (2017). Metaphor as a device for understanding cognitive concepts. *Revista de Lenguas para Fines Específicos*, 23(2), 226-246.

Kovecses, Z. (2010). *Metaphor: A practical introduction.* (2nd ed.). Oxford: Oxford University Press.

Lakoff, G., & Johnson, M. (1980). *Metaphors we live by.* Chicago: University of Chicago Press.

Nida, E. (1975). *Componential analysis of meaning.* The Hague: Mouton.

Parrott, G. (2001). *Emotions in social psychology.* Psychology Press.

Plutchik, R. (2001). The nature of emotions: Human emotions have deep evolutionary roots, a fact that may explain their complexity and provide tools for clinical practice. *American Scientist*, 89(4), 344-350.

Rosch, E. (1973). Natural Categories. *Cognitive Psychology, 4*(3), 328-350.

Rosch, E. (1975). Cognitive representations of semantic categories. *Journal of Experimental Psychology: General*, 104: 192-233.

Rosch, E. (1978). Principles of categorization. In *Cognition and categorization*, E. Rosch and B. B. Lloyd (Eds.), pp. 27-48. Hillsdale, NJ: Lawrence Erlbaum.

Ullman, S. (1962). *Semantics: An introduction to science of meaning*. NY: Barnes & Nobles.

Wierzbicka, A. (1988). The semantics of grammar. Amsterdam: John Benjamins. 1990. 'Prototypes save': on the uses and abuses of the notion of 'prototype' in linguistics and related fields. In S. Tsohatzidis (ed.) *Meanings and prototypes: Studies in linguistic categorization*, pp. 3473-67. London: Routledge.