A CONTRASTIVE ANALYSIS OF ENGLISH AND VIETNAMESE PROTOTYPE STRUCTURES

Nguyen Thi Nhung*

Faculty of English Language Teacher Education, VNU University of Languages and International Studies, No.2 Pham Van Dong, Cau Giay, Hanoi, Vietnam

Received 28 January 2024
Revised 11 June 2024; Accepted 18 June 2024

Abstract: Categorisation is a central issue in Cognitive Linguistics, which is argued to be one of the primary principles of conceptual and linguistic organisation (Croft & Cruse, 2004). Classical categorisation and the prototype theory are two general approaches to categorisation. Since the classical categorisation approach was claimed to have certain drawbacks, most linguists working within the experimentalist mode of explanation use prototype categorisation as their primary way to account for their data. However, is the way people categorise items around them consistent across different cultures? This paper attempts to shed light on the answer to this question by comparing the prototype structures of four categories - bird, furniture, fruit, and vehicle - between English and Vietnamese. In order to find out the similarities and differences, the questionnaire data from 92 Vietnamese participants were collected to survey their rating of the goodness of exemplars. The data were then analysed by Google Form and compared to the available data from English respondents in the previous study of Rosch and Mervis (1975). Results revealed that the prototype structures were similar and different across the two cultures. That is why the teaching and learning of vocabulary should take into account cultural sensitivity.

Keywords: cognitive linguistics, categorisation, classical categorisation, prototype categorisation

1. Introduction

The term **category** was first coined by Aristotle in philosophy and was widely used in linguistics in the 20th century (Auwera & Gast, 2010). Jefferson (1924) and Bloomfield (1933) were among the first scientists to introduce the word as a technical term in the linguistic field. According to Croft and Cruse (2004), categorisation, a central issue in Cognitive Linguistics, is one of the primary principles of conceptual and linguistic organisation. Croft and Cruse (2004) summarise two general approaches to categorisation: classical categorisation and the prototype theory.

The **classical model** of conceptual categories outlines them based on a specific group of features deemed necessary and sufficient. Necessary means that any entity lacking any of these features cannot belong to the category, while sufficient indicates that possessing all the features ensures membership. For instance, the category of COLT can be described by the features [EQUINE], [MALE], [YOUNG]. Following this model, if an element fails to satisfy any of the critical conditions, it is automatically disqualified, whereas fulfilling all three conditions ensures inclusion. Hence, determining category membership involves assessing the

* Corresponding author.
Email address: nhungnguyenclc.ulis@gmail.com

pertinent characteristics, which either results in inclusion or exclusion for each item under consideration. The classical categorisation model, while still applicable in specific contexts, is often considered an oversimplification. With the emergence of cognitive sciences in the latter half of the 20th century, this model underwent significant challenges, extending beyond mere recognition of its idealised nature. It was argued that human categorisation is not merely a detached, logical process of checking features - a perspective sometimes termed objectivism - but involves perceptual and physical engagement by the human subject. This new paradigm, known as experiential realism or experientialism (Lakoff, 1987), emphasises the close connection between human cognition and bodily experiences encompassing various connotations. For example, when contemplating a *bed*, our thoughts are not primarily focused on its inherent features but rather on associated perceptual experiences such as comfort and relaxation.

The concept of categorisation, which is closely linked to perceptual experience, significantly influenced the understanding of how categorisation functions. One of its pivotal outcomes was a reassessment of the relationship between categories and their constituents and the attributes defining categories. In contrast to the classical model, which posits categories and their defining abstract attributes as separate entities from the entities being categorised, proponents of experiential realism advocated for a stronger connection between categories and real-world objects. Specifically, categories were viewed as being associated with and organised around particularly prominent representatives that are cognitively and perceptually significant. This notion is now widely recognised as the essence of **prototype theory**, where the most notable instances of a category are referred to as **prototypes** (Auwera & Gast, 2010, p.171). Berlin and Kay (1969), Rosch (1973), and Rosch and Mervis (1975) conducted groundbreaking experimental and theoretical research on prototype theory. Berlin and Kay demonstrated that perceptual salience significantly influences lexical categorisation across languages.

Similarly, Rosch (1973) and Rosch and Mervis (1975) illustrated that there are clear cultural intuitions regarding the representativeness of elements within categories. For instance, the category FRUIT is not perceived simply as a random set of biologically defined fruits; instead, individuals tend to associate specific types of fruits, like apples, with the category, while considering others, such as plums or olives, as less typical representatives. In other words, contrary to the classical model's notion of strict criteria for category membership, conceptual categories are structured around prototypes, with some members being better exemplars than others and having fuzzy boundaries with neighbouring categories. This concept lies at the core of the prototype theory of categorisation, also referred to as prototype semantics, where categories are labelled by words and possess conceptual content.

The question of whether the way people categorise items around them is consistent across different cultures has attracted the attention of several linguists. Several studies have adopted a cross-cultural analysis to find the answer to this question, surveying European and North American (Basile, 2007), Persian and American (Biria & Bahadoran-Baghbaderan, 2016); Jordanian and American (Ajalein & Al-Khanji, 2020). Meanwhile, there is a noticeable gap in the literature review regarding the cross-cultural comparison of the prototypical structures between two culturally distinct regions – Western and Eastern countries. This motivates the researcher to conduct this research, namely English and Vietnamese prototype structures: a contrastive analysis. This study aims to answer the following research question: *What are the similarities and differences (if any) between the prototype structures of four categories - BIRD, FURNITURE, FRUIT, and VEHICLE - in English and Vietnamese?* The answer to this research question would be a helpful reference source for teachers and learners

from the two cultures in their vocabulary teaching and learning practice.

2. Literature Review

2.1. Theoretical Background

2.1.1. Categorisation

Categorisation is "one of the most basic human activities" (Croft & Cruse, 2004, p.74), which is a major driving force behind the capability to conceptualise objects, states, and events in various ways and from different perspectives (Taylor, 2003). In other words, it is the process in which experiences and concepts are recognised and understood. Categorisation implies that concepts are classified based on commonalities and usually for some specific purpose.

The term **category** was coined by Aristotle in his treatise on Categories (Auwera & Gast, 2010). Even though Aristotle's theory of categories was based mainly on linguistic observations, the term category was not widely used in linguistics until the 20th century. The word was established as a technical term in linguistics in the early 20th century and was used, for instance, by Jespersen (1924) and Bloomfield (1933).

2.1.2. From Classical Models to Prototypes

2.1.2.1. Classical Categorisation

Back then, classical categorisation was the first idea to categorisation, attributed to the Aristotelian view (Auwera & Gast, 2010). The classical Aristotelian view claims that linguistic categories have a definitional structure (well-defined). To put it differently, this approach holds that one can define what is in and out of the category. According to Croft and Cruse (2004), for category membership, an entity has to fulfil a set of **necessary** and **sufficient** conditions. Necessary and adequate hereby denotes that the entity is individually necessary but not only collectively sufficient to define a category.

First and foremost, it satisfies the necessary features to represent a category member. In other words, one must answer the question of *what an object must have to be in a category*. Second, those features must be jointly sufficient for membership, meaning that *if an object has those properties, it is in the category*. For instance, if a *dog* is defined as a four-legged animal that barks, this would mean that any dog is an animal, four-legged, and barks. Vice versa, anything that has all those features is a dog. Besides, in light of the classical view, categories should be mutually exclusive and collectively exhaustive. This way, any entity of the given classification universe belongs unequivocally to one, and only one, of the proposed categories.

Accordingly, any dog that does not have four legs or cannot bark is not considered a dog. Nonetheless, definitions are not always neat and clear-cut because the existing world is complicated and often unclear. Let us look at the example of *dog* again. It is common knowledge that not all dogs are four-legged, and not all can bark. Some dogs lose their bark with age, while others may be disabled, having only two or three legs. However, no one ever doubts that they are still dogs. Moreover, it is often possible to identify some necessary features. For example, all dogs have blood and breathe, but these features are generally insufficient to determine category membership. Humans also have blood and breathe to survive, but we are not dogs.

The Cognitive Revolution in the 1970s helped pave the way for Cognitive Linguistics to emerge as a new branch of linguistics (Miller, 2003). Cognitive linguistics aims to study how we perceive and interpret the world and how it is reflected in the language. In light of this

approach, scientists such as Berlin and Kay (1969), Rosch (1973), and Lakoff (1987) pointed out that the classical view of categorisation was problematic in several ways:

- *Necessary conditions are inadequate*: The idea of necessary and sufficient conditions is rarely met in categories of naturally occurring things or humans' categorisation of experiences.
- *There are degrees of membership*: Humans tend to regard some members of categories as better members than others.
- *Boundaries between categories are unclear*: Natural categories tend to be fuzzy at their boundaries and inconsistent in the status of their constituent members.

From those observations, cognitive scientists argue for the process of categorisation based on ***prototypes***.

2.1.2.2. The Prototype Model of Category Structure

As mentioned earlier, it is rare for necessary and sufficient conditions to be satisfied within categories of naturally occurring phenomena. Instead, categories should be viewed as being connected to and organised around particularly typical exemplars. This concept is commonly referred to as the essence of **prototype theory**, and the most prominent instances within a category are termed **prototypes** (Auwera & Gast, 2010). Croft and Cruse (2004) assert that (1) categorisation based on a prototype model is the basis for human development, and (2) this developmental process is built on the learning of the world via embodiment. Categories are not objectively present in the world but stem from people's experiences.

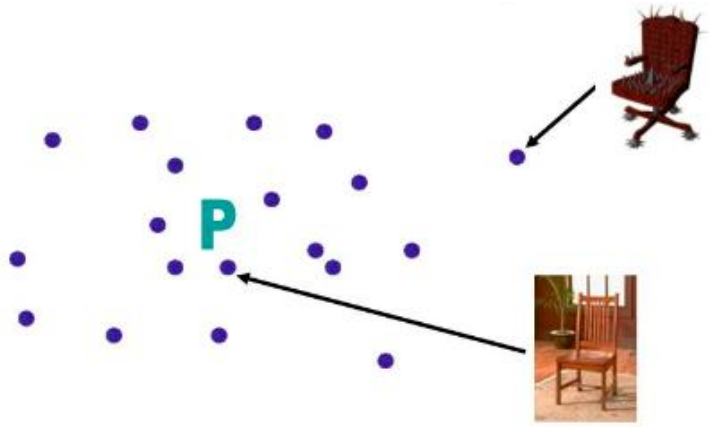
Goodness-of-exemplar Ratings

One of the most significant notions in prototype structures is Goodness-Of-Examplars (GOE) (Croft & Cruse, 2004). Every category member is not considered an equally good category example; instead, items lie on a spectrum of category goodness (Rips et al., 1973; Rosch & Mervis, 1975). For instance, on reading or hearing the word COLOR, you may think of *green* or *blue* before *grey* or *violet*. Similarly, when asked to give an example of STATIONERY, you will be more likely to mention a *pen* than a *filing tray*. From the two examples, it is apparent that not all members of a category share equal status within the category. In the categorisation process, people may cite certain items as better examples of the category than others.

Indeed, categories display graded centrality and degree of membership, with good members towards the centre (the prototypical centre) and bad members towards the boundary. If a member is more proximal to this prototypical centre, it shares more properties in common with the prototype. Meanwhile, those members that do not share many features similar to those of the centre are marginally located. Figure 1 below shows an example of graded centrality and the degree membership of the CHAIR category.

Figure 1

Graded Centrality and the Degree Membership of the CHAIR Category



As shown in Figure 1, all chair-like objects will be judged based on an individual's prototype of a chair in the centre of the figure under the prototype theory. The closer the objects are to the centre, the more resemblance they bear to this prototypical chair. At the same time, the spiky chair - a torture device used during Medieval times - is a poorer example of CHAIR. Therefore, it is placed in the peripheral area.

Levels of Categorisation

Prototype theory also provides an account of levels of categorisation. Categories occur at different levels of inclusiveness. Inclusiveness relates to what is subsumed within a particular category. Croft and Cruse (2004) introduced three levels of categorisation together with five examples of three levels of categorisation.

a. vehicle - **car** - hatchback

b. fruit - **apple** - Granny Smith

c. living thing - creature - animal - **dog** - spaniel

d. object - implement - cutlery - **knife** - bread knife

e. object - item of furniture - **fable** - card table

Normally, one level of specificity in each set, called the **basic** level of specificity, has a special status and importance. The basic level items in the examples are printed in bold italics. Apart from the basic level, two further levels of specificity with different characteristics are usually identified: the superordinate level and the **subordinate** level. These are not defined simply by their position in the chain - there are substantive characteristics that distinguish one level from another.

- ***Superordinate level*** is the most general level at the top of a folk taxonomy.
- ***Basic level*** is perceptually and conceptually the more prominent, the psychologically basic level. Basic level categories are members of superordinate level categories and offer the most responses and richest images.
- ***Subordinate level*** is the most specific one. They are the members of the basic level categories. They have identifiable gestalts and many individuating particular features.

2.2. Review of Related Studies

Among the earliest advocates of prototype theory were anthropologists Berlin and Kay

(1969) and psychologist Rosch (1973). Through an extensive study of basic COLOUR terms such as red, blue, and yellow across numerous languages, Berlin and Kay (1969) discovered a remarkable consensus among informants from diverse linguistic and cultural backgrounds regarding the prototypical examples of these colours. However, there was considerably less agreement on colours at the boundaries, such as shades between *dark red and purple* or between *turquoise-like blue* and *green*. Berlin and Kay labelled the colours that represented the most typical examples of primary colours as **focal colours.** At the same time**,** Kay and McDaniel (1978) later showed that physiological aspects of vision were accountable for the observed shared perceptions across cultures. This is a clear and intriguing illustration of how cognitive abilities, such as perception, influence the properties of linguistic elements like basic COLOUR terms.

Rosch (1973) built upon Berlin and Kay's work, extending it beyond COLOUR categories to encompass various other types of categories, including geometric shapes like SQUARE and TRIANGLE, as well as everyday concepts such as FURNITURE, VEHICLE, and WEAPON. Like the findings in COLOUR categories, Rosch discovered that members of these object categories could be evaluated on a scale of **goodness-of-examplars** by participants in psychological experiments. For instance, participants widely agreed that *cars* and *trucks* were exemplary instances of the category VEHICLE, while items like *skis*, *skateboards*, and *elevators* were rated as poor examples. Rosch coined the term **prototype** to denote these typical representatives within categories, arguing that they functioned as cognitive benchmarks for the organisation and retrieval of categories. This concept was complemented by fuzzy boundaries between categories, as Labov (1973) observed, suggesting that categories like CUP, MUG, and BOWL blend into each other rather than being sharply delineated. Rather than conforming to a rigid checklist of necessary and sufficient features, as proposed by Aristotelian philosophy, conceptual categories are internally structured in terms of prototypes, ranging from highly typical to less typical members, and with blurred boundaries to neighbouring categories. This forms the basis of the prototype theory of categorisation.

Rosch and Mervis (1975) then conducted one of the most renowned studies. Their research comprised six experiments aiming at testing the hypothesis that the most prototypical members of categories share the most attributes with other category members and the fewest characteristics with members of other categories. Essentially, the theory posits that the overall cue validity of item attributes determines prototypicality. In Experiments 1 and 3, participants listed attributes for items belonging to semantic categories previously rated for their level of prototypicality. Strong positive correlations were found between these ratings and the degree to which an item's attributes were shared among other category members. In Experiments 2 and 4, participants listed superordinate categories of category members and characteristics of members from contrasting categories. Negative correlations emerged between prototypicality and superordinates outside the relevant category and between prototypicality and an item's possession of attributes shared by members of contrasting categories. Experiments 5 and 6 utilised artificial categories and demonstrated that family resemblance within categories and the absence of overlap with elements from contrasting categories were associated with ease of learning, reaction time in identifying items post-learning, and ratings of prototypicality. The argument posits that family resemblance provides an alternative to defining categories based on criterial features, as it significantly correlates with several independent properties.

Later studies started to pay attention to cross-cultural differences of GOE ratings. Some research has been conducted to compare and contrast the data reported by European and North American (Basile, 2007), Persian and American (Biria & Bahadoran-Baghbaderan, 2016),

Jordanian and American (Ajalein & Al-Khanji, 2020). Simply put, the most basic procedure involved two stages:

- Stage 1: In this stage, the researchers divided participants into different groups based on their nationalities and genders. They then gave participants from these groups a category and a list of putative members of that category and asked them to rank each item according to how good an example is (GOE ratings). Data collected from many respondents helped identify the best representatives of the category, typically referred to as the **prototype** or **prototypical members** of the category.
- Stage 2: The researchers then compared the GOE rating scores between different groups of informants to identify any similarities and differences (if any).

Basically, all the previous studies revealed that gender and culture played a significant role in identifying the category membership of various members of a given concept across different languages.

In the context of Vietnam, no research to date has been done on the same issue. This gap in the literature strongly motivated me to carry out this study, but within the limits of this study, I only focused on the cultural factor on GOE ratings across two cultures - Vietnamese and English.

3. Research Methodology

3.1. Research Design

To find out the similarities and differences in the prototype structure of categories in English and Vietnamese, the study employed quantitative approach data from Vietnamese participants to survey their rating of the goodness of exemplars. The data were then analysed and compared to the available corresponding data from English respondents in the previous study of Rosch and Mervis (1975).

3.2. Scope of the Study

The subjects of this research were superordinate categories. Categories at the superordinate level were of particularly interest because they are sufficiently abstract and have few, if any, attributes common to all members (Rosch et al., 1976). Hence, such categories may consist almost entirely of items related to each other using family resemblances of overlapping attributes. In addition, superordinate categories have the advantage that their membership consists of a finite number of names of basic-level categories that can be adequately sampled (Rosch & Mervis, 1975). In particular, the categories used were the four most common categories of concrete nouns in English – BIRD, FURNITURE, FRUIT, and VEHICLE - determined by a measure of word frequency (Kucera & Francis, 1967).

3.3. Sampling Method and the Participants

This quantitative study utilised simple random sampling as it is the "simplest and most common method of selecting a sample, in which the sample is selected unit by unit, with equal probability of selection for each unit at each draw" (Singh, 2003, p.71). According to Acharya (2013), "In this method, every individual has an equal chance of being selected in the sample from the population" (p.330). Therefore, simple random sampling is beneficial to this study in that it ensures unbiased, representative, and equal probability of the population.

Noor, Omid and Jawad (2022) claim that due to likelihood and chance, the sample should include individuals who share traits with the general population. Thus, in simple random

sampling, the researcher needs to specify the general common characteristics of the individuals that can participate in the study. Accordingly, this study chose 92 participants who met the following criteria: (1) are Vietnamese, (2) are willing to answer the survey questions. There were no requirements regarding the English level of the chosen respondents as they would answer the questions solely based on their personal experiences and the survey was conducted in Vietnamese and. Hence, their English knowledge would have no significant influence on the validity and reliability of the results when it came to comparison of prototype structures of the same four categories between the Vietnamese and English cultures. Additionally, within the limit of this research, the researcher only attempted to study cultural factors on GOE ratings across two cultures; therefore, gender and age would not be the focus of this paper.

Following is the demographic information of the participants:

- Nationality: 100 % Vietnamese
- Gender: 47% females and 53% males
- Age: 11% under 15 years old, 72% between 15 and 64 years old, and 17% over 64 years old.

3.4. Data Collection Instrument

The questionnaire was used to collect data to answer the research question. Certainly, questionnaires offer a significant advantage because they facilitate gathering responses from many individuals, yielding more generalisable findings (Rowley, 2014). In addition, the questionnaire is a helpful tool for this study because the research met the suggested criteria of using a questionnaire, as suggested by Rowley (2014, p. 310)

- The research objectives centre on surveying and profiling a situation to develop overall patterns
- Sufficient is already known about the situation under study, and meaningful questions can be formulated to include in the questionnaire.
- Willing respondents can be identified as those who are in a position to provide meaningful data about a topic. Questionnaires should suit the research, the researcher, and the respondents.

The questionnaire in this study was written in Vietnamese to ensure that participants understood the instructions and questions efficiently. It consisted of three parts:

(1) The introduction: This section stated the purpose of the study and gave general guidelines for completing the questionnaire.

(2) The main survey questions: In the main section, four questions corresponded to four chosen categories – BIRD, FURNITURE, FRUIT, and VEHICLE. In Rosch and Mervis's experiment, 20 items from each category were chosen to represent the full range of goodness-of-example ranks. However, within the limit of this paper, only seven items (in the same order of ranking as in the original study) were chosen to make it easier for comparison. The researcher must synthesise a list of attributes based on the Oxford Advanced Learner Dictionary (n.d.) and Cambridge Dictionary (n.d.) to identify which seven members should be put in each category. The attributes are demonstrated in Table 1 below.

Table 1

Attributes for Four Rating Items (Oxford Learner Dictionary & Cambridge Dictionary)

Category	Properties/ Criteria
Bird	(1) lays eggs (2) is covered with feathers (3) has two wings and two legs (4) can fly
Furniture	(1) is put in a house or an office to make it suitable for (2) living or working in (3) can be moved
Fruit	(1) is part of a plant (2) consists of one or more seeds and flesh (3) can be taken as food (4) usually tastes sweet
Vehicle	(1) is a machine, usually with wheels and an engine (2) is used for transporting things or people from one place to another

Based on this list of features, the researcher created a list of the following rating items which were randomly ordered.

- BIRD: duck, crane, red-whiskered bulbul, gull, sparrow, pigeon, parrot
- FURNITURE: picture, chair, table, telephone, piano, rug, fan
- FRUIT: orange, apple, guava, coconut, mango, pumpkin, peach
- VEHICLE: motorbike, elevator, skateboard, cart, airplane, car, bus

It is important to note that items unfamiliar to the Vietnamese cultural context were excluded. For example, *robins* or *penguins* were not chosen to be on the list of items for the BIRD category.

For each question/category, seven earlier chosen items that possessed the attributes mentioned above were listed in a random manner. The respondents were asked to give a numerical value to estimate how good an example of a given category was. Seven items in each category were rated based on the extent to which each member was representative of the category. Subjects were given a seven-point Likert scale according to how good the examples were. 1 designated an excellent example - the representative that participants immediately associated with a concept and 7 indicated a very poor or not an example - the item that respondents thought of last in the list. A high GOE score means the one that is close to 1.

(3) Personal information: This section asked for the participants' personal information, including their nationality, age, and gender.

3.5. Data Collection Procedure

After piloting the questionnaire and making necessary adjustments, the researcher distributed it online to 92 participants. Those informants were also noted that since their answers reflected their subjective concept of the category in question, there would be NO correct or incorrect answer.

3.6. Data Analysis Procedure

After being collected, all the quantitative data were automatically analysed by Google Form, showing the mean score of respondents choosing seven items in each category. These numerical data helped the researcher to put seven items in each category in the order that indicated how good each item was as a representative of the category (GOE ratings). As described in the data collection instrument section, number 1 indicated the best example of a category participants first thought of, while number 7 corresponded to the poorest example. Therefore, the item with the lowest mean score would be the first one in the list, also known as the best representative; meanwhile, the item with the highest mean score was the poorest example in one category.

These lists were then compared with available corresponding data from English respondents in the previous study of Rosch and Mervis (1975).

4. Results and Discussion

4.1. Survey Results

The table below summarises numerical data of GOE ratings for four categories.

Table 2

GOE Scores of the Items in the Four Categories

BIRD	GOE	FURNITURE	GOE	FRUIT	GOE	VEHICLE	GOE
sparrow	1.69	chair	1.85	orange	1.55	motorbike	1.27
pigeon	1.77	table	1.86	apple	2.16	car	2.23
red-whiskered bulbul	2.36	fan	3.58	guava	3.23	bus	3.10
gull	2.40	telephone	4.30	mango	3.43	airplane	3.70
parrot	2.75	rug	4.38	coconut	4.22	cart	4.96
crane	3.13	picture	4.59	peach	4.63	skateboard	5.58
duck	4.00	piano	5.46	pumpkin	5.65	elevator	5.98

As shown in Table 2, *sparrow, chair, orange, and motorbike* received the lowest GOE scores (1.69, 1.85, 1.55, and 1.27, respectively), showing that they were the most typical representatives of their categories. By contrast, *duck, piano, pumpkin*, and *elevator* received the highest GOE values (4.00, 5.46, 5.65, and 5.98, respectively). This means these items were the poorest examples of the categories, according to participants' perceptions. Typicality is perhaps the most crucial variable in predicting how the participants interacted with categories. An object's typicality level can be explained by the frequency of encounters and the family resemblance theory of Rosch and Mervis (1975).

First, the frequency of participants' encounters with objects significantly influences their choice of the prototypical member. It is not surprising that a *sparrow* was reported as a better example of birds than a *duck*; or that a *chair* is a more typical kind of furniture than is a *piano*; an *orange* is a better example of fruits than a *pumpkin*; a *motorbike* is a more typical kind of vehicle than an *elevator*. However, given that a *motorbike* and an *elevator* are both known to be vehicles, why should one be more typical than the other? This can be accounted for by how frequently the participants encounter the object. They might see more *motorbikes*

than *elevators*, so those members must be more typical.

Second, Rosch and Mervis's family resemblance theory (1975) also helps to explain why certain items are more typical than others. The two scientists propose that items are likely to be typical, providing they (1) possess the features frequent in the category and (2) do not have features frequent in other categories. For example, let us compare two extremes, *orange* and *pumpkin*. We see both *oranges* and *pumpkins* every day, but why are *oranges* much more typical as fruits than *pumpkins*? Rosch and Mervis assert that it is not because *oranges* are ubiquitous fruits that make it typical. Instead, it is because *oranges* have properties that are very common among fruits but not common among vegetables. To be more specific, *oranges* are round citrus fruits with thick skin and taste sweet and so on. Most of these properties are found in many other fruits. By contrast, *pumpkins* have flesh that can be cooked as vegetables. Items that share fewer and fewer properties similar to the prototypical model become less and less typical. At some point, these less typical items become so atypical that one starts to doubt whether they are in the category. Is a *pumpkin* really an example of a fruit? It is part of a plant; it is sweet and can be eaten, but it is also different from most fruits in its use (it can be cooked as vegetables). This property is expected in the category of VEGETABLE rather than FRUIT.

4.2. Comparison Between English and Vietnamese Prototype Structures

A comparison was made between the data from my survey and the one by Rosch and Mervis (1975) to identify the similarities and differences in the prototype structures between English and Vietnamese. The four comparison tables below reveal similarities and differences in participants' opinions across the two cultures.

Table 3

BIRD - GOE Rating

English **Rosch & Mervis (1975)**	**Vietnamese** **(Results from this current study)**
1. robin	1. sparrow
2. sparrow	2. pigeon
3. dove	3. red-whiskered bulbul
4. parrot	4. gull
5. duck	5. parrot
6. penguin	6. crane
7. ostrich	7. duck

Table 4

FURNITURE - GOE Rating

English **Rosch & Mervis (1975)**	**Vietnamese** **(Results from this current study)**
1. chair	1. chair
2. table	2. table
3. bed	3. fan

4. piano	4. telephone
5. rug	5. rug
6. clock	6. picture
7. telephone	7. piano

Table 5

FRUIT - GOE Rating

English **Rosch & Mervis (1975)**	**Vietnamese** **(Results from this current study)**
1. orange	1. orange
2. apple	2. apple
3. peach	3. guava
4. strawberry	4. mango
5. lemon	5. coconut
6. coconut	6. peach
7. date	7. pumpkin

Table 6

VEHICLE - GOE Rating

English **Rosch & Mervis (1975)**	**Vietnamese** **(Results from this current study)**
1. car	1. motorbike
2. bus	2. car
3. motorbike	3. bus
4. airplane	4. airplane
5. cart	5. cart
6. sled	6. sled
7. elevator	7. elevator

4.2.1. Similarities

On the one hand, Tables 4, 5, and 6 show that Vietnamese participants and those from English-speaking countries reached a consensus on categorising FURNITURE, FRUIT, and VEHICLE items. In both cultures, *chair* and *table*, *apple* and *orange*, *motorbike* and *car* were reported to be the best examples in their categories with the highest GOE scores.

4.2.2. Differences

On the other hand, a slight difference in the prototype structures of the two groups of informants can be witnessed in Tables 3 and 6. The rating of best examples differs for the same category - BIRD and VEHICLE - in different languages/ cultures. As can be seen from Table

3, American respondents consider a *robin* to be a better example of a BIRD than an *ostrich* or a *penguin*. However, in Vietnamese culture, a *sparrow* and a *pigeon* are considered the best examples of this category, unlike a *crane* or a *duck*. Similarly, *motorbike* is the most popular means of transportation in Vietnam, which makes it easy to understand why motorbikes were rated as the best example of the VEHICLE category, unlike in Rosch and Mervis's study (with *cars* as the best example).

To explain this, GOE ratings may be strongly culture-dependent. Systems of categories are not objectively out there in the world but are rooted in people's experiences. Not to mention that conceptual categories are not identical for every individual in the same culture. Concepts are closely related to our knowledge of the world, and people can more easily learn concepts consistent with their knowledge. Vietnamese people have little chance (if not to say no chance) to see *robins*, *penguins,* or *ostriches*. Hence, it is impossible for them to cite these members as representatives of the BIRD category. The same thing applies to the other groups of participants regarding *red-whiskered bulbul*.

5. Conclusion

In conclusion, from what has been discussed, prototype theory has excellent utility in promoting vocabulary teaching and learning. Based on the results mentioned above and the discussion, specific implications for vocabulary teaching and learning can be drawn out. First, the prototypical meaning comes into being at the earliest time, and it is also the first meaning to be learned by language community members. Additionally, the prototypical meaning of a word is more easily mastered by learners, while other peripheral meanings are more challenging to acquire. Hence, teachers should teach the prototypical meaning of a word first and attach importance to the explanation of prototypical meaning. They should also explain the relations between the prototypical meaning and derived meanings to assist learners in understanding the words better. If learners understand the prototypical meaning of a word, they will find it a lot easier to learn and deduce other meanings. Second, the prototype structures can be both similar and different across cultures. That is why vocabulary teaching and learning should be culturally sensitive. Learners will better acquire a word if they have real-life experiences with it.

References

Acharya, A. S., Prakash, A., Saxena, P., & Nigam, A. (2013). Sampling: Why and how of it. *Indian Journal of Medical Specialties, 4*(2), 330-333.

Ajalein, M., & Al-Khanji, R. (2020). Prototype semantic analysis of abstract and concrete concepts among Jordanian and American students. *International Journal of Linguistics, 12*(2). 148. https://doi.org/10.5296/ijl.v12i2.16468

Auwera, J. V. D., & Gast, V. (2010). Categories and prototypes. In J. J. Song (Eds.), *The Oxford handbook of language typology* (pp.166-189). Oxford University Press. https://doi.org/10.1093/oxfordhb/9780199281251.013.0010

Basile, J. (2007). *Prototypes in Europe and North America: How they reflect gender and cultural differences.* Retrieved on August 20, 2023. Https://www.diva-portal.org/smash/get/diva2:5063/FULLTEXT01.pdf

Berlin, B., & Kay, P. (1969). *Basic color terms: Their universality and evolution*. University of California Press.

Biria, R., & Bahadoran-Baghbaderan, A. (2016). Cross-cultural analysis of prototypicality norms used by male and female Persian and American speakers. *Psycholinguist, 45*(6), 1301-1314.

Bloomfield, L. (1933). *Language.* Holt.

Cambridge. (n.d.). Bird. In *Dictionary.cambridge.org*. Https://dictionary.cambridge.org/dictionary/english/bird

Cambridge. (n.d.). Fruit. In *Dictionary.cambridge.org*. Https://dictionary.cambridge.org/dictionary/learner-english/fruit?q=fruit

Cambridge. (n.d.). Furniture. In *Dictionary.cambridge.org*. Https://dictionary.cambridge.org/dictionary/learner-english/furniture

Cambridge. (n.d.). Vehicle. In *Dictionary.cambridge.org*. Https://dictionary.cambridge.org/dictionary/learner-english/vehicle

Croft, W. A., & Cruse, D. A. (2004). *Cognitive linguistics*. Cambridge University Press.

Jespersen, O. (1924). *The philosophy of grammar*. Routledge.

Kay, P., & McDaniel, C. K. (1978). The linguistic significance of the meanings of basic color terms. *Language, 54*(3), 610-646.

Kucera, H. K., & Francis, W. N. (1967). *Computational analysis of present-day American English.* Brown University Press.

Labov, W. (1973). The boundaries of words and their meanings. In C. J. Bailey, & R. W. Shuy (Eds.), *New ways of analyzing variation in English* (pp. 340–371). Georgetown University Press.

Lakoff, G. (1987). *Women, fire, and dangerous things: What categories reveal about the mind*. Chicago University Press.

Miller, G. A. (2003). The cognitive revolution: A historical perspective. TRENDS in *Cognitive Sciences, 7*(3), 141-144.

Noor, S., Omid, T., & Jawad, G. (2022). Simple Random Sampling. *IJELS, 1*(2), 78-82. Https://doi.org/10.22034/ijels.2022.162982

Oxford. (n.d.). Bird. In *Oxfordlearnersdictionaries.com*. Https://www.oxfordlearnersdictionaries.com/definition/english/bird_1?q=bird

Oxford. (n.d.). Fruit. In *Oxfordlearnersdictionaries.com*. Https://www.oxfordlearnersdictionaries.com/definition/english/fruit_1?q=fruit

Oxford. (n.d.). Furniture. In *Oxfordlearnersdictionaries.com*. https://www.oxfordlearnersdictionaries.com/definition/english/furniture?q=furniture

Oxford. (n.d.). Vehicle. In *Oxfordlearnersdictionaries.com*. https://www.oxfordlearnersdictionaries.com/definition/english/vehicle?q=vehicle

Rips, L. J., Shoben, E. I., & Smith, E. E. (1973). Semantic distance and the verification of semantic relations. *Journal of Verbal Learning & Verbal Behavior, 12*, 1-20.

Rosch, E. H. (1973). Natural categories. *Cognitive Psychology, 4*, 328-350.

Rosch, E. H., & Mervis, C. B. (1975). Family resemblance: Studies in the internal structure of categories. *Cognitive Psychology, 7*, 573-605.

Rosch, E. H., Mervis, C. B., Gray, W. D., Johnson, D. M., & Boyes-Braem, P. (1976). Basic objects in natural categories. *Cognitive psychology, 8*(3), 382–439. Https://doi.org/10.1016/0010-0285(76)90013-X

Rowley, J. (2014). Designing and using research questionnaires. *Management Research Review, 37*(3), 308-330.

Singh, S. (2003). *Advanced sampling theory with applications: How Michael "selected" Amy*. Kluwer Academic Publishers.

SO SÁNH ĐỐI CHIẾU CẤU TRÚC ĐIỂN MẪU CỦA MỘT SỐ PHẠM TRÙ TRONG TIẾNG ANH VÀ TIẾNG VIỆT

Nguyễn Thị Nhung

Khoa Sư phạm tiếng Anh, Trường Đại học Ngoại ngữ, Đại học Quốc gia Hà Nội,
Số 2 Phạm Văn Đồng, Cầu Giấy, Hà Nội, Việt Nam

Tóm tắt: Phạm trù là một vấn đề trung tâm của Ngôn ngữ học tri nhận, là một trong những nguyên tắc cơ bản của việc tổ chức sắp xếp ngôn ngữ và khái niệm (Croft & Cruse, 2004). Phân loại cổ điển và lý thuyết điển mẫu là hai cách tiếp cận chung để phân loại. Vì cách tiếp cận phân loại cổ điển được cho là có một số hạn chế nhất định, nên hầu hết các nhà ngôn ngữ học theo chủ nghĩa thực nghiệm đều sử dụng phân loại điển mẫu làm cách chính để giải thích dữ liệu của họ. Tuy nhiên, cách mọi người phân loại các sự vật, hiện tượng xung quanh họ có nhất quán giữa các nền văn hóa khác nhau không? Bài viết làm sáng tỏ câu trả lời cho câu hỏi này bằng cách so sánh các cấu trúc điển mẫu của bốn phạm trù - chim, đồ đạc, trái cây, xe cộ - giữa tiếng Anh và tiếng Việt. Để tìm ra những điểm tương đồng và khác biệt, dữ liệu bảng câu hỏi từ 92 người Việt đã được thu thập để khảo sát đánh giá của họ về mức độ tốt của các mẫu. Những dữ liệu này sau đó được phân tích và so sánh với dữ liệu có sẵn từ những người Anh trong nghiên cứu trước đây của Rosch và Mervis (1975). Kết quả cho thấy các cấu trúc điển mẫu vừa giống vừa khác nhau giữa hai nền văn hóa. Đó là lý do tại sao việc dạy và học từ vựng cần tính đến sự nhạy cảm về văn hóa.

Từ khóa: ngôn ngữ học tri nhận, phạm trù, phân loại cổ điển, phạm trù điển mẫu