มโนทัศน์ของเจ้าของภาษาต่อความหมายของคำนามในภาษาอังกฤษ
ในบริบทที่ใช้แบบนับได้และนับไม่ได้
Native Speakers' Conceptualizations of Meanings of English Nouns
in Count and Mass Contexts

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บทคัดย่อ

งานวิจัยเชิงคุณภาพเรื่องนี้ศึกษามโนทัศน์ของเจ้าของภาษาต่อการนับได้ของคำนาม โดยมุ่ง
ที่จะตรวจสอบการเปลี่ยนแปลงของความหมายเมื่อคำนามเปลี่ยนสถานะจากการเป็นนามนับได้เป็นนาม
นับไม่ได้หรือในทางตรงข้าม บทนำเริ่มจากการทบทวนวรรณกรรมเชิงทฤษฎีที่เกี่ยวกับความแตกต่าง
ระหว่างคำนามนับได้และคำนามนับไม่ได้ในภาษาอังกฤษ รวมถึงความแตกต่างของความหมายในเชิงอรรถ
ศาสตร์และหน่วยคำของระบบคำนามในภาษาอังกฤษและภาษาไทย ตอนที่สองอภิปรายการศึกษาวิจัย
ซึ่งสำรวจมโนทัศน์ของเจ้าของภาษาอังกฤษต่อการนับได้ของคำนามที่ใช้กับคำนำหน้านามที่แตกต่างกัน
ในบริบทต่างๆ ตอนที่สามนำเสนอผลจากการวิจัยเชิงคุณภาพซึ่งมุ่งที่จะตรวจสอบทฤษฎีที่กล่าวอ้างไว้ใน
วรรณกรรม (อาทิเช่น Alan, 1980; Baldwin & Bond, 2003; Mufwene, 1984; Wierzbicka, 1988)
ตอนสุดท้ายเป็นการสรุปผลการวิจัยที่แจกแจงเป็นข้อสรุปจากผลการวิเคราะห์พร้อมทั้งข้อเสนอแนะ
สำหรับการวิจัยในครั้งต่อไป ผู้วิจัยหวังว่างานวิจัยชิ้นนี้จะอำนวยประโยชน์ให้แก่ผู้สอนภาษาอังกฤษใน
การพัฒนาการเรียนการสอนและการเตรียมเนื้อหาวิชาที่เหมาะสมเพื่อสอนให้ผู้เรียนรู้จักการนำบริบทมา
ใช้ในการพิจารณาการนับได้ของคำนามในภาษาอังกฤษได้อย่างถูกต้อง

คำสำคัญ : การนับได้ของคำนาม คำนามที่ใช้เรียกสิ่งที่เป็นรูปธรรม คำนามที่ใช้เรียกสิ่งที่เป็นนามธรรม
หรืออาการนาม สามารถแบ่งแยกออกเป็นปัจเจก ไม่สามารถแบ่งแยกออกเป็นปัจเจก

Abstract

This qualitative study investigates native speakers' conceptualizations of noun countability. It attempts to uncover the meaning shifts from the native speakers' viewpoints when nouns alternate their countability status. The opening section provides a background of the count/mass distinction of English nouns discussed in the previous theoretical literature and the morphological and semantic differences in the nominal systems between English and Thai. The second section describes an exploratory study, which examines how native English speakers conceptualize countability of nouns used with different articles in different contexts. In the third section, the qualitative results of the study are presented in order to verify some of the claims made in the literature (e.g. Alan, 1980; Baldwin & Bond, 2003; Mufwene, 1984; Wierzbicka, 1988). The concluding section summarizes the findings with empirical generalizations and recommendation for future research. It is anticipated that this paper will offer pedagogical implications for teachers to develop a more informed method and prepare proper materials to teach their students how to use contexts to determine countability of English nouns.

Keywords: countability, concrete, abstract, individuated, non-individuated

1.   Introduction

In the pedagogical literature, teachers of English as a second or foreign language (ESL/EFL) report that the English article system is challenging both for teachers to teach and for second language (L2) learners to master. Researchers and teachers ascribe the difficulty in article acquisition to numerous factors. Young (1996) and Master (2002) asserted that one of the major causes of learners' difficulty results from the complexity of the English article system itself. Such a system encodes semantic notions of referentiality, existence and attribution as well as pragmatic notions of anaphora and context. A further difficulty for learners in mastering the system also lies in the relationship between articles and the syntactic notions underlying noun countability and number. That is, the speaker/writer will decide which article to use once a noun has been identified as count or non-count. As this is the case, Master (1988; 1990) ranked the count/ non-count distinction as the first feature to consider before determining the correct article.

Syntactically, the assignment of [±count] is involved in the use of the *indefinite* and *zero* articles. A [+count] noun distinguishes the number of nouns (i.e. either singular or plural), which in turn determines whether the indefinite article

a/an is required in the singular, or the *zero* article may be used in the plural. The singular count noun rule prohibits the occurrence of bare count nouns, i.e. singular count nouns without a determiner. A [–count] noun, on the contrary, carries only *zero* marking; it never takes the indefinite article *a/an* and cannot be pluralized. As the count/non-count distinction is one of the key factors in determining an article choice, incorrect assignment of countability and number to the noun in question apparently results in learners' errors in article use. Research (e.g. Master, 1990) has revealed that a great number of errors that L2 learners make with articles can be traced back to learners' misjudging countability or number of nouns.

Learners whose L1 lacks morphological markers for countability and number often have difficulty assigning [±count] features to English nouns. The learners' problem tends to be exacerbated by the fact that most nouns in English can potentially be considered count or non-count depending on the context in which a noun is used. Thus, learners must first take the context into consideration. The countability judgment of context-free nouns may not be of much help when having to choose an article in actual language use. In other words, it is the context which determines the countability

of a noun, not a noun per se. A question may arise as to how teachers can make their students use the context in the same way native English speakers do for distinguishing between the count and non-count use of a noun in a given context. Yoon (1993) noted that Japanese speakers, for example, find it difficult to determine how native English speakers regard nouns as count or non-count according to context.

The objective of this paper is thus to seek for an answer, at least in part, by examining how native English speakers associate their thought and meaning with linguistic coding when nouns alternate between mass and count use in various noun phrase (NP) contexts. It is hoped that understanding how native speakers conceptualize the countability of nouns used in a count or non-count sense will offer pedagogical implications that will help teachers to develop a more informed model to teach their students how to use contexts to determine noun countability and the correct use of English articles.

Before we begin to explore native speakers' conceptualizations of noun countability, it is necessary to review theories which treat count and non-count nouns as semantically and pragmatically motivated rather than arbitrary and view the [±count] distinction in terms of actual use in different contexts rather than the

lexical property of nouns per se.

1.1   Count vs. Non-count Nouns

Nouns are words that represent things, people, animals, concepts, ideas, feelings, qualities, events, and others. Three major concepts of nouns typically described in grammar textbooks are: countable vs. uncountable (or count vs. mass), singular vs. plural, and definite vs. indefinite.

Because the grammatical descriptions of English nouns must accommodate countability and definite/indefinite distinction, article usage is usually incorporated into beginning lessons in noun classes. Although the correct usage of articles depends on factors other than countability of nouns, it appears that noun countability is a crucial underlying feature in the article system in English. As such, many grammar books often introduce articles by referring to the distinction between count and non-count nouns prior to other components. A vital question arises here. How do native English speakers conceptualize the countability of nouns?

In order to answer the question, we may need to firstly explore how the terms 'mass' and 'count' nouns are defined. According to Quirk, Greenbaum, and Svartvik (1979, p. 130), "count nouns show the speaker as able to distinguish these items as separable entities", and

thus they can be counted. Mass nouns, on the other hand, "are seen as continuous entities and show the speaker as regarding these substances or concepts as having no natural bounds" (Ibid). Master (2002, p. 333) defines a count noun as "one that has a distinct border or boundary, a 'packet' that allows the distinction of one such entity from another and thus may be counted and pluralized, e.g. pencil, star, idea". A non-count noun, on the other hand, is "one that has no distinct border or boundary, a mass or 'wave' that does not allow the distinction of entities and therefore may not be counted or pluralized, e.g. plastic, flour, energy" (Ibid).

As mentioned earlier, countability mainly influences article usage, especially the indefinite article a/an and the zero article (∅). A count noun can be a single entity referred to as a singular noun, and it can be morphologically marked in a plural form by an [-s] or [-es] as in a pen→three pens; a glass→two glasses. A mass noun has only one form and never takes indefinite articles. In traditional grammar books, two concepts related to the count/mass distinction are concrete and abstract nouns.

Concrete nouns are generally represented by physical objects, substances and materials (Leech & Svartvik, 1994). They can be seen either as count or mass. Concrete count nouns are

physical objects that can be counted and can be distinguished as separate entities. Thus, they can be modified by denumerators such as numbers, and have a morphologically marked plural form: one dog, two dogs, several dogs. Concrete mass nouns, on the other hand, are seen as continuous entities which are regarded as substances with no natural bounds. Commonly, concrete mass nouns include materials or substances such as water, milk, beer, gold, dirt, soap, air, etc. Since mass nouns are normally not counted, they do not take plural forms (but only one form, i.e. bare nouns) and do not appear with other words that indicate the meaning of singular or plural—e.g. equipment, *one equipment, *two equipments, *several equipments. However, mass nouns can be modified by unspecific quantifiers such as much or some, and can be subject to division by means of certain 'gradability expressions', such as kind, sort, or 'partitives' such as bar, lump, loaf, piece, pile, yard, gallon, acre, etc.

Abstract nouns, in contrast, do not refer to real objects or entities. They are referred to as qualities, feelings, states, ideas, concepts, events, etc. As abstract nouns are not visible, they are claimed to be more easily regarded as both count and mass than concrete nouns (Leech & Svartvik, 1994). Nouns referring to events or occasions, such as talk, knock, shot, or

meeting, are usually count, while qualities and other abstract nouns tend to be mass: beauty, honesty, wealth, happiness, progress, research, information, homework, etc. Many abstract nouns, however, can be either mass or count: e.g. talk, thought. Other nouns, such as difficulty, trouble, experience, can be mass and count but with some differences in meaning (Leech & Svartvik, 1994, p. 44):

(1)   We had little difficulty convincing him.
        [state of hardship]

(2)   He is having financial difficulties.
        [problems or troubles]

(3)   She is a teacher with a lot of experience.
        [knowledge or skill]

(4)   Tell me about your experiences abroad.
        [past events or happenings]

In traditional grammar, many English nouns are viewed as being semantically arbitrary. As such, countability is also treated as arbitrary and is regarded as a lexical property of nouns. Although many grammar books attempt to make a distinction between count and mass nouns, definitions for such traditional terminology are, in many cases, not of much help for learners to clearly understand the nature of the count/mass distinction, especially when learners find that most nouns can have their countability changed.

Cognitive linguists (e.g. Langacker, 1987) have tried to explain the countability phenomenon of nouns and proposed that the count/mass distinction is in fact a much less arbitrary phenomenon than has traditionally been thought to be the case. In the cognitive linguists' viewpoints, the count/mass distinction has a conceptual and experiential basis. That is, noun categories are mainly determined by the characteristics of the objects to which the nouns refer and by the way in which humans interact with these objects, which is often influenced by nonlinguistic factors. These factors are largely independent of an individual's language background.

From the semantic point of view, Wierzbicka (1988) claims that the words of a language offer the speaker a large set of pre-packaged semantic configurations, which organizes and influences the speaker's thought. She argues that form-classes seem to be semantically motivated rather than arbitrary. On her view, countability judgments are based on "the conceptualization intended by the speaker" (p. 507). This is in line with Master's (2002) argument that although there is a greater likelihood that certain nouns will be count and others non-count, countability is largely determined by the speaker. Thus, it is neither realistic nor

practical to make lists of countable and uncountable nouns and to consult such lists to detect countability.

Wierzbicka (1988) also proposes that countability is often motivated by the semantic distinction between object and substance reference and provides further motivating factors for the non-arbitrariness of grammatical differences. Size, for example, is one crucial element which affects conceptualization for foodstuff of similar kinds either as composing of individual entities or as being internally homogeneous (e.g. noodles vs. flour). Mass use is often motivated when the entity is either too small to attract much attention from the human consumer such as an individual grain of rice, or too big to put on one's plate, such as an individual pumpkin or a head of cabbage. Eating habits is another factor that motivates countability judgments. People usually conceive of vegetables that tend to be eaten individually, like olives and radishes, as count nouns, whereas those that are often chopped up and added to other foods, like garlic, as mass.

Mufwene (1984) supports the argument that the distinction between count and mass is not lexical, but semantic and delimitative. On this view, he opposes the rigid labeling of nouns as either mass or count in the lexicon and points out the difficulty in explaining what

in the structure can account for the obvious linguistic-semantic difference between the members of the pairs of words which may just appear to reflect alternative ways of conceiving of or talking about the same entities. For example,

mass	count
fiction	novels
poetry	poems
mail	letters
cattle	cows
kitchenware	kitchen utensils
footwear	shoes

(Mufwene, 1984, p. 201)

Mufwene also argues the difficulty in justifying why the nouns that name objects of similar nature, such as the following, are assigned to different categories:

mass	count
knowledge	beliefs
rice	beans
spaghetti	noodles
garlic	onions

(Mufwene, 1984, p. 201)

The above pairs of nouns make it clear that these nouns may not be distinguished solely on the basis of what they denote. Examples of 'mass' nouns that are seen to be interpreted purely as a linguistic projection includes referents of nouns such as furniture, luggage, equipment, livestock, etc., which can be clearly perceived as divisible and do not

appear to be different from count nouns such as tables, chairs, suitcases, tools, cows, etc. Mufwene argues that 'mass-ness' should actually be determined by the nature of existence of a particular noun rather than linguistic arbitrariness. In this respect, he introduces the alternative terms individuated versus non-individuated to replace the traditional terms count versus mass. The term 'individuated' refers to discrete entities or sets of entities which possess a built-in mode of individuation and can be singular or plural in form. 'Non-individuated', on the other hand, is the situation when the speaker does not care to individuate the referents. In other words, the speaker uses non-individuated nouns when he wishes to refer to the objects which the nouns pick out in such a way that no division of entities into parts is presupposed. In the case of liquids such as wine, milk, and beer, the built-in mode of individuation is lacking in the structure of these objects. That is, they cannot be counted as separate units. Some contexts, however, lend their own units of individuation—e.g. containers such as glass, cup, bottle, can, carton. Thus, it is fully understandable to say: two coffees to mean two cups of coffee, or two beers for two bottles, cans, or glasses of beer, depending on the availability in the situation of utterance. Some non-count nouns can be 'individuated' as types, such

as wine and beer in the following sentences:

(5)   This is a wine of uncommon flavor.

(6)   There is also a beer made of wheat rather than hops.

Mufwene's proposition supports Allan's (1980) argument that theoretically, most nouns can alternate between mass and count, depending on the context of use. The countability status of nouns is established at the level of the whole noun phrase (NP). The alterations of the count/mass distinction are the result of an individual speaker's decision to talk about or depict things one way or the other. The perceiver of his utterance will interpret the nouns in just the ways he intended for them to be; namely, as discrete sets for the count use of nouns ('individuated'—to follow Mufwene's term), or continuous ensembles for mass nouns ('non-individuated'). Consider the following two sentences:

(7)   He likes fruit for dessert; or

(8)   He likes fruits for dessert.

The choice of sentence (7) or (8) reflects the speaker's alternative perceptions of the same object(s) either as a continuous entity or a set of denumerable discontinuous objects. In most cases, how the objects are available to the speaker, whether in the form of individual fruits, in slices, or as fruit salad, largely determines the particular

perception of the moment and how the speaker reproduces this in language.

Although countability is characteristic of NPs and not nouns, it is still true that not all nouns are equally amenable to mass or count uses. Some nouns, for example, car, boat, beetle, carpet, closet, and table, are more readily located in countable environments, while others, such as lightning, furniture, equipment, and evidence, are generally located in uncountable NPs (Allan, 1980, p. 548). In other words, nouns often prefer one or the other class. Allan refers to this particular characteristic of nouns as noun countability preferences (NCPs). According to Allan (1980, p. 554), uncountable environments are "the more general, and presumably more basic than countable ones", which is why uncountable nouns are unmarked morphologically and syntactically, while countable nouns are marked in both morphology and syntax.

Based on Allan's NCPs, Baldwin and Bond (2003, p. 464) suggested a division of nouns, depending on their readiness to undergo countability shifts, into five major types: fully countable, strongly countable, weakly countable, uncountable, and plural only. Nouns that rarely undergo conversion are marked as fully countable such as knife, uncountable such as furniture, or plural only such as clothes and scissors. Other nouns are marked either as strongly countable (for count nouns that can be converted to mass, such as cake), or weakly countable (for mass nouns that are readily convertible to count, such as beer). Such a conversion is triggered by surrounding context.

From the literature presented thus far, one can see that communication, although it is about objects and states of affairs, is ultimately believed to be the speaker's decision in determining (by the context of communication) how he/she wants to present them. Such a decision is made by how the speaker perceives or conceives of the objects in the context of use at the moment of speaking. The count/mass distinction, then, is not actually a distinction among words, but a distinction among ways of using those words. Countability is not a characteristic of nouns per se, but of noun phrases (NPs) in the discourse of communication. The concept of countability in English NPs is challenging for many ESL/EFL learners to grasp, particularly those whose L1s do not have number morphology and an article system. Thai, for example, does not mark nouns for countability. However, the concept of countability does exist in the Thai language. The following section will review briefly how the concept of countability is conveyed in Thai.

1.2   Countability in Thai

Although Thai nouns are morphologically unmarked, this does not mean that the count/mass distinction is not relevant in the Thai language. As proposed by Chierchia (1994, cited in Hua & Lee, 2005), all languages have a mass domain for noun denotations, but whether a count domain is available for noun denotations or not differs across languages. Languages like English have both count and mass semantic domains for noun denotations; whereas many Asian languages like Thai and Chinese do not have a count semantic domain. Thai nouns, like Chinese nouns, do not encode a count/mass distinction, and they generally occur in mass form (i.e. bare nouns). The Thai language allows bare nouns to occur as generic arguments, denoting kinds or types. That is, they draw on the mass domain, neutral as to individuation and quantification. The enumeration and quantification of Thai nouns require the meanings implied by the context or the presence of other words appended in the sentence. The use of noun classifiers can be seen as an important device to individuate or measure the mass denotations provided by the nouns. The common construction is the use of *N + cardinal numeral + classifier*. By incorporating a classifier, Thai nouns, regardless of whether they are physical objects, liquids or substances, are considered to be individuated. For liquid and substance, a classifier referred to as '*mensural classifier*' (Hua & Lee, 2005) is used to provide a unit of measurement or a container for counting the noun denotations. Mensural classifiers correspond to mass-classifiers and are typically nouns in their own rights, for example,

(9) three   glasses of   water   (English)
     naam   saam   kaew (C) (Thai)
= water   three   glass
    N +   numeral + classifier (C)

Another type of classifier, called '*sortal classifier*' (also referred to as '*individual classifier*'), is employed for individuating referents of physical objects. Sortal classifiers typically reflect the shape, the size, or the ontological properties of the referents of the nouns they are assigned to. Sortal classifiers correspond to count-classifiers (Hua & Lee, 2005), and most of them are usually different words from the head nouns to which they are attached, for example,

(10) four   tables   (English)
      toh   sii   tua (C)   (Thai)
= table   four   item / piece
    N +   numeral + classifier (C)

As we have seen, the morphological, syntactic and semantic differences between English and Thai nominal systems require Thai learners of English to construct a new association

between the concepts and realizations of countability in English and Thai NPs. The complexity that arises in the learning of the count/mass distinction is that some English nouns (such as *fiction* vs. *novels, luggage* vs. *suitcases*) are seen to be interpreted purely as a linguistic projection, making it difficult for Thai learners to judge their countability based solely on noun denotations. The labeling of English nouns as 'countable' and 'uncountable' in grammar textbooks thus tends to be complicated for these learners. Their problems appear to be exacerbated when they find that some 'uncountable' nouns are sometimes used as 'countable', and vice versa. As most English nouns can be used as count or non-count depending on the speaker's intended meaning and the way he/she depicts things as count or mass, it appears to be impractical to make lists of countable and uncountable nouns and refer to such lists to detect countability, as argued by Master (2002). The teaching of noun countability should focus on the way most nouns can alternate between count and non-count use depending on the context in actual language communication.

Motivated by the above discussion, the central objective proposed in this paper is to seek empirical evidence to illustrate the claims in the theoretical literature that most nouns can be used

either as countable or uncountable, but they may be interpreted differently in syntactic contexts which denote a mass or a count reading. The present study thus focuses on examining how native English speakers conceptualize the differences in meanings of nouns when they alternate their countability status in various NP environments. The hypothesis formulated for the study is that most English nouns are readily convertible between count and mass use with slight shifts in meaning and that the alteration of noun countability status is based on the speaker's conceptualization of an entity being individuated or non-individuated (as claimed by Mufwene, 1984). In addition, the study also aims to seek some empirical generalizations which may be useful for teachers of English when teaching noun countability to their students.

2.   The Study
2.1   Participants

The participants included twenty native English-speaking teachers (NESTs) from four universities in Bangkok, Thailand. The justification for choosing native English speakers who are teachers of English was based on the presumption that due to their familiarity with linguistic issues and metalanguage, they should be capable of describing how nouns are conceptualized as count or non-count in relation to the

article choice in each noun phrase (NP) context.

2.2 Research Instrument

Fifteen nouns were investigated in this study. Each target noun was used in different noun phrase contexts in a set of three sentences with different articles: Ø, *a/an*, and *the*, where Ø is used with a bare noun in a mass environment, *a/an* is used with a singular noun in a countable indefinite NP context, and *the* is used in a definite NP context. Plural nouns are excluded due to the fact that the count/mass distinction of nouns can be determined by the use of *a/an* and the *zero* article. The definite article *the* is included so as to observe how native English speakers view the countability of nouns in both definite and indefinite contexts.

The criteria for the selection of these fifteen nouns were based on four factors. Firstly, these nouns can readily undergo countability shifts. Secondly, countability conversion of the fifteen nouns chosen for this study tends to be uncommon to most Thai learners of English, compared to nouns whose countability alternation is more familiar to learners such as *coffee* vs. *coffees*. Thirdly, they are frequently-used, selected from a corpus, and suitable for teachers of English to use as examples for Thai learners.

Finally, these nouns are not used in idiomatic expressions, which normally appear in formulaic chunks that do not require the speaker's decision on the way a noun should be used.

The instrument was developed by selecting twenty nouns from examples given in numerous sources (e.g. Alan, 1980; Katz & Zamparelli, 2012). These target nouns included ten nouns that are used most frequently in count contexts (i.e. strongly countable nouns) and ten nouns that are used most frequently in mass contexts (i.e. weakly countable nouns). Each of these nouns was put in a set of three sentences in which the target noun was used with three different articles: Ø, *a/an*, and *the*. These twenty sets of sentences were checked for acceptable language by a native English-speaking teacher (NEST). Adjustments were made according to the comments and suggestions regarding the naturalness of language use. The reliability of the instrument was subsequently checked by two native English-speaking teachers, who had earned a Master's degree in English language teaching. The aim was to check the appropriateness of the selected sentences and the target nouns. After being informed of the purpose of the study, these two NESTs were asked to describe how they conceptualized each noun in a particular context in relation to the article

choice. Based on the comments and suggestions over some sentences and the target nouns, five sets of sentences containing those nouns were eliminated. Therefore, only fifteen sets of sentences with fifteen target nouns were used to serve the purpose of this study. These fifteen nouns included seven strongly countable nouns, as listed in (a), and eight weakly countable nouns, as listed in (b).

(a) *Strongly countable nouns*:

carrot   car   pizza   piano
rope   stone   oak

(b) *Weakly countable nouns*:

plastic   victory   wheat   darkness
desire   cotton   heat   rhythm

To keep the participants from offering common responses such as 'the noun is countable/ uncountable' or 'abstract noun', sample sentences with a brief description for each NP environment were provided in the final version of the instrument. Please refer to sample test sentences in the appendix.

2.3   Data Collection

Twenty sets of the test instrument were hand-delivered to twenty native English-speaking teachers (NESTs) at four universities in Bangkok, Thailand. These NESTs were asked to complete the test instrument and provide personal and contact information (e.g. their name, native country, native language, educational background, teaching experience, email address, and telephone number) and returned the completed tests to the researcher.

2.4   Data Analysis

The collected data was analyzed qualitatively based on the actual statements written in their own words by the twenty NESTs. Key words were listed and used as the basis for classifying the meaning differences into categories, as will be presented and discussed in the following section.

3.   Results

This section explores and discusses qualitatively the conceptualizations provided by native English-speaking teachers (NESTs) regarding the differences in meanings of the fifteen nouns used with different articles. As the focus of the study was to explore the meaning shifts occurring when nouns convert their countability status, we will firstly examine nouns used with Ø and *a/an* in mass and count contexts. Then, the NESTs' conceptualizations of nouns used with the definite article will be summarized in the next section.

3.1   Conceptualizations of Nouns Used with Ø and *a/an*

The results of the qualitative

analysis of the NESTs' descriptions of the target nouns used with Ø and *a/an* in mass and count contexts will be presented in two parts based on the classification of nouns into: (a) strongly countable nouns and (b) weakly countable nouns, as mentioned in Section 2.2.

3.1.1   Strongly Countable Nouns

This part summarizes the denotations of strongly countable nouns in count NP contexts and the meaning shifts occurring when these nouns are used in mass NP environments. The seven strongly countable nouns are *carrot, car, pizza, piano, rope, stone*, and *oak*.

3.1.1.1 Count Use of Strongly Countable Nouns

The seven strongly countable nouns when used in singular countable NP contexts were interpreted similarly by most NESTs as denoting one discrete physical object, as shown in the following statements:

(Quote 1)   a *carrot* - referring to one individual item

(Quote 2)   a *carrot* - a single whole carrot

(Quote 3)   a *car*   - referring to a single, discrete entity out of many

(Quote 4)   a *piano* - describes a physical piano in relation

to other objects

(Quote 5)   a *rope* - one of many possible ropes

(Quote 6)   a *stone* - referring to a single discrete item from among many

Taken together, strongly count nouns when used in their typical count NP contexts are conceptualized by native English speakers in this study as 'one separate entity', which allows the distinction of one such entity from another. This verifies the claims made in the theoretical literature that the meaning of a count noun specifies an individuation.

3.1.1.2 Conversion from Count to Mass in Strongly Countable Nouns

When strongly countable nouns are used in mass NP contexts, the meaning shifts found in the descriptions of the NESTs can be classified into the following categories.

(a)   Referring to a generic class or type of entity, which denotes 'whole' rather than 'divisity' or individuation of reference. Consider the following statements:

(Quote 7)   Ø *pizza* - refers to a generic type of food

(Quote 8)   Ø *pizza* - an unspecified amount of pizza

(Quote 9)   Ø *rope* - refers to a general category of substance

(Quote 10)   Ø *rope* - a generalized
              concept of rope, amount
              and form unspecified
(Quote 11)   Ø *stone* - refers to a class
              of material
(Quote 12)   Ø *stone* - an unspecified
              amount/form of stone
(Quote 13)   Ø *oak* - a general
              reference to the type
              of wood as material
(Quote 14)   Ø *oak* - an unspecified
              amount/form of oak

From the examples above, one can conclude that strongly countable nouns, under conversion, give rise to mass uses of these nouns with the following shifts of meaning:

Ø *pizza* as a type of food (whole) vs.
    an individual pizza, or two pizzas,
    or a slice of pizza
Ø *rope* as a generic type of string
    (whole) vs. a rope of three feet
    or two five-foot ropes
Ø *stone* as a type of rock (whole) vs.
    its parts as pieces, i.e. one stone
    or two stones
Ø *oak* as a type of wood (whole) vs.
    its parts perceived as an oak tree
    or oak trees

(b)   Referring to an unidentified number of discrete item(s) having undergone a process such as being cut up, sliced, diced, ground up or shredded, as in the examples below:

(Quote 15)   Ø *carrot* - no longer
              a discrete entity, one or
              more carrots has been
              chopped up or grated
(Quote 16)   Ø *carrot* - a quantity
              of carrot that has been
              sliced or diced
(Quote 17)   Ø *carrot* - unspecified
              amount/formless mass

(c)   Denoting 'conceptual abstraction' of actual physical objects based on their distinctive features or characteristics such as power or capacities. Consider the following descriptions:

(Quote 18)   Ø *car* - refers to an
              abstraction or generic
              reference about a
              high-performance car
(Quote 19)   Ø *car* - refers to an
              abstract concept, not
              an actual item
(Quote 20)   Ø *car* - referring to one's
              concept of a Ferrari's
              capabilities
(Quote 21)   Ø *car* - the use of 'car'
              here represents the power
              of the car
(Quote 22)   Ø *piano* - not a discrete
              item but concept of
              a musical instrument
(Quote 23)   Ø *piano* - refers to a
              generic class of
              instruments (piano)

(Quote 24) Ø *piano* - generic reference to an ability/skill to play piano, not a specific instrument

Summarizing, then, strongly countable nouns, under conversion, give rise to mass uses with the following shifts of meaning: (a) denoting a generic class or type of entity, which represents 'whole' rather than 'divisity' or individuation of referent, as in the case of *pizza, rope, stone*, and *oak*; (b) denoting an unspecified amount of entity that is no longer in the form of discrete individuals as a result of being processed as ingredients or cooked, as in the case of concrete nouns for plants, fruits, and vegetables such as *carrot*; and (c) denoting conceptual abstraction of physical entities based on their features or characteristics, as in the case of *car* and *piano*.

To summarize, the results of the NESTs' descriptions of strongly countable nouns show that many nouns which appear frequently in count contexts also appear frequently in mass contexts. The results also show the meaning shifts when these nouns are used with Ø and *a/an* in mass and count contexts.

3.1.2 Weakly Countable Nouns

As remarked above, weakly countable nouns are those that are generally located in mass NP contexts, but they can readily be converted to count NP environments. In this study, eight weakly countable nouns are investigated which include: *plastic, victory, wheat, darkness, desire, cotton, heat,* and *rhythm*. First, we will examine the participants' conceptualizations of weakly countable nouns used in their typical mass NP contexts. Then, we will consider cases where these nouns are located in count environments.

3.1.2.1 Mass Use of Weakly Countable Nouns

The eight weakly countable nouns when used in their basic mass NP environments were interpreted similarly by the participants in two different senses: (a) denoting a generic class or type of material, as in the case of concrete nouns: *plastic, wheat, cotton*; (b) denoting a generic concept of feeling, quality, or event, as in the case of abstract nouns: *victory, darkness, desire, heat*, and *rhythm*. Consider the following statements:

(a) *Concrete weakly countable nouns*:

(Quote 25) Ø *plastic* - refers to a generic type of material, e.g. plastic, metal, wood

(Quote 26) Ø *plastic* - refers to a class of material, not an item

(Quote 27) Ø *plastic* - an unspecified amount/form of plastic

(Quote 28)   Ø *wheat* - generic type of crop (e.g., wheat, barley)

(Quote 29)   Ø *wheat* - general category of substance, generic group

(Quote 30)   Ø *wheat* - an unspecified amount/form of wheat

(Quote 31)   Ø *cotton* - refers to the whole group of fibers known as cotton

(Quote 32)   Ø *cotton* - referring to non-discrete item, but type of material

(b)   *Abstract weakly countable nouns*:

(Quote 33)   Ø *victory* - refers to a general concept of winning

(Quote 34)   Ø *victory* - a generalized abstract concept of victory

(Quote 35)   Ø *darkness* - a generic concept of time without light

(Quote 36)   Ø *darkness* - a generalized concept of lack of light

(Quote 37)   Ø *desire* - refers to an abstract concept (desire)

(Quote 38)   Ø *desire* - general abstract notion/quality of an uncountable state of mind

(Quote 39)   Ø *heat* - refers to an abstract idea of high temperature

(Quote 40)   Ø *heat* - referring non-specifically to a type of energy

(Quote 41)   Ø *rhythm* - refers to a general abstract concept

(Quote 42)   Ø *rhythm* - a generalized concept of rhythm, no specified amount or form

To sum up, weakly count nouns when used in their typical non-count contexts are conceptualized by native English speakers in this study as denoting mass substances or concepts with no distinct boundary, and thus are viewed as generic kinds/classes of entity or generic abstract concepts. This supports the claims made in the theoretical literature that the meaning of a non-count noun is neutral as to individuation.

3.1.2.2 Conversion from Mass to Count in Weakly Countable Nouns

As discussed above, the mass use of weakly count nouns denotes indivisibility of the referents; these nouns are thus viewed as 'whole'. When weakly countable nouns are used in count NP contexts, the meaning shifts of these nouns, under conversion, can fall under any of the following categories.

(a)   The count noun version of a weakly countable noun for concrete things or stuff is perceived either as kinds or types of what the noun in its mass version denotes. The conversion appears with such nouns as *plastic*, *wheat*, and *cotton*. Consider the following statements:

(Quote 43)   a *plastic* - referring to a specific type of plastic

(Quote 44)   a *plastic* - the context qualifies a type of plastic out of a variety of plastics

(Quote 45)   a *plastic* - referring to an individual type of plastic (non-specific)

(Quote 46)   a *plastic* - one of many types of plastic

(Quote 47)   a *wheat* - referring to one of many species of wheat

(Quote 48)   a *wheat* - one of many types/varieties of wheat

(Quote 49)   a *cotton* - referring to a 'type of' cotton (ellipsis)

(Quote 50)   a *cotton* - refers to an individual type of cotton, out of potentially many

(b)   Abstract nouns denoting feelings or qualities such as *desire, rhythm* and *heat*, under conversion, give rise to count uses with the meaning shift toward denoting kinds or types.

(Quote 51)   a *desire* - There are many types of desires. This refers to one of many.

(Quote 52)   a *desire* - r e f e r r i n g generally to a particular type of emotion

(Quote 53)   a *desire* - refers to one type of desire among a variety of desires

(Quote 54)   a *rhythm* - referring one, among other possible kinds

(Quote 55)   a *rhythm* - one of many rhythms that different cities have

(Quote 56)   a *rhythm* - one type of rhythm

(Quote 57)   a *heat* - a particular type of heat, e.g. a dry heat, a humid heat

(Quote 58)   a *heat* - refers to one of many types of heat (temperature)

(Quote 59)   a *heat* - a type/level of heat

(c)   An abstract noun denoting an event or occasion when used in mass NP environments can be viewed as an instance of, as in the case of *victory* and *darkness*.

(Quote 60)   a *victory* - a particular event in history amongst other victories

(Quote 61)   a *victory* - specified victory for a particular event (among many events)

(Quote 62)   a *victory* - refers to an individual win

(Quote 63)   a *darkness* - refers to one of many periods without light

(Quote 64)   a *darkness* - specific darkness in that time

(Quote 65)   a *darkness* - refers to a particular incidence

Note that *darkness* was also viewed by many NESTs as denoting kind/type/shade, as in:

(Quote 66)   a *darkness* - It qualifies as a kind of darkness

(Quote 67)   a *darkness* - could be a type of darkness

(Quote 68)   a *darkness* - a shade of darkness – one shade of many

Similarly, the abstract noun *desire*, which was viewed by the majority of participants as denoting type, was also conceptualized by some native speakers as one instance of an emotion occurring at a particular period of time, as in:

(Quote 69)   a *desire*- an emotion limited to a specific time frame

To sum up, weakly countable nouns, under conversion, give rise to count uses with a limited variety of shifts in their denotations, which include a kind or type of and an instance of.

It should be noted that another common conversion of mass nouns to count environments is that of units, which generally denote servings or partitives of the denotations of the underlying mass nouns. Common examples are found in: a (cup of) *coffee*, a (glass of) *beer*, a (slice of) *bread*. This type of conversion is most commonly recognized by EFL/ESL learners at the intermediate levels as it is usually introduced in grammar classes. On this view, it was decided that this type of conversion should be excluded from the study.

3.2   Conceptualizations of Nouns Used with *the*

As argued above, the definite article *the* is in fact neutral as to countability. It can be used with nouns in both count and mass NP environments. According to the grammar of English, the countability of an NP, as determined by the speaker, must be known or made known to the hearer. In an indefinite NP, the hearer is assumed to be unaware of the reference; thus, knowledge of the countability of such an NP cannot be assumed to be known. That is why, in indefinite NPs, nouns must be marked to indicate countability: either $\emptyset$ for mass environments, or *a/an* for singular count contexts (and the plural suffix –*s* on the head noun for plural count NPs). A definite NP, on the other hand, is used only when the speaker assumes the hearer's knowledge of the reference of such an NP, which will ordinarily mean that its countability can be assumed to be known. This section aims at exploring the NESTs' descriptions of the 15 target nouns used with the definite article *the* and discuss the meanings viewed by the NESTs in terms of countability.

3.2.1 Strongly Countable Nouns Used with *the*

We will firstly examine the NESTs' conceptualizations of the definite NPs headed by the seven strongly countable nouns: *carrot, car, pizza, piano, rope, stone*, and *oak*.

Let us first consider the following descriptions on the noun *carrot*:

(Quote 70)   the *carrot* - specifically referring to one item

(Quote 71)   the *carrot* - specific countable item, known to interlocutors

(Quote 72)   the *carrot* - a particular item referred to previously

(Quote 73)   the *carrot* - refers to a specific amount of carrot previously set aside

(Quote 74)   the *carrot* - an unspecified amount of sliced/chopped item

(Quote 75)   the *carrot* - could be a quantity or a single carrot (depending on context)

(Quote 76)   the *carrot* - could be more or less than a single carrot that is part of the   recipe

From the above examples, one can see that when used in a definite NP, *the carrot* can be viewed as either count or mass, depending on the context in which the NP is used (i.e. either as 'one' item, a 'single' carrot, or as unspecified amount of carrot no longer in separate items). On the contrary, the definite NP *the car* is viewed only as 'one' countable item, as in:

(Quote 77)   the *car* - refers to an individual entity, which is known

(Quote 78)   the *car* - second reference to a known item to both interlocutors

(Quote 79)   the *car* - a single, specific car (namely, the one he parked)

Descriptions offered by NESTs for *the piano, the rope, the oak* were quite consistent with those for *the car*, that is, the NESTs viewed these NPs as denoting one particular item whose reference is identified based on the shared knowledge between the speaker and hearer. Similarly, the NP *the pizza* was also perceived by the majority of NESTs as one identifiable item. However, one NEST described *the pizza* as "the amount of the specific pizza was unknown," which suggests that *pizza* may be viewed in mass term rather than a single specific pizza. As for *stone* in '*the stone* used for the counter tops...', the NP was viewed as mass which denotes a particular type of material used for a specific purpose as identified in the context.

One point that most NESTs shared

in describing definite descriptions was the inclusion of terms such as *particular, specific, already mentioned, referred to previously, known to interlocutors, the listener knows which one*. The assumed hearer's knowledge of the reference is a clear pragmatic function that distinguishes definite NPs from indefinite NPs and is what the majority of NESTs found important to describe.

3.2.2 Weakly Countable Nouns Used with *the*

In this study the eight nouns are divided into (a) concrete nouns: *plastic, wheat, cotton*, and (b) abstract nouns: *victory, darkness, desire, heat*, and *rhythm*. Let us firstly consider the weakly countable concrete nouns used in definite contexts. The concrete noun *plastic* in *the plastic* was viewed as being (a) a particular type of plastic, and (b) particular plastic used in a particular area (i.e. around the hole) as indicated in the context. Similarly, the wheat was explained as (a) a particular type of crop, and (b) specific amount of wheat in a specific location. The use of *the* with *cotton* was described (a) one specific type of cotton, (b) a particular lot of cotton, and (c) specific cotton at a specific time.

The abstract nouns *victory, darkness* and *desire* when used in definite contexts were described similarly as a particular event or feeling occurring at a particular time and place. The abstract nouns *heat* and *rhythm* used in definite contexts were interpreted as a particular state, condition, quality or type at a specific time and place as specified in the context.

Like the descriptions for strongly countable nouns used in definite contexts, hearer's knowledge about the reference was also stated in the descriptions for the definite weakly countable NPs by a number of NESTs. As one can see, how the definite NPs are conceived of depends largely on the discourse contexts. Countability, though not marked in definite NPs, is assumed to be known due to the fact that the reference of the head noun is assumed known to the hearer. On this view, countability can be accounted for as a subcategory of the NP determined by the context.

4. Conclusion

This study investigated native English speakers' conceptualizations of noun countability and the meaning shifts when nouns convert their countability status. It began with theoretical literature of what is meant by countability. Then an exploratory study was conducted to obtain empirical generalizations of mass-count alternation in English nouns.

The findings presented in the study support the arguments discussed earlier

that most nouns can be used either as mass or count, making it impossible to propose that the count/non-count distinction is the intrinsic property of each noun. The results of this study allow us to assume that there are a vast number of nouns that can be used as countable or uncountable depending on whether their referent is thought of as made up of discrete units or not. The referent of a count singular noun is typically conceptualized as one discrete entity. The referent of non-count noun, on the other hand, is typically conceptualized as indivisible entity. Most English nouns can undergo countability shifts by modifying their meanings. As can be seen, the interpretation of meanings is relativized to contexts.

Based on Allan's (1980) argument, though English nouns belong to various classes, most of them are basically uncountable. This has led us to assume that when given the ground interpretation, almost all English nouns can be used in uncountable environments. As one can see from the findings of this study, even nouns which tend to favor count readings, for example, *carrot, car, piano*, can readily be converted to mass uses. The meaning shifts that take place when a count form is used as a mass fall under a variety of types, which include, but may not be confined to, the following: (1) *a (generic) kind, type,*

class or *species*, (2) *universal grinding*, and (3) *conceptual abstraction*. In the case of mass nouns under conversion, these nouns give rise to count nouns with a more limited variety of shifts in denotation. They primarily include: *a kind or type of, an instance of*, and *a unit of*.

5. Pedagogical Implications

The implication of the findings presented above is that, in order to determine countability, learners of English as a second or foreign language need to have knowledge of the referent of an NP in context. As argued by Master (2002), it is impractical to refer to certain English nouns as count or mass. Therefore, teaching countability of nouns should be introduced through comprehension tasks using contextualized texts to provide language in discourse. Then, a clear conceptual explanation with regard to the notions of individuation or divisibility of an entity should be provided so that students will have a clear understanding of pragmatic and semantic meanings of nouns in their mass and count use. Teachers may point out to their students that, depending on the meaning intended by the speaker, a noun (no matter whether it primarily prefers a count or mass reading) when conceived of by the speaker as one separate entity either by itself or by means of a type of division of such an entity (e.g.

as type, kind, sort, species, class, unit, serving, part, or instance of) will be used as count, either in a singular or plural form. The same referent can alternatively be used as non-count when it is conceived of as indivisible substance with either one of the following meanings: (1) mass substance with no distinct boundary, (2) a formless entity of unspecified amount, (3) conceptual abstraction of a physical entity, or (4) denoting generic reference to the type of entity. The teacher's provision of a few generalizations of the concept of individuation with some examples can help reduce the student's burden in having to deal with the complex aspect of countability.

In addition to knowledge of an NP in context, learners also need to be provided with a clear understanding that grammatical countability is language-specific. Learners should be aware that different languages encode the countability of the same referent in different ways. Unlike English, the Thai language does not morphologically mark nouns for countability. Therefore, Thai learners tend to have great difficulty with the English specific conceptual encoding of countability even though their knowledge of the world is just as complete as that of native English speakers. Thus, one important task of ESL/EFL teachers is to help their students to become sensitive

to the distributional mass and count environments of nouns, which can be perceived from the denotational differences of these nouns in the context of use at the moment of the utterance. This means that greater attention should be given to the pragmatic domain of language in real context of communication when teaching English nouns.

6.   Recommendation for Further Research

Regarding noun countability, much research still remains to be done. In this study, the singular count and mass NPs are used as proxy for distinguishing the count-mass uses of nouns; plural NPs are not included. Due to the fact that singular NPs usually occur in mass and count contexts, while some plurals might appear only in count uses, investigating plural NPs may yield interesting and insightful results. Further research can then be carried out to investigate both the singular and plural uses of nouns in order to recognize the meaning shifts which correlate with a count-mass conversion. Also, we should be able to explore the contexts in which those nouns whose singular uses are semantically distinct from their plural uses are likely to occur more frequently. This way, we can classify their countability preference.

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Appendix
Sample Test Sentences

Please describe briefly how you view the differences in meanings of the underlined noun in each set of sentences when used with different articles as shown in the examples.

Examples: (a) The vet found bits of chewed-up **Ø pencil** in the dog's stomach.
                  Answer: *No longer a discrete entity, but a formless mass*
            (b) All you have to do is pick up **a pencil** and start connecting the dots.
                  Answer: *Referring to one individual item*

1. (a) She added **Ø carrot** to the cake for flavor.
         _____

    (b) There is **a carrot** in the right side drawer in the fridge.
         _____

    (c) After you sauté the onion, dice **the carrot** and add it to the pan.
         _____

2. (a) I think the Ferrari is more **Ø car** than he can handle.
         _____

    (b) He decided to go to a dealership and buy **a car**.
         _____

    (c) He parked **the car** on a residential block and walked the rest of the way to work.
         _____

3. (a) Did you order **Ø pizza** or Thai food?
         _____

    (b) I ordered **a pizza** for lunch.
         _____

    (c) **The pizza** had anchovies on it, so Paula wouldn't eat it.
         _____