# The Study on Second Language Acquisition of English Count-Mass Distinctions

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## 内 容 简 介

本书介绍了中国英语学习者对英语名词可数性特征的习得过程。书中所报告的研究内容紧紧围绕“视角转换”假设展开。该假设认为，中国英语学习者对英语名词可数性特征的习得是逐渐摆脱汉语量词的影响、掌握编码在英语名词中可数性视角的过程。该过程主要包括：习得名词固有可数性视角，即指称的界、指称的内部结构、指称的共有功能；习得名词可数性转化视角，即可数名词去界后的不可数性、不可数名词有界后的可数性。学习者习得英语名词可数性视角会导致概念重组，进而影响其对客观事物释解视角的择取。

本书适合高校从事语言研究的教师、语言学专业的研究生和本科学生阅读。

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# 致　谢

毫无疑问，最轻松、愉悦的时刻就是在数年完成书稿后感谢帮助过笔者的学者和老师！

首先，衷心感谢广东外语外贸大学外国语言学及应用语言学研究中心王初明先生的悉心指导。先生是一位国际知名的语言学家、教育家，工作甚是繁忙。然而，在文稿撰写期间，先生不厌其烦，每周与笔者进行数小时讨论，从选题、研究问题的提出、研究方案的制定、数据分析方法的选择，乃至文稿撰写等细小方面层层把关，付出巨大心血。笔者很荣幸采用先生提出“视角转换”假设描述并解释中国英语学习者习得英语名词可数性特征的心理机制。如果没有先生悉心指导，该研究不可能顺利完成，更不可能以书稿的形式出版。

其次，广东外语外贸大学外国语言学及应用语言学研究中心徐海教授对本书稿每个章节提出详尽的宝贵修改意见，笔者受益匪浅。广东外语外贸大学吴旭东教授、华南师范大学何安平教授、华南理工大学钟书能教授、广东外语外贸大学赵晨教授、广东外语外贸大学姜琳教授在研究方案的制定和数据分析等方面提出了宝贵的建设性意见。在此一并感谢。衷心感谢在广东外语外贸大学攻读博士研究生学位的三年期间，温宾利教授、霍永寿教授、刘建达教授、冉永平教授和董燕萍教授在语言学相关课程中的指导点拨，使得笔者具有足够的语言学专业知识从事第二语言习得研究。

再次，海外知名语言学家 Laurel S. Stvan、Vivan Cook、Ronald W. Langacker 和 Edward J. Wisniewski 在笔者调查名词可数性特征习得过程中慷慨寄送新进研究成果，让笔者及时了解名词可数性特征研究的最新进展。值得一提的是 Ronald W. Langacker 和笔者在邮件中对名词“界”性的讨论，使得笔者对英语名词可数性范畴的认知机制有了更为深刻的认识。陈立军老师为本研究的部分实验编写计算机程序。长江师范学院、重庆大学、重庆师范大学以及广东外语外贸大学的部分学生和老师积极参加调查，正是他们的热情配合使得笔者观察并分析名词可数性特征习得中的视角转换现象成为可能。《现代外语》编辑部王启博士和科学出版社编辑常春娥老师为文稿的语言进行了最终修订。笔者为上述付出辛勤劳动的学者和老师深表谢意。

最后，笔者引用著名物理学家阿尔伯特·爱因斯坦对事物可数性特征的论述与从事名词可数性研究的学者进行共勉：Many of the things you can count don't count. Many of the things you can't count really count。

# 前　言

本书在认知语言学框架下，提出了视角转换假设，旨在描述并解释中国英语学习者习得英语名词可数性特征的过程。假设认为，学习者对英语名词可数性特征的习得，是逐渐摆脱汉语量词的影响、掌握编码在英语名词中的可数性视角的过程。该过程主要包括：习得名词固有可数性视角，即指称的界、指称的内部结构、指称的共有功能；习得名词可数性转化视角，即可数名词去界后的不可数性、不可数名词有界后的可数性。学习者习得英语名词可数性视角会导致概念重组，进而影响其对客观事物释解视角的择取。中国学生对英语名词可数性视角的习得受汉语量词、英语名词的可数性偏好、名词可数和不可数用法的语义相似度、名词可数性视角的复杂性等因素的制约。

为检验这些因素对英语名词可数性视角习得的制约作用，作者分别进行了三项实证研究。研究一考察了英语名词可数性视角的复杂性、汉语量词对中国学生习得英语名词固有可数性视角的影响。分属四个水平组的 199 名被试参加了改错任务。结果显示：第一，中国学生首先习得“简单视角”（指称的界）名词，然后习得“复杂视角”（指称内部结构、指称功能）名词；第二，中国学生对英语名词的可数性判断受汉语量词的影响；第三，虽然语言水平对其判断名词可数性有显著影响，但被试都未完全建立名词固有可数性视角的图式。

研究二考察了汉语量词、英语名词可数性偏好、可数和不可数用法的语义相似度对中国学生习得英语名词可数性转化视角的影响。分属四个水平组的 103 名被试分别参加了两次改错任务。结果显示：第一，受英语名词可数性偏好的影响，相对于常用的可数性名词而言，中国学生对不常用的可数性名词的可数性转化用法习得更好；第二，受汉语量词的影响，相对于汉语中不可接受的名词可数转化用法而言，被试对汉语中可接受的名词可数转化用法习得更好；第三，如果名词可数和不可数用法的语义相似度高，名词的可数/不可数用法会显著阻断其不可数/可数用法的习得；第四，虽然学习者的语言水平对其名词可数性转化的判断有显著影响，但被试都未完全建立名词可数性转化视角的图式。

研究三考察了学习者可数性特征的习得对其释解客观事物视角的影响。研究采用实物命名任务。分属五个水平组的 114 名被试分别对复杂、简单、无定形实物命名。被试对与原型刺激同形状但不同材料的实物、原型刺激同材料但不同形状的实物进行词汇扩展，判断哪类实物与原型刺激共享同一名称。结果发现：第一，被试对复杂实物的释解均基于形状视角；第二，汉语

单语者和中国学生对无定形实物的释解均基于材料视角，而英语单语者对其的释解无视角偏好；第三，被试对简单实物的释解差异较大，汉语单语者和中等水平的中国学生择取材料视角，英语单语者择取形状视角，而高水平的中国学生无视角偏好；第四，回归分析显示，中国学生对英语名词可数性特征习得的程度能显著预测他们对简单物体释解视角的择取。

综合上述研究结果，本研究认为：中国学生很难习得英语名词可数性的固有视角和名词可数性转换视角。他们对英语名词可数性视角的习得受到诸如，汉语量词、英语名词可数性视角的复杂度、英语名词的可数性偏好、名词可数—不可数语义相似度等因素的制约。尽管如此，中国学生对英语名词可数性视角的习得会导致名词可数性概念的重组，进而影响其对客观事物释解视角的择取。

本书结构如下：第一章简单述介了英语名词可数性特征的相关理论、书中所做研究的目的、书中研究所采用之方法。第二章详细回顾了典型的英语可数名称的语言本体研究和语言习得研究，然后评述了解释英语名词可数性的四大理论，指出在解释英语名词可数性习得中它们的不足。第三章描述了本书研究采用的三维视角理论。首先根据认知语言学的视角理论，界定英语可数名词的固有视角和转化视角，然后通过英汉语言对比分析和相关实证研究结果，得出母语为量词语言的英语学习者在掌握英语可数名词后会历经视角转换的过程。第四章从视角理论出发，探讨了制约英语名词可数性特征以及转换的可数性特征习得的因素。这些因素主要包括名词本身可数性视角的复杂度、母语影响、英语名称可数性特征偏好以及名词可数性特征的相互阻断。根据四类影响因子提出中国英语学习者英语名词可属性特征习得的五个具体假设。第五章报告了中国英语学习者习得英语名词可数性特征的三个实证研究。研究一考察了英语名词可数性视角的复杂性、汉语量词对中国学生习得英语名词固有可数性视角的影响。研究二考察了汉语量词、英语名词可数性偏好、可数和不可数用法的语义相似度对中国学生习得英语名词可数性转化视角的影响。研究三考察了学习者可数性特征的习得对其释解客观事物视角的影响。第六章对三个实验结果进行了综合讨论，提出了中国英语学习者习得英语名词可数性的过程是视角转换的过程，最后综合论述了研究结果对二语习得理论建构和外语教学的启示。

张晓鹏

2017.7.30

# Contents

# List of Abbreviations

| | |
|---|---|
| AI | Abstract Individuates |
| AN | Abstract Non-individuates |
| AOE | Age of starting English learning |
| AR | Accuracy Rate |
| As-T | Abstract substance-Type Conversions |
| CA | Count Aggregates |
| CI | Concrete Individuates |
| CL | Classifier |
| C&M | Count and Mass |
| C/M | Count or Mass |
| CN | Concrete Non-individuates |
| Cs-T | Concrete substance-Type Conversions |
| EFL | English as a Foreign Language |
| ET | Editing Task |
| GSL | General Service List |
| L1 | First Language |
| L2 | Second Language |
| LTUT | Learn Together, Use Together |
| MA | Mass Aggregates |
| M&C | Mass and Count |
| M/C | Mass or Count |
| MS | Mass Superordinates |
| NS | Native Speakers |
| NNS | Non-native Speakers |
| I-C | Individuate-Content Conversions |
| O-S | Object-Substance Conversions |
| O-A | Object-Abstract Conversions |
| S-O | Substance-Object Conversions |
| SLA | Second Language Acquisition |
| S-I | Substance-Instance Conversions |
| P-I | Proper-Individuate Conversions |
| PT | Pluralia Tantum |
| VKS | Vocabulary Knowledge Scale |

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Chapter 1

# Introduction

English count and mass (C&M) distinctions pose notorious difficulties for L2 learners, especially for those whose first language (L1) is a classifier language like Chinese. Non-nativelike use of C&M nouns can be found hither and thither in both online and offline language production, as noticed by Gally (2010) who put it that "the second most common systematic error for [Japanese] EFL learners, after articles, has seemed to involve noun countability" (p. 87), even though they have intensively learned English for years in classroom settings. Below is an excerpt of turn-takings between a Chinese (English as a Foreign Language) (EFL) learner and an English native speaker (NS), which I happened to overhear at an English corner three years ago. At that time they were talking about Chinese automobile industry, during which the negotiation of C&M constructions is particularly intriguing.

**Chinese EFL Learner:** ..... they did many *researches* before cars went into mass production.

**NS:** Yeah, of course. Much *research* was needed.

**Chinese EFL Learner:** Much...mu... *research* [seemed to be confused]...

**NS:** They also need to know recent *developments* of the automobile industry.

**Chinese EFL Learner:** Recent *developments*? Why did you say *developments*? I remember that *development* cannot be used with adding *-s*.

**NS:** Oh, *developments*, here I mean different aspects of car production, for example, technology, market needs...Ur... something like that.

In this excerpt, the Chinese EFL learner inappropriately took *research* as a count noun①. Moreover, she was also confused when hearing the NS using *developments* to refer to different aspects of car-making industry, based on the belief that *development* can only be used as a mass noun. Even though *development* is inherently mass, the NS converted it into a count sense, denoting events or incidents which had recently happened and were likely to have an effect on the present situation in this context. However, the EFL learner did not shift to the perspective taken by the NS; that is, she could not take the NS's perspective to construe the count sense of *development*, let alone use such a converted count sense. Why did she take *research* as a count noun? And why was it difficult for her to take the English perspective to construe and use the count sense of *development*?

Ever since Whorf and Sapir advanced their Linguistic Relativity Hypothesis in the 1950s, relativists have contended that "language was classificatory, isolating and organizing elements of experience" (Whorf, 1956, p. 55). The basic tenet upheld by them is that languages differ from one another largely because they encode different ways in which humans experience and construe the world, a view that is in conformity with the denotation of the cognitive linguistic term "perspectives" (Croft & Cruse, 2004; Lakoff, 1987; Rocha, 2010; Ungerer & Schmid, 2006; Verhagen, 2007). Perspectival difference obtains at any level of linguistic representation both within- and cross-linguistically, particularly in grammar. The C&M distinction is a case in point. In the above excerpt, *research* encodes mass sense which refers to a piece of work that involves studying something and trying to discover facts about it, whereas its Chinese equivalent encodes

① *Research* can be used as a count noun on some occasions; however, in most cases, NSs consider it mass, as they mainly emphasize its content instead of its quality and diversity. In this sense, it is a mass noun. On the contrary, when emphasizing its quality and diversity, NSs usually choose words like *studies*, or phrases like *types of research*, etc. as candidates instead.

count sense① which tends to emphasize telicity and diversity of the event proper, indicating that humans construe things from different perspectives to express intended meanings across languages (Lee, 2001; Verhagen, 2007). *Development* encodes a mass sense, denoting an atelic process of something growing, while *developments*, a converted count use, refers to bounded and diverse incidents and events, suggesting that people see the same thing from different perspectives to convey desired meanings in the same language (Langacker, 1987a, 1987b; Talmy, 1985, 1991; Verhagen, 2007).

MacWhinney's (2005) perspective hypothesis claims that "grammar arose from perspective-taking" (p. 198). Perspective, the way people construe things and state of affairs, gives rise to disparate grammatical manifestations across languages. Being morphologically impoverished, Chinese resorts to classifiers to ground the C&M distinction, while English instantiates it exclusively depending on morphemes like singular, plural or bare forms (Lucy, 1992a), although this distinction is semantically and contextually constrained (this point is discussed in Chapter 2 and Chapter 3). Such a contrasting perspectival difference between these two languages makes it notoriously difficult for Chinese students to acquire C&M distinctions in English.

So when learning English C&M distinctions, Chinese EFL learners are supposed to acquire the perspective encoded both in English inherent C/M nouns (e.g., the mass status of *research* and *development*) and in converted C/M use (e.g., the count status of *developments*) rather than identify them based on their L1 perspective. Inherent C/M noun is meant that a noun primarily evokes a C/M reading in context-free situations, and such a reading is always marked as a C/M feature of the first sense of a noun in dictionaries (for the detailed definition, please refer to §3.4.1). In this book, the process of taking English rather than L1 perspective to make

① Some linguists (e.g., Allan, 1977; Krifka, 1995; Chierchia, 1998a, 1998b; Lucy, 1992a; Borer, 2005; Hansen, 1983) propose the "mass noun hypothesis", claiming that classifier languages have no count nouns; and all their common nouns are mass nouns, yet others (e.g., Chao, 1968; Yi, 2010; Cheng & Sybesma, 1998) hold that Chinese makes count-mass distinctions, yet such a distinction is observed in classifiers not in nouns *per se*. Here I do not make any comment on these thesis here, but just labeled count perspective for the sake of convenience. For the detailed review, please refer to § 3.7.

C&M distinctions is termed as *Perspective Shifting*[①] (Wang, 2012, *personal communication*) in L2 learning. If so, L2 learners can make English C&M distinctions in a native-like way.

But how do EFL learners identify C/M nouns from English perspectives? To answer this question might involve satisfying the following conditions. First, the perspective of English C&M distinctions should be conceptually-motivated rather than arbitrarily-distinguished (Middleton et al., 2004; Wisniewski, Lamb & Middleton, 2003). Second, learners have to clarify a mechanism behind such distinctions, gradually establish English C&M perspectival schemata and restructure the related knowledge (Cook, 2003; Cook et al. 2006; Ijaz, 1986; Jarvis, 1998; Kecskes, 2007; Pavlenko, 1999, 2000) in the same way as English NSs do. The established English C&M perspectival schemata will, in turn, affect L2 learners' perspective-taking in construing the referents of nouns. If they restructure English C&M knowledge in the same way as English NSs do, they will take native-like perspectives in construing real-world entities (Athanasopoulos, 2006; Athanasopoulos & Kasai, 2008; Cook et al., 2006; Imai & Gentner, 1997; Jarvis, 1998, 2011; Jarvis & Pavlenko, 2008; Pavlenko, 1999, 2000). However, how do L2 learners make these distinctions from English perspectives? Do they construe real-world entities the way NSs do? To date, few attempts have been made to address these issues in the SLA (Second Language Acquisition) research agenda.

## 1.1 English C&M Nouns in a Nutshell

In English, both C&M nouns[②] denote diverse entities. Physical objects

① Prof. Wang Chuming argues that L1 learning is a process of acquiring perspectives coded thereof, which is also endorsed by MacWhinney (2005), and L2 learning, logically, should be a process of acquiring L2 perspectives. When perspectives in both languages are different, learners are supposed to take L2 perspectives when L2 is acquired (Personal communication, on Mar. 15th, 2012). Wang hereby uses *Perspective Shifting* to describe such a developmental trajectory in second language acquisition.

② The C&M distinction is found in many languages but manifests itself in different perspectives. It is Jespersen who first made the distinction of mass-words (uncountables) and countables in *The Philosophy of Grammar* (1924, pp.198-200), a work on the principles of grammar that focuses on English and some other related languages like French and Spanish. In this book, I follow the extant literature that *mass nouns* is used interchangeably with *non-count nouns* or *uncountalbes*, and *count nouns* with *countables*.

(e.g., *box*) are primarily labeled by count nouns. So are some abstract entities (e.g., *idea*), events (e.g., *explosion*) and superordinate categories (i.e., broad categories of perceptually diverse things like *animal*). While substances (e.g., *mud*) are dominantly tagged with mass nouns, so are some abstract entities (e.g., *evidence*), events (e.g., *sleep*) and superordinate categories (e.g., *furniture*). In addition, both C&M nouns can name similar entities (Wisniewski, Lamb & Middleton, 2003). For instance, *pebble* is count while *gravel* is mass. Furthermore, the same kind of entity can sometimes be labeled using either count or mass syntax (e.g., *buy a cake* vs. *want cake for dessert*).

Morphosyntactically, count nouns admit a contrast between singularity and plurality and can be preceded by numerals (e.g., *five pencils*), whereas mass nouns do not, being almost always singular, and can occur in bare forms (i.e., *I want juice*). Mass nouns can also be modified by the indefinite quantifiers *much* and *little* while plural count nouns can be headed by *many* and *few*. Correlated with this are several other conditions, i.e., quasi-cardinal numerals modify count nouns, but not mass nouns. For example, *several drinks* is acceptable, but **several milks* is oftentimes illicit. Moreover, *little* and *much* modify mass nouns, never count nouns; whereas *few* and *many* modify count nouns, never mass nouns. Mass nouns do not tolerate *a* (*an*), whereas count nouns do. The neutral word *a lot of* and *some* in English may be used with either type of nouns. Taken together, nouns do not manifest a one-to-one morpho-syntactic mapping in English (Quirk et al., 1985; Landman, 2011).

Semantically, English C&M nouns are differentiated according to what they denote. Two criteria have been invoked: cumulativity and divisibility (Bunt, 1985; Krifka, 1995; Langacker, 1987a; Quine, 1960). If one adds or divides *water* to *water*, one still has *water*. The only change is in quantity but not in quality. However, *a car* is a bounded entity; adding or dividing *a car* means not simply quantity changing but quality changing as well. Thus, nouns which refer cumulatively are mass nouns, otherwise they are count