

[Refereed Article]

An Overview of the Count/Noncount Distinction of English Nouns

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Abstract

Research on the count/noncount distinction of English nouns has a long history, but the distinction has never been sufficiently described. Count and noncount nouns are defined in two domains: morpho-syntax and semantics. The definition, however, varies from linguist to linguist. In this research, we take the view that the distinction is essentially syntactic, and count nouns are defined morpho-syntactically as those that satisfy two conditions: i) to inflect for number to mark a singular-plural contrast and take both a singular and a plural verb that agree with the number of a subject NP (including those with identical singular and plural forms); ii) to occur in direct construction with the cardinal numerals. Noncount nouns are defined as those that do not satisfy these two conditions.

Research on the count/noncount distinction has been mainly on concrete nouns. Various semantic criteria have been proposed (e.g. atomicity, homogeneity, arbitrary divisibility, boundedness) to identify referential properties that are to be shared by all count nouns or all noncount nouns. For proto-typical count and noncount nouns, a noun's semantic, syntactic and morphological properties are aligned, and the proposed criteria work very well. However, mismatches between count-noncount syntax and semantics are often observed: some nouns have the semantics of a count noun but the syntax of a noncount noun (e.g. *furniture, toast*) while others have the semantics of a noncount noun but the syntax of a count noun (e.g. *cloud, mountain, ripple*). None of the proposed criteria sufficiently accounts for the mismatches. Conceptualization (or alternative construals) and communicative function are proposed to account for the mismatches. However, there are some nouns whose count or noncount status cannot be explained by alternative construals or communicative function. When all these criteria fail, grammatical convention remains as the only solution.

Little research has been done on abstract nouns, and the proposed criteria for the count/noncount distinction of concrete nouns do not apply to abstract nouns because abstract nouns provide no perceptual information about their referential properties. Also, researchers use their own intuitions to provide examples to support their arguments. It is not hard to find counter-examples since their arguments are based on a very limited number of data. It is necessary to use large corpora such as the Bank of English to explore the count/noncount distinction of abstract nouns by looking into collocational patterns.

I Introduction

The purpose of this article is to review various criteria that have been proposed to account for the

count/noncount distinction (hereafter referred to as C/NC distinction) of English nouns and to look into the mismatches between syntax and semantics that prevent a clear description of the distinction. It is often observed that the grammatical form of a noun does not reflect its referential properties and/or construals. For example, *toast* is perceptually and conceptually countable, but the noun *toast* is noncount, and you cannot say **two toasts* to mean *two slices of toast*.

Languages can be classified into two types with respect to number: mass-count languages and classifier languages (Gil 2008).¹⁾ English is a mass-count language, in which nouns of high countability (i.e. count nouns such as *car*, *dog* and *pencil*) generally occur in direct construction with numerals (e.g. *one car*, *two dogs*, *three pencils*), whereas nouns of low countability (i.e. noncount nouns such as *water* and *sand*) typically do not occur in direct construction with numerals and need a numeral classifier, or measure word (e.g. *one glass of water*, *two pounds of sand*) to indicate a unit of measure.²⁾ Classifier languages, such as Japanese, Korean and Chinese, do not mark plurality morpho-syntactically, and a bare noun can have a singular or plural reading. Sortal numeral classifiers are used when nouns are in construction with numerals: e.g. two dogs are referred to in Japanese as *ni-hiki-no inu* (*two-CLASSIFIER-GENITIVE dog*), where a sortal numeral classifier *hiki* is required to indicate non-human animals (Muromatsu 2003: 87).

In English, common nouns (as opposed to proper nouns) are divided into three types in terms of countability (i.e. based on the types of restrictions on the usage of nouns): count nouns, noncount nouns and mass-count flexible nouns (e.g. *rope*, *stone*), which have both a count and a noncount use with the same meaning (Gillon 1999: 52, Barner & Snedeker 2005).³⁾ Count nouns can be divided into three groups in terms of their grammatical behavior: typical count nouns (e.g. *cup*, *pen*), base plural nouns (e.g. *sheep*, *aircraft*) with identical singular and plural forms, and collective singular nouns (e.g. *government*, *committee*), which can take either a singular or a plural verb. Noncount nouns can be divided into five groups in terms of their referential properties: homogeneous mass nouns (aka substance mass nouns: e.g. *water*, *mud*), which typically denote an unindividuated substance; heterogeneous mass nouns (aka object-mass nouns or superordinate mass nouns: e.g. *furniture*, *footwear*), which denote sets of individuated objects; plural mass nouns (e.g. *groceries*, *remains*); lexical plural nouns (aka uninflected plural-only nouns: e.g. *police*, *cattle*), whose denotation is thought of en masse (Payne & Huddleston 2002: 345); abstract noncount nouns (e.g. *advice*, *information*, *knowledge*).

A prototypical count noun (e.g. *cup*, *pen*) denotes an individuated, separate object that can be counted while a prototypical noncount noun (e.g. *water*, *mud*) denotes an unindividuated substance that cannot be counted without a numeral classifier (e.g. *two bottles of water*). In between typical count and noncount nouns are nouns of various degrees of countability. Clear boundaries between count and noncount nouns are hard to draw in both semantics and morpho-syntax, and mismatches between count-noncount syntax and semantics (i.e. between grammatical behavior and referential properties and/or construals) are often observed.

Object mass nouns (e.g. *furniture*) and mass-count flexible nouns (e.g. *rope*) cause mismatches. *Furniture*, for example, denotes a collection of discrete objects (e.g. chairs, tables), and it is possible to count its referents (Nicolas 2004: 134, Barner & Snedeker 2005: 51, Bale & Barner 2009, Chierchia 2010: 151, Wiese 2012: 58)⁴⁾. However, morpho-syntactically it behaves as a noncount noun, and it

does not combine directly with a numeral (**three furnitures*). *Rope* is a mass-count flexible noun, which can be used as both a count and a noncount noun with the same meaning. The same physical entity can be referred to as *some rope* (noncount noun) or *some ropes* (count noun). Referential properties (i.e. perceptual characteristics of a referent) have some influence on the categorization of a noun into count or noncount, but they do not determine whether a noun is used as a count noun or a noncount noun.

In the following sections, we will review various criteria, both syntactic and semantic, that have been proposed to account for the C/NC distinction. First, we will define count and noncount nouns morpho-syntactically. Then, based on this definition, we will review various semantic criteria for the C/NC distinction to show that none of the criteria sufficiently accounts for mismatches between count-noncount syntax and semantics. In the last section, we will show that the proposed criteria for the C/NC distinction of concrete nouns do not apply to abstract nouns, and will propose to use large corpora such as the Bank of English to investigate the C/NC distinction of abstract nouns by looking into collocational patterns.

II Criteria for the C/NC distinction

Various criteria have been proposed to account for the C/NC distinction of English nouns since it was first recognized by Jespersen (1909-49, vol. 2, ch. 5.2) (Gillon 1992: 597, Cowie 1999: 57, Lasersohn 2011: 1133). The research has been mainly on concrete nouns (Grimm 2014), and the C/NC distinction is explained in three domains: morphology (i.e. inflection for singular-plural contrast), syntax (i.e. determiner-head combination restrictions and subject-verb agreement), and semantics (i.e. referential properties, alternative construals, communicative function). It is forbiddingly difficult to sufficiently describe the distinction since a noun's semantic, syntactic and morphological properties are not always aligned. Mapping failure between syntax (including morphology) and semantics is often observed, and no criteria sufficiently account for the mismatches. First, we will propose our morpho-syntactic definition of count and noncount nouns, and then we will review morpho-syntactic restrictions that different linguists employ to distinguish count nouns from noncount nouns. Next, we will review semantic criteria that have been proposed to identify referential properties that are to be shared by all count nouns or all noncount nouns. We will see that none of the proposed criteria sufficiently accounts for the mismatches between count-noncount syntax and semantics. Then, we will review the ideas of alternative construals and communicative function that are proposed to account for the mismatches.

2.1. Morpho-syntactic accounts for the C/NC distinction

Morphologically, the English language has two types of nouns in terms of inflection for number: nouns that inflect for number to mark a singular-plural contrast (e.g. *car/cars*), and nouns that do not, which are further divided into three groups: pluralia tantum (e.g. *police, oats, scissors, clothes*), singularia tantum (e.g. *rice, garbage, furniture, information, knowledge*), and those with identical singular and plural forms (e.g. *sheep, aircraft, barracks, headquarters*).⁵⁾ Nouns with singular-plural contrast and those with identical singular and plural forms are defined as count nouns in this

research while pluralia tantum and singularia tantum are noncount.

Syntactically (i.e. in terms of subject-verb agreement and determiner-head combination), English nouns can be divided into several types. There are three types of nouns in terms of subject-verb agreement (aka singular-plural concord): those nouns that occur only with a singular verb (e.g. typical noncount nouns such as *water* and object mass nouns such as *furniture*), those that occur only with a plural verb (e.g. pluralia tantum), and those that can occur with both a singular and a plural verb (e.g. typical count nouns such as *dog* and *car*, collective nouns such as *committee* and *family*, mass-count flexible nouns such as *rope* and *stone*). Nouns that can occur with both a singular and a plural verb are defined as count nouns in this research, and the other two types are noncount.

In terms of determiner-head combination restrictions, there are two types of nouns: typical count nouns that combine with the following count determiners: cardinal numerals (*one, two, three* to infinity), the indefinite article (*a/an*), indefinite quantifiers (e.g. (*a*) *few, several, many*, high round numbers), distributive determiners (e.g. *another, each, every, either, neither*), and typical noncount nouns that combine with the following noncount determiners: zero determiner (\emptyset), *all, much, (a) little, enough, less, more, sufficient*. In this research, nouns that can combine with cardinal numerals are defined as count nouns since they admit all other count determiners. Nouns that do not combine with cardinal numerals are noncount, including those nouns that combine with *a/an* (e.g. *knowledge*) and indefinite quantifiers (e.g. *livestock*). Some pluralia tantum, which Payne & Huddleston (2002: 345) call 'quasi-count nouns' (e.g. *cattle, police*) and 'exceptional count nouns' (e.g. *people*), can directly combine with cardinal numerals other than *one* (e.g. *Two police were killed. Smiling Alem led two cattle in chains into the tent*).⁶⁾ These nouns are defined as noncount in this research since they neither mark a singular-plural contrast nor combine with a numeral *one*.

Morpho-syntactically, count nouns are defined in this research as those nouns that satisfy the following two conditions: i) to inflect for number to mark a singular-plural contrast and take both a singular and a plural verb that agree with the number of a subject NP (including those with identical singular and plural forms); ii) to occur in direct construction with the cardinal numerals.

Table 1. Summary of the C/NC Distinction

Classification	Singular/Plural Contrast					Noun Type	Examples
	Morphology	Syntax	Semantics	Cardinal Numerals			
Count/ Noncount	Inflection	Subject- Verb Agreement	Referential Properties	<i>one</i>	<i>two</i> to infinity		
C	+	+	+	+	+	Typical Count Nouns	<i>book, car, cat, pencil</i>
C	-	+	+	+	+	Identical SG/PL Nouns	<i>sheep, barracks</i>
C	+	+	+	+	+	Collective Nouns	<i>committee, crew, family</i>
C/NC	+ / -	+	+ / -	+ / -	+ / -	Flexible Nouns	<i>rope, stone, difficulty</i>
NC	-	- (PL)	-	-	+	Pluralia Tantum I	<i>people</i>
NC	-	- (PL)	+	-	+	Pluralia Tantum II	<i>police, cattle</i>
NC	-	- (PL)	+	-	- (?)	Pluralia Tantum III	<i>oats, scissors, groceries</i>
NC	-	- (SG)	+	-	-	Singularia Tantum I	<i>rice, garbage</i>
NC	-	- (SG)	+	-	-	Singularia Tantum II	<i>advice, information</i>
NC	-	- (SG)	-	-	-	Singularia Tantum III	<i>courage, knowledge</i>
NC	-	- (SG)	+	-	-	Object-Mass Nouns	<i>cutlery, equipment, furniture</i>
NC	-	- (SG)	-	-	-	Substance Nouns	<i>water, mud, gold</i>

Noncount nouns are defined as those that do not satisfy these two conditions. Table 1 lists twelve types of nouns that are identified as either count or noncount nouns according to our morpho-syntactic definition of the C/NC distinction. In the leftmost column, count nouns are marked as C, and noncount nouns are marked as NC. In the four columns under Singular/Plural Contrast, nouns that show a singular/plural contrast are marked '+' while those that do not are marked '-'.

Semantic coercion is not considered in Table 1.⁷⁾ Huddleston (1984: 248) and Payne & Huddleston (2002: 337), for example, accept the noncount use of *book* (e.g. *The termite was living on a diet of book*). In Table 1, *book* is included in *Typical Count Nouns*. There are at least four types of semantic coercion: ground-noun coercion, aka universal grinder (e.g. *too many apples* vs. *too much apple*), packaging coercion (e.g. *too much beer* vs. *too many beers*), individuation-by-cause coercion (e.g. *too much anxiety* vs. *too many anxieties*), and individuation-by-instance coercion (e.g. *too much kindness* vs. *too many kindnesses*) (Bale & Barner 2009: 227-228).⁸⁾ The first two types of coercion apply to concrete nouns, and they are not considered in Table 1. The last two types apply to abstract nouns (e.g. *anxiety*, *kindness*), and they are included in Flexible Nouns.

Determiner-head combination restrictions are not listed except for cardinal numerals since disagreement is expected on the restrictions. Huddleston (1984: 245) says: "judgements concerning the acceptability of relevant determiner-head combinations are not always clear or constant from speaker to speaker." Also, linguists do not always agree on the count-noncount classification. For example, Payne & Huddleston (2002: 345) classify *police* as a noncount noun whereas Gillon (1999: 53) classifies *police* as a count noun.

Nouns such as *advice* and *information* (Singularia Tantum II) are classified as semantically countable since they allow their referents to be counted with numeral classifiers (e.g. *one piece of advice*, *two pieces of advice*). On the other hand, nouns such as *knowledge* and *courage* (Singularia Tantum III) are semantically noncount since they do not generally combine with numerals with or without classifiers.⁹⁾ Five types of nouns have mismatches between semantics and syntax: Pluralia Tantum II and III, Singularia Tantum I and II, and Object-mass nouns.

In the following section, we will review morpho-syntactic restrictions that several linguists employ to distinguish count nouns from noncount nouns. Nouns can be classified into several levels of countability based on different criteria, and classification varies from linguist to linguist. Morpho-syntactically, Gillon (1999: 51) classifies nouns into two groups, mass nouns and count nouns, based on seven criteria (Table 2). The modification by *much* and *less* is the only criterion to positively identify noncount nouns. However, the C/NC distinction is not so simple. For example, neither *knowledge* nor *police* marks a singular/plural contrast, but *knowledge* admits *a/an* while *police* can combine with cardinal numerals (except *one*) and other quantifiers such as *many* and *few*.

Table 2. Morpho-syntactic criteria for mass/count distinction

MORPHO-SYNTACTIC CRITERIA	MASS NOUN	COUNT NOUN
modified by cardinal numerals	-	+
modified by quasi-cardinal numerals (e.g. <i>several</i>)	-	+
modified by indefinite article	-	+
modified by <i>many</i> and <i>few</i>	-	+
modified by <i>much</i> and <i>less</i>	+	-
SG/PL contrast	-	+
<i>one</i> antecedent	-	+

To avoid the binary opposition between count and noncount nouns, efforts have been made to classify nouns in terms of the degrees of countability, using different syntactic restrictions as criteria, especially determiner-head combination restrictions. Huddleston (1984: 245) and Downing & Locke (2002: 422-424) classify nouns into six levels, Lasersohn (2011: 1135), seven types, Allan (1980), eight levels, and Wierzbicka (1988: 555-560), fourteen types. Classification depends on how much in detail each linguist intends to describe the syntactic behavior of nouns, i.e. how many restrictions they provide to distinguish the syntactic behavior of one group of nouns from that of another. The problem is that the more restrictions they use, the more likely they face disagreement on the restrictions. The syntactic behavior of nouns, especially in terms of determiner-head combination restrictions, is extremely complex, and it is practically impossible to provide an exhaustive list of syntactic restrictions that distinguish one group of nouns from another in terms of countability.

Huddleston's classification (Table 3) is based on the following four groups of co-occurrence restrictions between determiners and nouns (i-iv). Nouns are identified as count nouns when they satisfy all four criteria (V), and all the other nouns are noncount with varying degrees of countability (I-IV). The syntactic feature of subject-verb agreement is not considered, and *equipment* (a singulare tantum) and *outskirts* (a plurale tantum) are placed in the same group (I).

- i the cardinal numerals *one, two, three*, etc.
- ii other numerically quantifying expressions such as *both, a dozen*, etc.
- iii the 'fuzzy' quantifiers *many, several, few*.
- iv *a, another, each, every, either, neither*, which take singular heads.

Table 3. Determiner-head combinations

	Degree	Examples	Determiners permitted from list (i-iv)
Uncountable	I	<i>equipment, outskirts</i>	None
	II	(α) <i>knowledge, phonetics</i>	<i>a</i>
		(β) <i>clothes, dregs</i>	<i>many, few</i>
	III	<i>cattle</i>	<i>many, few</i> , and relatively large round numbers
	IV	<i>police, people</i> ("persons")	All except those requiring a singular head
Fully countable	V	<i>cake, dog</i>	All

Downing & Locke (2002: 420-428) divide nouns into six levels (A-F in Table 4) based on the following eight criteria of grammatical markers (i-viii). Their criteria are different from Huddleston's. For example, the criterion of cardinal numerals is missing in Downing & Locke. On the other hand, in Huddleston, zero determiner, the determiner *all*, noncount quantifiers (*much, little, a little*), and singular/plural contrast are missing.

(a) Grammatical markers of mass nouns

- (i) The singular form of the noun with zero determiner: e.g. *beauty, coffee*.
- (ii) The singular form of the noun preceded by *all*: e.g. *all sincerity*.
- (iii) The singular form of the noun, quantified by *much, little, a little*: e.g. *much room, little furniture*.

(b) Grammatical markers of count nouns

- (iv) The singular form of the noun determined by *a(n)*: e.g. *a new job*.
- (v) The singular form of the noun determined by *each, every*: e.g. *each day, every year*.
- (vi) With number contrast marked on the noun: e.g. *lion/lions; child/children*.
- (vii) Invariable or plural form of the noun preceded by a plural determiner: e.g. *many choices; those sheep*.
- (viii) Plural number concord with verb or pronoun: e.g. People *like* to be happy, don't *they*?

Table 4. Distribution of countability markers of English nouns (Downing & Locke 2002: 423)

Type		MASS			COUNT				
		1	2	3	4	5	6	7	8
		0 + N.SG	<i>all</i> + N.SG	<i>much, little</i> + N.SG	<i>a(n)</i> + N.SG	<i>each, every, either</i> + N.SG	Number contrast on noun	<i>many, (a) few</i> + N.PL	Number concord with verb, pronoun.
A	FULLY MASS (some with <i>a(n)</i>) <i>drinking; luck, advice; furniture</i>	+	+	+	(+)				
B	FULLY MASS (some with <i>a(n)</i> or pluralised) <i>rain; happiness; help; education</i>	+	+	+	(+)		(+)		
C	FULLY MASS, FULLY COUNT <i>cake; building; truth; kindness, love</i>	+	+	+	+	+	+	+	+
D	Never mass. Partially count <i>people, police, (the) Alps, goods; scissors</i>							+	+
E	FULLY COUNT, Never mass (except number contrast on noun) <i>sheep, aircraft; barracks, means</i>				+	+		+	+
F	FULLY COUNT, Rarely mass <i>car; deed, fault; way, look</i>	(+)	(+)	(+)	+	+	+	+	+

NOTE: The plus sign '+' indicates that most nouns in the set admit the given mass or count marker, and the bracketed sign '(+)' indicates that some do not admit it.

Lasersohn (2011: 1135) adds 'cumulative reference' and 'stubbornly distributive predicates' as criteria¹⁰ in addition to determiner-head combination restrictions and subject-verb agreement, and he classifies nouns into seven types (Table 5). The following criteria are missing: singular/plural contrast, the determiner *all*, the indefinite article *a/an*, distributive determiners (e.g. *another, each, every, either, neither*).

Table 5. Summary of patterns distinguishing subclasses of singular, plural and mass nouns

	ordinary singulars	collective singulars	lexical plurals	ordinary plurals	heterogeneous mass nouns	homogeneous mass nouns	plural mass nouns
	<i>cup</i>	<i>government</i>	<i>police</i>	<i>cups</i>	<i>furniture</i>	<i>water</i>	<i>dues</i>
agreement	sg	sg/pl	pl	pl	sg	sg	pl
<i>many</i> vs <i>much</i>	*	*	<i>many</i>	<i>many</i>	<i>much</i>	<i>much</i>	<i>much</i>
numerals	*	*	?	✓	*	*	*
bare	*	*	✓	✓	✓	✓	✓
cumulative reference	no	no	yes	yes	yes	yes	yes
combine with "stubbornly distributive" predicates	✓	✓	✓	✓	✓	*	*

Allan (1980: 562) classifies nouns into eight levels (Table 6), based on five criteria (or NP environments): EX-PL (subject-verb and pronoun-antecedent agreement), A + N (*a(n)*, *one* + singular noun), All + N (*all* + singular noun), F + Ns (fuzzy denominators + plural noun: (*a*) *few*, *several*, *many*, *about fifty*, etc.), and O-DEN (other denominators: e.g. *each*, *every*, *either*, *both*, natural numbers from *one* to infinity). The following criteria are missing: zero determiner, singular/plural contrast.

Table 6. Countability Preferences

	NOUN							
ENVIRONMENT	<i>car</i>	<i>oak</i>	<i>cattle</i>	<i>Himalayas</i>	<i>scissors</i>	<i>mankind</i>	<i>admiration</i>	<i>equipment</i>
EX-PL	+	+	+	+	+	+		
A + N	+	+		+		+	+	
All + N	+		+	+	+			
F + N	+	+	+		?			
O-DEN	+	+						

(+ indicates that the given NP environment defines the head noun as countable)
(In the All + N Test, it is FAILURE that gets a plus, not success.)

Different linguists employ different criteria to classify nouns into several groups in terms of the degrees of countability. Allan's list, for example, has a class for nouns that are fully noncount (e.g. *equipment*) which does not admit *a/an*, but Downing & Locke's list does not. On the other hand, Allan does not list the Type B nouns of Downing & Locke, which are fully NC but may admit pluralization as well as *a/an*. Also missing in Allan's list are Type C nouns, which are fully C and fully NC. There are also some disagreements among linguists. Allan claims that *scissors* is not clearly grammatical in the F+Ns environment ((*a*) *few*, *several*, *many*, etc.), whereas Downing & Locke claim that *scissors* (Type D) admit such plural determiners as *many* and *a few*. Another example of disagreement is on the countability of (*the*) *Alps* (Type D) and *Himalayas*. Downing & Locke claim that (*the*) *Alps* admits *many* and *a few* but not *a/an*, whereas Allan claims that *Himalayas* admits *a/an* but not *many*, *a few* and other fuzzy denominators.

The morpho-syntactic distinction of nouns in terms of the degrees of countability varies from linguist to linguist. The differences in their classifications are not caused by morphological criteria (i.e. inflection for singular-plural contrast) or subject-verb agreement, but by determiner-head combination restrictions, i.e. whether a noun combines with certain determiners such as *many*, *few*,

much, little, low numerals, high round numerals, etc., on which disagreement is expected. To avoid expected disagreement on determiner-head combination restrictions, we define count and noncount nouns in terms of inflection for singular-plural contrast and subject-verb agreement. We add the criterion of cardinal numerals in order to make it clear that a referent can be counted with numerals from *one* to infinity. Our definition is cited here again: Count nouns are defined morpho-syntactically as those nouns that satisfy the following two conditions: i) to inflect for number to mark a singular-plural contrast and take both a singular and a plural verb that agree with the number of a subject NP (including those with identical singular and plural forms); ii) to occur in direct construction with the cardinal numerals. Noncount nouns are defined as those that do not satisfy these two conditions.

It is true that the binary opposition between count and noncount nouns is characteristic not of the nouns, but of the NP's which they head (Allan 1980), but the binary opposition, not degrees of countability, is expected when discussing the mismatches between count-noncount syntax and semantics. For example, when we say, "In English, many mass nouns (like *furniture* and *equipment*) denote individuals" (Bale & Barner 2012: 239), "mass nouns" means noncount nouns as opposed to count nouns (i.e. binary opposition); it does not mean noncount nouns of varying degrees of countability. Also, from a pedagogical point of view, the binary opposition is preferred. L2 learners of English need to know, first and foremost, whether a particular noun allows only a count use or a noncount use or both because it is essential that they know if a noun takes a zero determiner singular form ($\emptyset N$), an indefinite article singular form (aN) or a zero determiner plural form ($\emptyset Ns$). It sounds very strange when we hear ungrammatical forms such as **I have dog*, **I have an information*, or **I have informations*. Knowledge of some basic quantifiers (e.g. *many* vs. *much*, *few* vs. *little*) may be important, but detailed information on determiner-head combination restrictions is not essential: e.g. some nouns combine with high round numerals but not with low numerals (e.g. *livestock*, *poultry*).

2.2. Semantic accounts for the C/NC distinction

It is generally agreed that count/noncount syntax is related to referential properties of nouns. Taylor (2002: 367) says: "The conceptual basis of the count-mass distinction is fairly transparent; it has to do with the distinction between an individuated 'object' and an unindividuated 'substance'." Semantically, count nouns denote individuated entities that can be counted (e.g. *car*, *cat*), while noncount nouns denote undifferentiated substances (e.g. *water*, *meat*) or heterogeneous aggregates (e.g. *furniture*, *cutlery*). Homogeneity of substances and heterogeneity of aggregates prevent counting.

A prototypical count noun denotes an atomic entity, i.e. a bounded, individuated entity with internal structure, which cannot be divided into smaller parts of the same kind (Taylor 2002: 367, Croft & Cruse 2004: 64). A cat, for example, is internally structured with its legs, head, tail and body linked with one another to constitute a connected whole (Nicolas 2004: 126). "An individuated object has its own internal structure and composition—split it up and it loses its identity. Dismantle a car and you have car parts, not a car any more" (Taylor 2002: 367).¹¹⁾ On the other hand, a prototypical noncount noun denotes a physical substance, which is not atomic, or atomless (i.e. internally homogenous) and can be divided arbitrarily into parts without losing their qualitative identity (e.g. *water*, *meat*). It does not have parts linked with one another in a specific fashion, although substances

may be heterogenous with internal structure at the molecular level, e.g. H₂O molecules (Pelletier 2012: 16). Meat is also atomless; “if you divide up a quantity of meat you still have meat, and if you put two quantities of meat together you have, again, meat” (Taylor 2002: 367).

In the world with only prototypical count and noncount nouns, a noun’s semantic, syntactic and morphological properties are aligned (Corbett 2019: 95). There are, however, many nouns whose syntax does not reflect their semantics. Table 7 (Corbett 2000: 172) shows a basic singular-plural system. Corbett classifies nouns into four levels to show the possible combinations of singular/plural contrast in semantics (i.e. referential properties), syntax (i.e. noun-verb agreement) and morphology (i.e. inflection for singular-plural contrast). *Dog* and *friendliness* have no mismatch between semantics, syntax and morphology. *Dog* marks a singular/plural contrast in all three domains while *friendliness* marks a contrast in none of them. *Sheep* is semantically countable, and it marks a singular/plural contrast syntactically but not morphologically. *Scissors* is semantically countable, but syntactically plural, and it does not mark a singular/plural contrast morphologically.

Table 7. Different indicators of number-differentiability (Corbett 2000: 172)

Different indicators of number-differentiability				
	<i>dog</i>	<i>sheep</i>	<i>scissors</i>	<i>friendliness</i>
semantics	+	+	+	-
syntax	+	+	-	-
morphology	+	-	-	-

In Table 1 (cited here again), there are at least six types of nouns whose morpho-syntax does not reflect their semantics: 1) Nouns with identical singular and plural forms (e.g. *sheep*), 2) Pluralia Tantum II (e.g. *police*), 3) Pluralia Tantum III (e.g. *scissors*), 4) Singularia Tantum I (e.g. *rice*), 5) Singularia Tantum II (e.g. *advice*), and 6) Object-Mass Nouns (e.g. *furniture*). The *dog* type, the *sheep* type, and the *friendliness* type in Table 7 correspond to Typical Count Nouns, Identical SG/PL Nouns, and Singularia Tantum III respectively in Table 1.

Table 1. Summary of the C/NC Distinction

Classification	Singular/Plural Contrast					Noun Type	Examples
	Morphology	Syntax	Semantics	Cardinal Numerals			
Count/ Noncount	Inflection	Subject- Verb Agreement	Referential Properties	<i>one</i>	<i>two</i> to infinity		
C	+	+	+	+	+	Typical Count Nouns	<i>car, cat, pencil</i>
C	-	+	+	+	+	Identical SG/PL Nouns	<i>sheep, barracks</i>
C	+	+	+	+	+	Collective Nouns	<i>committee, crew, family</i>
C/NC	+ / -	+	+ / -	+ / -	+ / -	Flexible Nouns	<i>rope, stone, difficulty</i>
NC	-	- (PL)	-	-	+	Pluralia Tantum I	<i>people</i>
NC	-	- (PL)	+	-	+	Pluralia Tantum II	<i>police, cattle</i>
NC	-	- (PL)	+	-	- (?)	Pluralia Tantum III	<i>oats, scissors, groceries</i>
NC	-	- (SG)	+	-	-	Singularia Tantum I	<i>rice, garbage</i>
NC	-	- (SG)	+	-	-	Singularia Tantum II	<i>advice, information</i>
NC	-	- (SG)	-	-	-	Singularia Tantum III	<i>courage, knowledge</i>
NC	-	- (SG)	+	-	-	Object-Mass Nouns	<i>cutlery, equipment, furniture</i>
NC	-	- (SG)	-	-	-	Substance Nouns	<i>water, mud, gold</i>

For example, *oats* and *scissors* (Pluralia Tantum III) are syntactically plural. However, semantically they show a singular-plural contrast: they denote individual entities, although they need classifiers to count (e.g. *one grain of oats*, *two pairs of scissors*). In the same way, *police* (Pluralia Tantum II) is syntactically plural, but semantically they show a singular-plural contrast, denoting individual entities. *Police* can denote one police officer as in (1-2).

- 1) The police came to the scene. When they arrived, there was only one police officer at first. Then, two additional officers came later. (*Bernice Rathe* by Bea Giovanni)
- 2) “You should know that I was almost apprehended yesterday. The police came to my door.” “They are supposed to check on you periodically,” said Adnan. “That is normal.” “It is usually only one police officer,” said the man. “This time it was two with one of them having a weapon drawn.” (*The Migrants* by Richard M. Bridges)

Perceptually (i.e. in terms of perceptual characteristics of referential properties of a noun) similar entities may be designated by either count or noncount nouns (e.g. *lentils* vs. *rice*), and the same entity can be designated by either a count or a noncount noun (e.g. *Remove your shoes* vs. *footwear*) or by a count or a noncount use of the same noun (e.g. *some ropes* vs. *some rope*). Object-mass nouns such as *furniture* and *silverware* are syntactically singular, but they denote countable entities. Nicolas (2004: 134) says as follows:

As remarked by Gillon (personal communication), furniture and silverware can also be counted. The linguistics department chair could ask someone to count the furniture in the main office. This person could straightforwardly answer: ten chairs, five tables, and six lamps. Likewise, the chair’s wife may ask him to count the silverware that they have.

Observing these mismatches between count-noncount syntax and semantics, some linguists argue that the C/NC distinction is arbitrary, unprincipled, or idiosyncratic (Bloomfield 1933: 266, Gleason 1955: 144-145, 1965: 135, McCawley 1975, Markman 1985, Palmer 1938: vi, 1971: 34-35, Ware 1975: 387, Whorf 1956: 141-142). Palmer (1938: vi) says: “There are many cases in which the noun stands for things countable or uncountable often according to the sense in which it is used, but often quite arbitrarily.” Other linguists argue that grammatical forms are semantically motivated (Bloom 1996, Langacker 1987a, 1987b, 1991a, 1991b, 2008, Soja et al. 1991, Wierzbicka 1988, Wisniewski et al. 1996, Wisniewski et al. 2003, Wisniewski 2010). Wierzbicka (1988: 528) says: “while they [grammatical forms] are not necessarily correlated with any ‘real world attributes’, they ARE correlated with different conceptualizations.”

Linguists have been trying to identify referential properties that are to be shared by all count nouns or all noncount nouns, and no one seems to have been successful. Various criteria have been proposed to account for the C/NC distinction: e.g. atomicity (Gillon 1999: 54, Chierchia 1998: 54, Rothstein 2010), cumulativity (Quine 1960: 91), divisivity (Cheng 1973: 286-288), arbitrary divisibility (Wierzbicka 1988: 506-508), internal homogeneity, which includes divisibility, replicability and inherent boundedness (Taylor 2002: 367), boundedness, homogeneity, expansibility/contractibility

and replicability (Langacker 1991a: 69–70), contiguity and functional unity (Wierzbicka 1988: 543, Wisniewski et al. 1996: 297, Lee 2001: 142, Payne & Huddleston 2002: 336, Barner & Snedeker 2005: 63). Some theorists put cumulativity and divisiveness (i.e. divisivity and arbitrary divisibility) together under the name of homogeneity (Pelletier 2012: 12).

A perceptual distinction between count and noncount nouns is clear when a count noun denotes prototypical objects, which are discrete, bounded entities (e.g. car, cat) and when a noncount noun denotes a prototypical substance, which are continuous, unbounded, and arbitrarily divisible entities (e.g. mud, water). Perceptual affordance influences the C/NC distinction. Imai & Masuda (2013: 20) argue on the object–substance categorization as follows:

When the perceptual affordance of a given entity strongly suggested the entity’s individuation status, then there was little room for language to affect people’s default construal for that entity (cf. Gentner, 1982). When the perceptual affordance of the entity was weak and ambiguous, language influenced the construal, pushing the boundary between object kinds and substance kinds one way or the other (cf. Gentner & Boroditsky, 2001; Malt, 1995; Medin, Lynch, Coley, & Atran, 1997).

Count and noncount nouns denote diverse things, and there are mismatches between count–noncount syntax and semantics. Some count nouns denote perceptually uncountable entities (e.g. *tear*, *cloud*) while some noncount nouns denote perceptually countable entities (e.g. *toast*, *bacon*, *furniture*). The grammatical behavior of these nouns suggest that the C/NC distinction cannot be fully defined in terms of referential properties (e.g. atomicity, individuability, boundedness, arbitrary divisibility, internal homogeneity, etc.). In the following section, we will see how the proposed semantic criteria for the C/NC distinction work or do not work.

2.2.1. Referential properties: atomicity, individuability and boundedness

Atomicity, inherent individuability and inherent boundedness are proposed to identify count nouns (or count use of nouns). However, these criteria do not account for the count status of nouns that denote entities which are perceptually hard to count (e.g. *tear*, *mountain*, *ripple*) and the noncount status of nouns that denote perceptually countable entities (e.g. *aspirin*, *toast*, *bacon*). *Tear* is a liquid, and it is hard to count the number of tears, although it may be possible to count the number of teardrops. The Bank of English finds only two cardinal numerals that occur with *tear(s)*, *one* and *two*: e.g. *one tear trickled down my cheek*; *Two tears rolled down her cheeks*. *Tear*, when combining with numerals, refers not to teardrops but to streams of tears sliding down the cheeks from each eye, which makes the maximum number two. Mountains and ripples are hard to count as well. Usually more than one mountain makes a row of mountains. You may be able to count the number of mountain peaks, but it is hard to count the number of mountains. Ripples are moving too quickly to count.

On the other hand, *toast*, *bacon* and *aspirin* clearly denote individual countable entities, but they are morpho–syntactically noncount, requiring a classifier to be counted: e.g. *a piece of toast* and *a slice/rasher of bacon* (Ware 1975: 390–391, Wisniewski et al. 2003: 610). In the same way, atomicity and

other criteria do not sufficiently account for the C/NC distinction of nouns that refer to perceptually similar entities (e.g. *rice* vs. *lentils*, *spaghetti* vs. *noodles*, *gravel* vs. *pebbles*, *sweat* vs. *tears*) and nouns that refer to the same collection of entities (e.g. *foliage* vs. *leaves*, *clothing* vs. *clothes/garments*, *kitchenware* vs. *kitchen utensils*).

2.2.2. Referential properties: cumulativity, divisibility, arbitrary divisibility, internal homogeneity

Cumulativity, divisibility, arbitrary divisibility and internal homogeneity are proposed to identify noncount nouns (or noncount use of nouns). However, these criteria do not account for the grammatical behavior of homogeneous count nouns (e.g. *fence*, *line*) and mass-count flexible nouns (e.g. *cloud*, *rope*). Cumulativity, which indicates that any sum of parts which are X (e.g. water) is X (Quine 1960: 91), does not distinguish count nouns from noncount nouns since it applies to plural count nouns as well: e.g. “if the animals in this camp are horses and the animals in that camp are horses, then the animals in the two camps are horses” (Link 1983: 128).

Divisibility, arbitrary divisibility, and internal homogeneity indicate that a portion of X (e.g. water) divided in two is still X, whereas a cat divided in two is neither two cats nor one (Barner & Snedeker 2005: 45). These criteria do not account for the count use of nouns that denote homogeneous entities: e.g. homogeneous count nouns (e.g. *fence*, *line*, *twig*, *wall*), mass-count flexible nouns with both a count and a noncount use (e.g. *cord*, *cloud*, *forest*, *rope*, *sky*, *steak*, *stone*, *rock*) (Nicolas 2004: 128). For example, two adjoining fences can make one fence (Rothstein 2017: 97), and the minimal part (i.e. atom) of a line is unstable and context-dependent (Rothstein 2017: 98). In the same way, mass-count flexible nouns keep their count status when they refer to arbitrarily divided pieces. When a rope is cut into four pieces, you will have four ropes (Gillon 1999: 52). *Cloud* is a visible mass of particles of condensed vapor, and it is perceptually similar to puddles of water. *Cloud* should be a noncount noun in terms of its referential properties. However, it has a count use as well as a noncount use: e.g. *the sun appeared from behind a black cloud; the sun disappeared behind black clouds*, and it can combine with cardinal numerals as in *No two clouds are alike*.

2.2.3. Alternative construals

The proposed criteria to account for the C/NC distinction in terms of referential properties (atomicity, homogeneity, arbitrary divisibility, etc.) do not sufficiently distinguish count nouns from noncount nouns. The cognitive individuation hypothesis is proposed to offer a comprehensive account of the conceptual basis of the C/NC distinction, and it is expected to account for the mismatches between syntax and semantics. It assumes that there is a systematic relationship between count/noncount syntax and how people conceptualize entities in the world. A central aspect of the cognitive individuation hypothesis is the process of construal (Wisniewski et al. 2003: 588). It emphasizes the role of the human or cognitive agent: i.e. how we interact with things, our focus of attention, etc. influence our interpretation of the perceptual input, which motivates us to refer to an entity with a count or a noncount noun (Bloom 1996, Langacker 1987a, 1987b, 1991a, 1991b, 2008, Soja et al. 1991, Wierzbicka 1988, Wisniewski et al. 1996, Wisniewski et al. 2003, Wisniewski 2010).

The typical example is object-mass nouns such as *furniture* and *cutlery*, which are syntactically noncount but semantically count.¹²⁾ *Furniture* and *cutlery* have perceptually countable individuals in

their denotations (Barner & Snedeker 2005: 45, Bale & Barner 2012: 246, Pelletier 2012: 15). *Furniture*, for example, refers to a collection of movable articles, and it is atomic (i.e. inherently individuated).¹³⁾ *Two pieces of furniture* does not refer to pieces, but to two minimal instances of furniture (i.e. atoms) such as a table and a chair (Wiese 2012: 58). Arbitrarily divided furniture (e.g. half a chair, a table leg) is not furniture (Chierchia 1998: 68, Gillon et al. 1999: 206, Payne & Huddleston 2002: 336, Middleton et al. 2004: 372, Barner & Snedeker 2005: 45, Murphy 2010: 159). On the basis of referential properties, *furniture* should be a count noun (Gordon 1985: 211). However, *furniture* never allows a count use, and it cannot be used in such forms as **a furniture* or **furnitures* regardless of the perceptual characteristics of the referent. This applies to *cutlery* and other object-mass nouns as well.

The noncount status of *furniture* and *cutlery* is explained in terms of our ways of interacting with things. For example, we use a collection of eating utensils (e.g. knives, forks, spoons) for a particular purpose (i.e. for eating) in one place at one time. The unitary function (i.e. being united by a common purpose) and the spatio-temporal contiguity make *cutlery* noncount (Wierzbicka 1988: 513, Wisniewski et al. 1996: 297, Lee 2001: 142, Payne & Huddleston 2002: 336, Barner & Snedeker 2005: 63). *Furniture* and *cutlery* are noncount because they are construed as a unitary entity with a single function. Lee (2001: 141) explains as follows:

The motivation for their [*cutlery, furniture, crockery, etc.*] assimilation to the mass category has to do with the level at which the concept applies. A set of knives, forks, and spoons can either be construed as a collection of separate objects performing different functions (cutting food, picking up food, stirring liquids) or as a collection of objects which manifest themselves contiguously and which all perform the same function (facilitating the consumption of food). At this level, any part of the phenomenon counts as equivalent to any other part. Similarly, a collection of chairs, tables, and cupboards is subject to alternative construals. We can think of them either as a group of separate objects or as a unitary entity with a single function—that is, as ‘furniture’.

Functional unity and contiguity, however, do not necessarily lead to a noncount interpretation of a collection of individual entities. For example, *toy* is a superordinate count noun like *animal* and *vehicle*, which refers to objects of different kinds that provide amusement (e.g. dolls, toy cars, toy blocks, video game devices, etc.), usually placed in a limited space. However, a collection of toys is not construed as a unitary entity with a single function. Another example is a golf set with clubs of different kinds (e.g. drivers, woods, irons, putters, etc.), which are usually placed in a golf bag, thus satisfying contiguity, and are used for playing golf, thus satisfying a unitary function. A set of golf clubs are very similar to cutlery in that both refer to a collection of items used for a particular purpose. However, a set of golf clubs is not construed as a unitary entity whereas a collection of eating utensils is. If grammatical behavior is semantically motivated, a set of golf clubs should allow a noncount construal.

Functional unity and contiguity may be conceptual bases of the C/NC distinction, but they do not seem to have predictive power. It is argued that the same set of entities (e.g. hammers, screwdrivers, drills, etc.) can be designated by a noncount noun (e.g. *equipment*) or a count noun (e.g. *tool*)

depending on how the set is construed, i.e. whether foregrounding the unitary nature or the diverse nature (Lee 2001: 141). The question remains to be answered: what causes some nouns to accept a noncount construal (e.g. *equipment*, *kitchenware*, *footwear*) and other nouns to resist (e.g. *tools*, *kitchen utensils*, *shoes*).

2.2.4. Communicative function

There are some nouns whose count or noncount status can be explained by neither referential properties nor alternative construals (or conceptualization). Their mismatches between count-noncount syntax and semantics are explained in terms of communicative function of language, which postulates that speakers flexibly construe the referents of nouns as individuated or nonindividuated entities depending on what aspect of an entity speakers find important to communicate (Wisniewski 2010). *Mashed potatoes* and *scrambled eggs*, for example, denote substances, and they are uncountable both perceptually and conceptually. They are, however, usually used in the plural form in American English, although they do not denote multiple entities. Wisniewski (2010: 186) argues that *mashed potatoes*, *scrambled eggs*, *chopped radishes* and other items of food that transform the original entities in their cooking process (e.g. eggs to make scrambled eggs) are used in the plural form because the information about the origin of the substance and the process that produced the substance is more important than the information about the perceptual characteristics (i.e. unindividuated substance). The plural form is chosen to communicate a message that the transformation (mashing, scrambling, etc.) is applied not to a substance but to multiple individuals (i.e. potatoes, eggs, etc.).

Another example is *pine needle*, which is perceptually countable but conceptually noncount (Wisniewski et al. 2003, Wisniewski 2010). Needles and pine needles are perceptually similar, and both are count nouns. However, they are conceptually different. We interact with needles one at a time, which motivates us to use *needle* as a count noun. On the other hand, we see multiple entities of pine needles on the ground (or on a pine tree) in very close proximity (i.e. contiguous), and we interact with multiple pine needles at a time. These characteristics of pine needles are similar to those of cutlery (and other object-mass nouns), which is construed as a unitary entity with a single function. Conceptually, *pine needle* should be noncount. However, the count syntax of *needle* is retained because the resemblance to needles is more important than the information that pine needles are construed as aggregates consisting of nonindividuated entities. As a result, the count syntax of *needle* is retained.

Communicative function may not account for mismatches between count-noncount syntax and semantics. For example, both *mail* and *e-mail* have a meaning of e-mail messages, which are perceptually countable. However, *mail* is noncount, denoting e-mail messages collectively, whereas *e-mail* has both a count and a noncount use, denoting e-mail messages individually or collectively. Checking five learner's dictionaries (see the reference section) indicates that *e-mail* used to be a noncount noun until around the mid 1990s. LDOCE 3rd Edition (1995) defines it as "[uncountable] a system that allows people to send messages to each other by computer." Its 4th edition (2003) adds a second meaning: "[uncountable and countable] a message that is sent from one person to another using the email system." OALD 7th Edition (2005), CALD 2nd Edition (2005) and other dictionaries follow LDOCE. *E-mail* has gained both a count and a noncount use to denote e-mail

messages individually or collectively whereas *mail* in the sense of *e-mail* is still noncount. If the case of *pine needle* applies to *e-mail*, e-mail should retain the original noncount use of *mail* whether it is conceptually count or noncount.

Bathroom scale(s) is another example. *Scales* takes the plural form, reflecting the bipartite structure of scales. A bathroom weighing device, however, does not have a bipartite structure. It is a device with a unitary structure and is perceptually countable. It is conceptually countable as well since we interact with a device one at a time. These characteristics of *bathroom scales* cause a mismatch between the grammatical form (i.e. plural form) and the referential properties (a unitary device).¹⁴⁾ To redress this mismatch, American English has opted for a change in grammatical form, from the plural *scales* to the singular *scale*, to reflect a perceptually proper construal of the device with a unitary structure. Semantics (i.e. perception of referential properties) has caused a change in syntax. On the other hand, British English has opted for a change in conceptualization to retain the original plural form, construing the device as an object with a multiple structure. Wierzbicka (1996: 388) once asked a number of children and teenagers in Australia why they thought the device was called *scales* rather than *scale*. To her surprise, they all came up with the same answer: it is because of all the little numbers they see on the device. In British English, syntax has caused a change in semantics (i.e. conceptualization). In other words, semantics is motivated by syntax. If grammatical form is semantically motivated, *digital alarm clock* should take the plural form since it is perceptually and conceptually similar to a bathroom weighing device with little numbers displayed on it.

The communicative function does not account for the plural status of *bathroom scales*. It is doubtful that British English speakers use the plural form because they want to communicate a message that a bathroom weighing device has a multiple structure. Imagine a device that announces your weight without displaying numbers visually. It is not hard to speculate that British English speakers still call the device as *bathroom scales* in the plural form. It is simply a case that the grammatical convention of the original word (i.e. *scales*) is retained.

It is difficult to maintain that a communicative purpose is involved when the C/NC distinction cannot be explained in terms of referential properties or alternative construals. *Toast*, for example, is a noncount noun, but it clearly refers to an individual entity, which is perceptually and conceptually countable. We interact with toast one at a time, and English speakers do not construe *toast* as an unindividuated substance but as a singular individual (Wisniewski et al. 2003: 610, Wisniewski 2010: 185). This may apply to *bacon*, but in the case of *bacon*, it could be argued that *bacon* has retained the syntax that reflects the perceptual characteristics of its original referent (i.e. cured meat from the back or sides of a pig) (Wisniewski 2010: 185). This way of reasoning, however, does not apply to *toast* in that it used to be a count noun as in *He had stopped taking cereals after the age of sixty but after 85 he had to re-start on medical advice taking two toasts or some cornflakes* (1978, cited from *The Oxford English Dictionary*). Somehow, the current usage does not allow *toast* to be used as a count noun although it is perceptually and conceptually countable. Again, it could be argued that *toast* is noncount because it reflects how its original referent (i.e. bread) is conceptualized. However, *toast* and *bread* are different nouns, and it is hard to support this argument.

2.2.5. Grammatical convention

In the discussion of the C/NC distinction of concrete nouns, it is generally agreed that count/noncount syntax is related to referential properties of nouns, and there is a tendency to use count-noun syntax to refer to an individuated entity and noncount-noun syntax to refer to a nonindividuated entity. However, there are many nouns whose count or noncount status cannot be explained in terms of referential properties: e.g. object-mass nouns, mass-count flexible nouns, homogeneous count nouns, etc., not to mention abstract nouns. When there is a mismatch between the grammatical behavior of a noun and its referential properties, the mismatch is explained in terms of alternative construals (or conceptualization). When the mismatch cannot be explained in terms of alternative construals, the mismatch is explained in terms of communicative function of language. There are still some nouns whose grammatical behavior cannot be explained semantically (e.g. *toast*). These observations suggest that the C/NC distinction is a grammatical and not an ontological or a conceptual distinction (Rothstein 2010: 361), and that the distinction is essentially, but not exclusively syntactic (Gordon 1985: 227). This is supported by the experiments conducted by developmental psychologists.

Psychologists (Gordon 1985, Gentner & Boroditsky 2001, Barner & Snedeker 2006) cast doubt on the claim that children's acquisition of the C/NC distinction is based on an object/substance distinction. A lot of research has been done by psychologists to determine whether the C/NC distinction is rooted in prelinguistic knowledge, or syntax provides the foundations for the conceptual development of the distinction (Wynn 1992, Spelke 1994, Imai & Gentner 1997, Hauser 2000, Wynn et al. 2002). Their studies deny the Quinian view of empiricism (Quine 1960) and indicate that the object/substance distinction and the concept of individuation are prelinguistic. On the other hand, children do not have a clear semantic categorization of mass nouns prelinguistically, and they acquire it as they grow older with more linguistic experience and syntactic information (Gordon 1985, Soja et al. 1991, Bloom & Kelemen 1995, Yoshida & Smith 2005, Kouider et al. 2006, Barner & Snedeker 2006). Children become sensitive to the count/mass and singular/plural distinction at the age of two and become able to extend the semantic categorization of mass nouns to novel words at around five. Children acquire the semantic categorization of mass nouns through syntactic information, but not through semantic analysis. Gordon (1985) says that syntactic cues are clearly the most effective and predominate over semantic cues as a basis for the C/NC distinction. Grammatical convention takes precedence over perception of referential properties for mass nouns (i.e. concrete noncount nouns).

2.3. Abstract nouns and boundedness

Concrete nouns are conceptualized in physical space whereas abstract nouns are generally conceptualized in other spaces, such as quality space and temporal space (e.g. *love*, *difficulty*, *experience*, etc.).¹⁵⁾ None of the criteria proposed to account for the C/NC distinction of concrete nouns applies to abstract nouns. Abstract nouns provide no perceptual information about their referential properties since they are not conceptualized in physical space. Criteria such as atomicity and internal homogeneity are not applicable.

Alternative construals may or may not work for abstract nouns. They work for abstract nouns that have both a count and a noncount use (e.g. *many difficulties* vs. *much difficulty*, *many experiences*

vs. *much experience*). Those nouns are like mass-count flexible nouns (e.g. *rope, stone*), and the same referent can be referred to as count or noncount depending on whether it is construed as countable or uncountable as in (3-4).

- 3) Andrew Walshe '02, from Herndon, VA, spent a year at the London School of Economics. "... but it was **a good experience**." [...] On all, it was **good experience** and a good time. ..."
(<http://blogs.hsc.edu/international/category/other-experiences/page/2/>)
- 4) As is well known, after decades of writing impersonal science fiction Ballard wrote *Empire of the Sun* (1984), a novel dealing with **his childhood experiences** in a Japanese prisoner-of-war camp. The most inscrutable of novelists, Ballard confides that he cannot explain why it took him 40 years to come to terms with **this primal experience**. (Wordbanks Online)

In (3), both *a good experience* and \emptyset *good experience* refer to the same spatio-temporally bounded event (a year at the London School of Economics) in the singular form with *a/an* and with \emptyset respectively. In the same way, *his childhood experiences* and *this primal experience* in (4) refer to the same experience in the plural and in the singular form respectively. These examples show that nouns that have both a count and a noncount use can be used as a count or a noncount noun depending on how their referents are construed, either as countable or uncountable entities. An alternative construal (a countable interpretation or an uncountable interpretation) causes a change in syntax, e.g. from count (*a good experience*) to noncount (\emptyset *good experience*). On the other hand, alternative construals do not work for those abstract nouns that have only a noncount use. They do not allow a change in syntax (i.e. from noncount syntax to count syntax) when their referents are construed as countable entities. *Advice*, for example, can be construed as countable entities as in *one final advice*, but it never allows the count syntax.

Advice is a typical noncount noun in the current usage with the meaning of an opinion or a suggestion.¹⁶⁾ However, it combines with a numeral *one* as in (5) and ordinal numerals such as *first* and *second* as in (6-7), which indicates that *advice* is construed as individual countable entities. Also, *advice* used to be a count noun, reflecting its construal, which is similar to the case of *toast*. A quick look at The Corpus of Historical American English (with more than 400 million words of text from the 1810s to 2000s) shows that *advice* used to admit *a/an* and pluralization until around the 1950s (8-9). *The Oxford English Dictionary* also has an example of *advices* in the plural form (10). At a certain point in history, *advice* shifted from a count noun to a noncount noun even though it has always retained the denotation of an individual opinion or suggestion. Alternative construals do not account for the noncount status of *advice* since it is noncount whether its referent is construed as countable or uncountable. Communicative function fails to account for the noncount status of *advice* as well, since it does not make sense to communicate a message that speakers construe *advice* as noncount while they allow it to combine with ordinal numerals.

- 5) Since time is running out, would you like to give **one final advice** to all of us about how we can keep our marriages alive? (*Hello! Just Married Or About To Marry?* by P. Bhalla. 2004)
- 6) My **first advice** to him was to get the best possible staff he could possibly find. (BOE)

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- 7) This prompted me to ask the trivial question: “What would be your advice today for a young woman who would like to do science and have a family too?” Mildred responded: “The first thing I would suggest is, marry the right man. That’s the most important thing. You have to have a husband who is fully supportive. That he does more than paying lip service to equality. My husband was really a feminist. He liked women and respected them. My **second advice** is that whatever decision they make they shouldn’t feel guilty.”
(*Women Scientists: Reflections, Challenges, and Breaking Boundaries* by Magdolna Hargittai. 2015)
- 8) If you had taken **an advice** from me, it would have been to buy that suit.
(*The Big-Town Round-Up* by William MacLeod Raine. 1920)
- 9) I knew you were leaving. My brother told me he had given **advices** to you to go without delay.
(*Below the Salt* by Thomas B. Costain. 1957)
- 10) To read with attention, exactly to define the expressions of our author, never to admit a conclusion without comprehending its reason, often to pause, reflect, and interrogate ourselves; these are **so many advices** which it is easy to give, but difficult to follow. (*The Miscellaneous Works of Edward Gibbon, Esq.* by Edward Gibbon. 1761)

Among various criteria proposed to account for the C/NC distinction of concrete nouns, bounding (or boundedness) is perhaps the only criterion that may apply to abstract nouns. Cognitive linguists argue that the C/NC distinction depends on whether a referent is construed as being bounded (Langacker 1991a, 2008, Talmy 2000, Radden & Dirven 2007, Lee 2001, Croft & Cruse 2004), and that it applies to abstract nouns (Langacker 1987b: 207). It is generally agreed that an abstract noun is used as a count noun when its referent is construed as bounded in temporal, quality or some other spaces. For example, abstract nouns that describe episodic events are count nouns (e.g. *jump, walk*), while those that do not describe a single episode of the process are noncount (e.g. *jumping, walking*) (Langacker 1987b: 207). Radden & Dirven (2007: 81) argue that abstract nouns that describe episodic situations are construed as discrete episodes and are used as count nouns because they are thought of as holding for a limited time. Episodic situations include events that take place or come up (e.g. *attack, protest, objection*) and certain states that can suddenly arise (e.g. *disease, idea, doubt*). On the other hand, abstract nouns that describe steady situations (e.g. *knowledge*), which are construed as lasting indefinitely, are mostly used as noncount nouns.

It is somewhat misleading to argue that an abstract noun is used as a count noun when its referent is construed as bounded. It leads us to believe that a bounded entity (in temporal or other spaces) is designated by a count noun (or a count use of a noun) and that an unbounded entity is designated by a noncount noun (or a noncount use of a noun). In fact, it goes the other way around. It is count syntax that gives the meaning of boundedness. Boundedness does not force count syntax as shown by the following examples of *silence* (11-13).

- 11) There was **a silence** for a moment, except for the faint scratching of the pen. (BOE)
- 12) There was **silence** for a moment before the sound of a car starting. (BOE)
- 13) There was **absolute silence** for a moment, **a silence** with no time and no feeling. I could hear the

world ticking inside my head — *tick, tick, tick ...* (*The Road of the Dead* by Kevin Brooks. 2006)

A *silence* in (11) and \emptyset *silence* in (12) are both temporally bounded, continuing for a moment. In (13), both \emptyset *absolute silence* and *a silence* refer to the same silence that continued for a moment, which is spatio-temporally bounded. At the same time, *a silence* is described as *with no time*, which suggests that the silence is temporally unbounded and should be designated by a noncount use. These examples of *experience* (3, 4), *advice* (5–10) and *silence* (11–13) show that temporal boundedness does not force count syntax. A temporally bounded event can be designated by a singular noun with *a/an* (*aN*), a plural count noun (\emptyset Ns) or a zero determiner singular noun (\emptyset N). Grammatical form (i.e. the count or noncount syntax) is not determined by bounding in objective reality.

Every silence is experienced as temporally bounded in our daily lives. In this sense, *silence* is construed as an individual entity, and it should be a count noun. However, *silence* has both a count and a noncount use, and it allows all three forms (\emptyset N, *aN* and \emptyset Ns) as in (14–16). When all three forms are available for a noun, the speaker chooses a particular form to represent his/her construal. The noun allows alternative construals (i.e. a single individual entity, plural individual entities or an uncountable entity) to cause a change in syntax (i.e. *aN*, \emptyset Ns, or \emptyset N). *Silence* may be conceptualized as bounded in physical space (17) as well as in temporal space (18) and can be used as a count noun. When the quality of silence is foregrounded, the silence is construed as unbounded and is designated by a noncount use as in (14) (Hewson 1972: 90).

- 14) Everyone stood in **stunned silence**. (*Buffalo Man* by Calvin C. Clawson. 2009)
- 15) Everyone stood in **a stunned silence**. (*Electos: Sophomore Year* by Jonathan Smith. 2019)
- 16) Everyone stood in **stunned silences**. (*The Empress Angelina's Quest: A Beary Maxumus Adventure* by Charles Nickerson and Irene Nickerson. 2015)
- 17) Canine excrement, I have learned, is referred to only as “poop” by the dog people. I once made the mistake of using a more colorful term, and was met by **stunned silences** all around. But now that I've got the lingo straight, the other dog people and I talk every morning.
(*Howl: A Collection of the Best Contemporary Dog Wit* by Bark Editors. 2007)
- 18) They are not used to **silences** in conversation and don't know how to manage them skilfully.
(*Critical Thinking Skills: Developing Effective Analysis and Argument*, 2nd Edition by Stella Cottrell. 2011)

III Summary and concluding remarks

Count and noncount nouns are defined in two domains: morpho-syntax and semantics. The morpho-syntactic distinction varies from linguist to linguist, and the semantic distinction has never been sufficiently described. Morpho-syntactically, it is generally agreed that the binary opposition between count and noncount nouns is characteristic not of the nouns, but of the NP's which they head (Allan 1980). Nouns are classified into several levels of countability depending on their morpho-syntactic behavior: i.e. inflection for singular-plural contrast, subject-verb agreement and

determiner–head combination restrictions. Classification (i.e. degrees of countability) depends on the number of determiner–head combination restrictions each linguist employs as criteria. Some linguists classify nouns into six levels while others into seven, eight or more levels.

From a pedagogical point of view, information on determiner–head combination restrictions may be important but not essential (except the information that singular count nouns normally require a determiner). Pedagogically, the binary opposition is preferred since L2 learners of English need to know, first and foremost, whether a particular noun allows only a count use or a noncount use or both. It is essential that they know if a noun takes a zero determiner singular form (\emptyset N), an indefinite article singular form (*a*N) or a zero determiner plural form (\emptyset Ns). Knowledge of some basic quantifiers (e.g. *many* vs. *much*, *few* vs. *little*) may be important, but detailed information on determiner–head combination restrictions is not essential: e.g. some nouns combine with high round numerals but not with low numerals (e.g. *livestock*, *poultry*). In defining count and noncount nouns, the essential criteria are singular–plural contrast and subject–verb agreement. In this research, count nouns are defined morpho–syntactically as those nouns that satisfy the following two conditions: i) to inflect for number to mark a singular–plural contrast and take both a singular and a plural verb that agree with the number of a subject NP (including those with identical singular and plural forms); ii) to occur in direct construction with the cardinal numerals. Noncount nouns are defined as those that do not satisfy these two conditions.

It is forbiddingly difficult to fully account for the semantic distinction between count and noncount nouns. The distinction is explained in terms of referential properties, alternative construals and communicative function. In terms of referential properties, a prototypical count noun denotes an individuated, separate object that can be counted while a prototypical noncount noun denotes an unindividuated substance that cannot be counted without a numeral classifier (e.g. *two bottles of water*). Various semantic criteria have been proposed (e.g. atomicity, homogeneity, arbitrary divisibility, boundedness) to identify referential properties that are to be shared by all noncount nouns or all count nouns. However, mismatches between count–noncount syntax and semantics are often observed: some nouns have the semantics of a count noun but the syntax of a noncount noun (e.g. *furniture*, *toast*) while others have the semantics of a noncount noun but the syntax of a count noun (e.g. *cloud*, *mountain*, *ripple*). None of the proposed criteria sufficiently accounts for these mismatches. Alternative construals and communicative function are proposed to account for the mismatches. However, there are some nouns whose count or noncount status cannot be explained by either of these two concepts. When all these criteria fail, grammatical convention remains as the only solution.

The proposed criteria for the count/noncount distinction of concrete nouns do not apply to abstract nouns because abstract nouns provide no perceptual information about their referential properties. Also, researchers use their own intuitions to provide examples to support their arguments. It is not hard to find counter–examples since their arguments are based on a very limited number of data. Kiss et al. (2017: 190) points out: “researchers looking into the issues involved in +MASS/+COUNT tend to use their own intuitions, based on a very limited number of data points (that is, a very limited group of words and their meanings). The use of largescale resources is relatively rare.”

For example, against the argument of Payne & Huddleston (2002: 337) that nouns which denote

results (*invention* in [iii]) are more countable than those denoting events (*inventions* in [ii]), Grimm (2014: 192) provides a counter-example (19) and argues that a countable reading of *invention* that refers to events is possible in a plausible context. Grimm says: “it remains an open question whether a result sense of an abstract noun, in and of itself, is more countable than an event sense of an abstract noun.”

- ii ?There were two separate inventions of the light-bulb. [event, count]
- iii Edison was honoured for three separate inventions. [result, count]

19) Oftentimes when an inventor in one part of the world begins working with one idea, other inventors simultaneously and independently develop similar ideas. This happened with the **inventions** of calculus (Leibnitz and Newton) and the electric light bulb (Edison and Swan).

A quick search of the Bank of English (BOE) and the Corpus of Contemporary American English (COCA) for the collocation [*inventions of the*] finds the following examples of *inventions* in the plural form that refer to events (20, 21), which supports the argument of Grimm. It is important to use large data instead of intuitions to develop hypotheses.

- 20) ... the nearly simultaneous **inventions** of the microscope (in 1590) and the telescope (in 1608) ... (COCA)
- 21) For example, L. Ron Hubbard (1950b: 9) announced his invention of Dianetics (later to become Scientology) by saying, “The creation of dianetics is a milestone for Man comparable to his discovery of fire and superior to his **inventions** of the wheel and arch.” (BOE)

Another example is the argument of Swan on the relationship between *a/an* and pre-modifying adjectives with noncount nouns. Swan (1995: 139) provides the following example (22) and argues: “With certain uncountable nouns — especially nouns referring to human emotions and mental activity — we have to use *a/an* when we are limiting their meaning in some way.”

- 22) We need a secretary with **a first-class knowledge** of German.
(NOT ... *with first-class knowledge of German.*)

In his third edition (2005: 132) and fourth edition (2016: grammar 120. 4), he revised his argument slightly. In the revised editions, he says “we often use *a/an*” instead of “we have to use *a/an*.” Still, his argument implies that *knowledge* co-occurs with *a/an* more frequently than with \emptyset when it is pre-modified by an adjective. The data collected from the Bank of English do not support his argument. Table 8 shows the numbers and the percentages of instances of the NP [adjective + *knowledge*] that co-occur with various determiners (*zero*, *a/an* and others). Only two NPs (*working knowledge* and *good knowledge*) co-occur with *a/an* over fifty percent. These examples point out that it is necessary to use large corpora such as BOE and COCA to prove hypotheses by looking into collocational patterns.

Table 8. Occurrence of *knowledge* with determiners

	a/an %	Ø %	a/an	Ø	Other Det.	TOTAL
<i>working knowledge</i>	81.2%	8.1%	121	12	16	149
<i>good knowledge</i>	74.8%	24.4%	92	30	1	123
<i>detailed knowledge</i>	33.8%	61.8%	46	84	6	136
<i>intimate knowledge</i>	30.2%	34.5%	77	88	90	255
<i>extensive knowledge</i>	18.9%	40.2%	25	53	54	132
<i>limited knowledge</i>	15.7%	48.0%	16	49	37	102
<i>general knowledge</i>	10.7%	58.3%	20	109	58	187
<i>first(-)hand knowledge</i>	6.3%	60.9%	12	117	63	192
<i>personal knowledge</i>	5.0%	44.6%	7	62	70	139
<i>inside knowledge</i>	4.5%	49.0%	7	76	72	155
<i>full knowledge</i>	3.9%	39.3%	8	81	117	206
<i>technical knowledge</i>	2.9%	56.5%	5	96	69	170
<i>specializ(s)ed knowledge</i>	2.9%	65.4%	3	68	33	104
<i>direct knowledge</i>	1.8%	58.9%	2	66	44	112
<i>local knowledge</i>	1.5%	58.8%	5	193	130	328
<i>prior knowledge</i>	1.3%	48.6%	4	153	158	315
<i>public knowledge</i>	0.9%	95.4%	3	312	12	327
<i>scientific knowledge</i>	0.5%	79.2%	2	313	80	395
<i>medical knowledge</i>	0.5%	60.0%	1	120	79	200
<i>common knowledge</i>	0.4%	97.3%	2	462	11	475
<i>new knowledge</i>	0.0%	66.5%	0	232	117	349
<i>human knowledge</i>	0.0%	90.5%	0	114	12	126

Notes

- 1) There are two types of numeral classifiers: sortal and mensural. Sortal numeral classifiers divide count nouns into semantic classes (e.g. human nouns, nonhuman animate nouns, etc.) while mensural numeral classifiers provide nouns of low countability with a unit of measure (e.g. *one glass of water*, *two pounds of sand*) (Gil 2008, Lyons 1977: 463). Most or all languages have mensural numeral classifiers. When comparing different languages, sortal numeral classifiers are referred to as numeral classifiers or simply as classifiers, and classifier languages refer to those languages in which sortal numeral classifiers are obligatory (e.g. Chinese, Japanese, Korean). In this research, the focus of attention is on nouns in English, in which sortal numeral classifiers are absent, and mensural numeral classifiers are referred to as numeral classifiers or simply classifiers unless otherwise mentioned.
- 2) Various terms are used to refer to count nouns and noncount nouns. Here, we use the terms 'count nouns' for 'countable nouns,' 'thing words,' 'unit words,' 'bounded nouns,' 'individual nouns,' etc. and 'noncount nouns' for 'uncountable nouns,' 'mass nouns,' 'mass words,' 'unbounded nouns,' etc., following Payne & Huddleston (2002: 340): "The term 'mass' is readily applicable with nouns like *water* or *coal* that denote substances but it is less evident that it applies transparently to abstract non-count nouns such as *knowledge*, *spelling*, *work*." Both 'mass noun' and 'noncount noun' may be used interchangeably when a noun refers to a substance (i.e. a mass of homogeneous matter), and also when citing arguments of linguists.
- 3) Nouns with both a count and a noncount use are also called: dual-life nouns (Pelletier 2012, Kiss et al. 2017), nouns with dual class membership (Quirk et al. 1985: 247), mass-count flexible words (Barner & Snedeker 2005, 2006), ambiguous nouns (Chierchia 2015: 3).
- 4) Rothstein (2017: 142) disagrees. She argues that counting furniture is not possible. She finds the following sentence infelicitous: *John has more tables than Bill has furniture*. She argues as follows: Two sums in the count domain are compared directly in terms of their cardinalities as in *John has more tables than Bill has books*. However, a sum in the count domain and another in the noncount domain cannot be counted, unless the two sums are mapped onto some relevant scale, for example, on a scale of volume, where the sentence means that John's tables take up more space than Bill's furniture.

- 5) Pluralia tantum (aka plural-only nouns) are nouns which are plural in form and have no singular counterpart (Crystal 2008: 372). A singularia tantum (aka singular-only nouns) are nouns that have no plural form and are only used with singular verbs.
- 6) The distinction between 'quasi-count nouns' and 'exceptional count nouns' is not clear. Payne & Huddleston (2002: 345) classify *people* (in the sense of persons) as an exceptional count noun, because it occurs with low numerals (e.g. *two, three*), although it does not combine with a numeral *one* or *a/an*. On the other hand, they classify *police* as a "quasi-count noun," which means that *police* is not a count noun, although *police* behaves in the same way as *people*, combining with low numerals as in the following examples: *Two soldiers and two police were killed; 20 terrorists and three police were killed in the confrontations*. Gillon (1999: 53) classifies *police* as a count noun.
- 7) Semantic coercion is the semantic shift of nouns from count to noncount or noncount to count. It is also known as 'reclassification,' 'semantic shift' (Quirk et al 1985: 248), 'recategorization' (Corbett 2000: 81), 'coercion' (Chierchia 2015: 152), semantic conversion/coercion (Kiss et al. 2017: 190), etc.
- 8) Semantic coercion occurs mostly from noncount to count. There are two types of count-to-noncount coercion: the deformation type, in which the referent loses its physical integrity as in *After I ran over the cat with our car, there was cat all over the driveway* (Langacker 1991a: 73); the domain shift type (Dirven & Pörings 2003: 14-15), aka 'metonymical reinterpretation' (Cruse 2011: 274), 'image-schematic transformation' (Evans and Green 2006: 187), in which the referent remains physically intact while the focus of attention shifts from one aspect to another, e.g. from 'cat' as an animal to 'cat' as a smell, as in *There's a smell of cat in this room* (Taylor 2002: 378). The deformation type works well for nouns that refer to foodstuffs such as apples and eggs, which are often seen in their deformed (i.e. cooked) conditions as in *Put some apple in the salad* (Quine 1960: 91) or *He's got egg on his tie* (Celce-Murcia & Larsen-Freeman 1999: 295). However, it does not work well for typical count nouns such as *car* and *bottle*, which are not expected to be seen in their deformed conditions in our daily lives: e.g. *?Dismatted car takes up far more space than you think*, or *?After I ran over the bottle with our car, there was bottle all over the driveway*.
- 9) Such expressions as *many acts of courage* are found, but they count the number of acts, not of courage as in the case of *two glasses of water*, where the number of glasses, not of water, is counted.
- 10) 'Cumulative reference' is the criterion that originates with Quine (1960: 91), who says: "So-called mass terms like 'water,' 'footwear' and 'red' have the semantical property of referring cumulatively: any sum of parts which are water is water." 'Stubbornly distributive predicates' include adjectives of size, shape, duration, etc. (e.g. *big, small, large, long, round*) that allow distributive readings, but stubbornly refuse to allow collective readings (Rothstein 2010: 360, Rothstein 2017: 87, Schwarzschild 2011). For example, *the big furniture* in *Please carry the big furniture downstairs first* refers to individual pieces of furniture. An adjective *big* allows only a distributive reading and refuses to allow a collective reading (e.g. *#The mud on that floor is big*).
- 11) This way of reasoning does not apply to some typical count nouns such as *pencil*. If you break a pencil into two parts, you will have two pencils.
- 12) Noncount nouns that denote a set of individual entities are given different names: 'object mass nouns' (Barner & Snedeker 2005), 'naturally atomic mass nouns' (Rothstein 2010: 356), 'fake mass nouns' (Chierchia 2010: 110), and other names such as 'count mass nouns,' 'individual mass nouns' and 'superordinate mass nouns' as opposed to superordinate count nouns (e.g. *animal* and *vehicle*).
- 13) Barner & Snedeker (2005) have shown that *furniture* and other object mass nouns quantify over individuals, which means that they are perceived as countable, individuated objects, not as an unindividuated substance (Wiese 2012: 58, Nicolas 2004: 134). In a proper context, *furniture* can refer to a single item (Chierchia 2010: 151). Bale & Barner (2012: 244-245) says as follows: "For example, in a situation where one is informed that either a chair or a table is on the balcony but not both (perhaps the informant forgets which item was on the balcony), the sentence in (15b) [The furniture is outside on the balcony] is appropriate. Barner & Snedeker (2006) have also shown that noncount syntax does not force a construal of objects as unindividuated.
- 14) This applies to pluralia tantum that denote an entity with a bipartite structure such as *pants, pajamas, scissors, pliers, binoculars*, and *glasses*. Corbett (2019: 54): says: [*These scissors* in "*These scissors are blunt*"] denotes a single entity so that its semantics is out of step with its syntax and morphology.
- 15) There are some abstract nouns that can be reified (ontological metaphor) in physical space: e.g. *beauty* in *all*

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these Bond beauties, referring to beautiful women.

16) *Advice* in the sense of news is used in the plural form: e.g. *the latest advices from Mexico*.

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DICTIONARIES

- CALD: *Cambridge Advanced Learner's Dictionary*.
- COBUILD: *Collins COBUILD Advanced Learner's English Dictionary*.
- LDOCE: *Longman Dictionary of Contemporary English*.
- MEDAL: *Macmillan English Dictionary for Advanced Learners*.
- OALD: *Oxford Advanced Learner's Dictionary*.

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