



Verbs' unaccusativity in existential constructions

Received : 04.10.2023
Accepted : 10.06.2024
Published : 14.08.2024
DOI: <https://doi.org/10.5281/zenodo.12789895>

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Abstract

The Unaccusative Hypothesis(UH) advocates the dominance of syntactic structure in assigning semantic values to sentence arguments. The same thematic roles should only be assigned by the same syntactic configuration. In recent studies, however, the unaccusative hypothesis was highly contentious and controversial and faced several problems. Certain verbs classified as unaccusative or unergative based on semantic or syntactic criteria do not conform to expectations due to the prevalence of unaccusative mismatches. Based on the previous cross-linguistic studies, this paper is motivated to focus on the nature of unaccusativity by a thorough syntactic and semantic dissection for verbs in existential constructions. It is argued that unaccusativity is primarily determined by syntactic positions rather than semantic features by providing a distributional pattern of verbs entering into existential constructions.

Keywords: existential, unaccusative hypothesis, unaccusativity, unergative

1. Introduction

The idea that intransitive verbs are not a monolithic class across languages has gained widespread acceptance. Cross-linguistic evidence shows certain constraints on the type of intransitive predicates in most languages. The examples below can give us a quick snapshot of the split intransitive behaviors associated with the different intransitive verbs in English and Chinese.

- (1) a. Two guests arrived. / There arrived two guests.
b. The little girl smiled. / *There smiled the little girl.
(there-insertion structure)
- (2) a. On the top of the mountain lived an older man.
b. *In the room cried a little boy. (locative inversion)
- (3) a. Lai-le liang-ge keren. / Liangge keren lai-le. ²
come two CL guest two guests come-ASP
'There come two guests.'
b. Keren ku-le. / *Ku-le keren.
guest cry-ASP cry-ASP guest
'The guest cried.' (Chinese post-verbal subject)

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² Abbreviations are as follows: ASP (Aspectual Marker) and CL (Classifier).

As shown above, verbs have a significant impact in alternating the two types of constructions in the above examples by holding the dominant status in the specifications of information, providing complex syntactic and semantic information for a sentence, and finally determining the syntactic structures with the semantic restrictions on the co-occurrence of the nominal components (Fillmore, 1968; Chafe, 1976). Furthermore, the classification of verbal predicates generally depends on the purposes and criteria adopted by linguists, and many of the classifications are based upon the shared syntactic or semantic properties. The categorization of intransitive predicates into two groups has been widely discussed in both formal and functional linguistic approaches, particularly since the emergence of the Unaccusative Hypothesis proposed by Perlmutter in 1978. The present study aims to examine the matter concerning the diverse behaviors exhibited by intransitive predicates. It involves the proposition that intransitive verbs can be categorized into two subtypes: unaccusative and unergative. Each subtype is linked to a specific underlying syntactic structure that underlies its apparent simplicity, as posited by Perlmutter (1978) and Burzio (1986). The underlying deep syntactic structures of the two categories of intransitive verbs exhibit notable differences, as exemplified below.

(4) a. [TP [NP Maryi] [VP came ti]]. (unaccusative)

b. [TP [NP Maryi] [VP ti danced]]. (unergative)

The analysis above indicates that the verb "came in" in (4a) is categorized as an unaccusative verb. At D-structure, the unaccusative verb solely governs an argument in the direct object position. This argument then moves to occupy the subject position at S-structure, as demonstrated in the derivation. In contrast, (4b) contains the unergative verb dance, and its sole argument is in subject position in all levels of representation, which means that its subject is base-generated externally, as shown in (4b). The different structural representation roughly tells us that unergative verbs project a subject through the syntactic derivation process, while unaccusative verbs contain an argument initially projected in the direct object position before being moved to the surface subject position. Some linguists argue that, although formulated in pure syntactic configuration, the distinction between the two is also believed to reflect specific semantic properties of the verb (Van Valin, 1990; Dowty, 1991). Semantic notions such as agentivity and telicity are related to determining the unaccusative-unergative distinction. Unaccusative verbs generally denote the change of state, which correlates with parenthood, are telic, while unergative verbs typically denote activities that correlate with agentivity are atelic (Levin & Rappaport Hovav, 1995). Levin & Rappaport Hovav (1995) argue that unaccusativity is a semantically determined but syntactically represented phenomenon. Such syntactic and semantic differences between unaccusative and unergative are not noticeable superficially, as both appear in similar syntactic contexts, i.e., the NP-V order.



As listed in the examples (1-3), both English and Chinese have been alleged to reflect the unaccusative-unergative dichotomy. However, the unaccusative treatment of these constructions has been considered highly contentious as the dichotomy was first proposed, making it challenging to explore the exact nature of these notions. Furthermore, the language phenomena analyzed as reflexes of the distinction between unaccusatives and unergatives show different forms cross-linguistically. In this paper, I will address the issue of the heterogeneous behaviors of intransitive predicates, especially the verbs distributional pattern of verbs entering into existential constructions from a syntactic and semantic perspective. Then, I will question the validity of the UH in existential constructions.

In order to dig out the nature of unaccusativity, this paper attempts to have a thorough syntactic and semantic dissection for unaccusatives in comparison with unergatives by focusing on the following research questions within the theoretical framework of the Unaccusative Hypothesis (Perlmutter, 1978) and generative grammar (Chomsky, 1981, 1986a, 1995, 1998, 1999).

- 1) What is the reason behind the displacement of the object of an unaccusative verb to its subject position instead of its original location?
- 2) What is the reason for the subject of unaccusative verbs, instead of unergative verbs, exhibiting the same syntactic characteristics as the direct objects of transitive verbs?
- 3) Does the differentiating syntactic representation of unaccusative and unergative verbs have interface effects, and if so, what effects?
- 4) What are the differences in the original formulation of the syntactic derivation between unaccusative verbs and unergative verbs? When and how are the differences acquired?

1.1. Theoretical Framework

1.1.1. Burzio's Generalization

Burzio (1981, 1986) adopts the Unaccusative Hypothesis proposed by Perlmutter and develops it under the framework of GB theory (Chomsky, 1981). This investigation adopts a projectionist perspective on unaccusativity in the realm of syntax. This perspective asserts that lexical entries affirmatively project arguments onto syntactic positions, and the differentiation between unaccusatives and unergatives can be evidenced by examining the distinct syntactic configurations linked with intransitive verbs. Burzio's contribution to the studies of unaccusativity brings a new interpretation of the structural distinction between unaccusatives and unergatives. The author observes a relationship between a verb's capacity to accommodate an external argument and its ability to allocate a structural case. This principle has been identified as Burzio's Generalization (1986: 178, 186).

- (5) Burzio's Generalization (BG hereafter)

The accusative case cannot be assigned to a verb without an external argument, and the theta-role cannot be assigned to an external argument without an accusative-case assigning verb.

An external argument is one that appears outside the predicate's maximum projection. Conversely, the "internal argument" refers to the debate about where in the maximum projection of the predicate anything is located. In deep structure, the first level of syntactic representation is derived from a verbal projection, and the arguments are aligned and predicted according to the individual lexical item and the Theta Criterion.

In generative syntax, direct objects that acquire thematic roles, such as Theme or Patient, are usually assigned accusative cases by the verb in D-structure (Jackendoff, 1983: 156). The reason why unaccusative verbs fail to assign accusative cases is that these verbs cannot take an external argument. The argument's organization could represent both types of intransitive verbs.

- (6) a. Unaccusative verb: < x > e.g., come
 b. Unergative verb: x < > e.g. laugh

As shown above, the device "< >" in (6) indicates the scope of the verb, which helps to understand the relative prominence between the internal argument and external argument (Grimshaw, 1990: 3). Argument structure is a structured representation, in which all the arguments are projected by the lexical entry of verbs, governed by the two hierarchy principles such as Thematic Hierarchy and Aspectual Hierarchy. The former, proposed by Jackendoff (1972), ranks the thematic role of the Agent higher than the theme, and the latter, proposed by Grimshaw (1990), puts the Causer argument as the priority in the argument structure representation. The external argument shows a prominent feature in both the thematic and aspectual hierarchies due to the Agent's thematic role or the Causer it bears in the event. The single argument of unaccusative verbs cannot be external because it is neither an Agent nor a Causer. Returning to the definition of Burzio's Generalization, it can be deduced that the generalization also follows the Case Theory. The Case Theory in GB requires all overt arguments to be assigned cases. Unaccusative verbs, as their name suggests, cannot assign the accusative case to their internal argument, and thus it has to move to a canonical subject position from the D-structure object position to get a case. In contrast, the subject of unergative verbs is an external argument with the stereotypical Agent thematic role.

1.2. *Unaccusative Hypothesis*

The concept of unaccusativity holds considerable importance in elucidating the bifurcated essence of verbs, their syntactic and lexical-semantic attributes, and the interdependence between these two facets (Levin & Rappaport Hovav, 1995: 2). Some verbs are predicted to be unaccusatives or unergatives based on their syntactic or semantic diagnostics. The focus of our inquiry will be directed towards the essence of unaccusativity, which will be examined through an analysis of the distinguishing characteristics of unaccusative and unergative verbs. It is important to acknowledge that prior



research, regardless of its semantic and syntactic foundation, is significantly impacted by the Unaccusative Hypothesis, which is insufficient in resolving the issue of unaccusative mismatches. We will have a general overview of the heterogeneity of intransitive verbs among languages. Intransitive verbs do not behave homogeneously in English, Chinese, and other European languages. There is a transitive alternation for some intransitive verbs but not for others, as shown in (7) and (8).

- (7) a. The boat sank.
b. The sailor sank the boat.
- (8) a. The vase glowed (in the sun).
b. *The sun glowed on the vase.

The heterogeneity of intransitive verbs is also represented in Italian, which selects different auxiliaries for different intransitive verbs (Krifka, 2001).

- (9) a. Maria ha camminato.
Maria has walked
'Maria walked.'
- b. Maria e arrivata.
Maria is arrived.
'Maria arrived.'

Evidence for the heterogeneity also comes from Chinese, in which the intransitivity of verbs is often dismissed by their position concerning nominal NPs, as shown below.

- (10) a. Fasheng le shigu.
happen ASP accident
'An accident happened.'
- b. Shigu facing le.
accident happen ASP
'An accident happened.'

We note above that the alleged intransitive verb facing 'happen' appears before the nominal NP shigu 'accident' in (10a) and post to the NP in (10b). Despite this variation, the predicate is considered intransitive (10a,b). Observing the different aspects of these intransitive verbs, we note that the subclassification of unaccusative and unergative verbs can be justified cross-linguistically. Unaccusative verbs feature a solitary argument that occupies the direct object position at D-structure and is expected to bear an accusative Case at the S-structure. Following Burzio's Generalization, unaccusative verbs cannot assign the case to their sole argument. Therefore, the argument must move to the subject position to obtain the nominative case. In the case of unergative verbs, the sole argument assumes an Agent theta-role and occupies the subject position across all levels of representation. The Unaccusative Hypothesis is the source of unaccusativity and warrants thorough examination in the subsequent discussion.

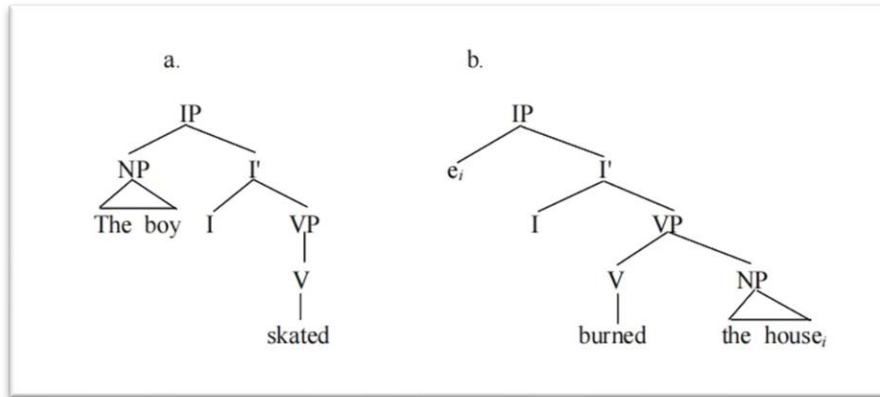
Within the framework of linguistic theories that aim to establish universal grammar, such as relational and generative grammar, scholars acknowledge the challenges associated with categorizing a specific class of verbs in accusative languages like English. In such languages, the subtypes of verbs cannot be effectively classified using the binary distinction of intransitive and transitive verbs. The issue at hand is addressed through the adoption of the unaccusativity framework, wherein certain intransitive verbs that feature Agent-like subjects are categorized as unergative (e.g. "ran," "eat," etc.). In contrast, others that feature Theme-like subjects are categorized as unaccusative verbs (e.g. "melt," "burn," etc.). The Relational Grammar and Chomsky's generative grammar frameworks have posited the syntactic distinctions between the two categories of intransitive verbs. The primary significance lies in the syntactic differences between the two categories of intransitive verbs, while the semantic differences are regarded as secondary and derivative.

The prevailing assumption is that the specifier position of IP is occupied by the subject of unergative verbs at both D-structure and S-structure. Conversely, the subject of unaccusative verbs is believed to occupy the direct object position at D-structure and subsequently move to the specifier position of IP at the S-structure to receive a nominative case. Thus, the syntactic structure derivation for sentences (6a,b) can be inferred.

- (11) a. The boy skates. (unergative)
 b. The house burned. (unaccusative)

The individual denoted by the subject in (11a) occupies the specifier position of IP in both D-structure and S-structure due to the unergative nature of the verb "skated." Conversely, it can be observed that the theme of the dwelling in (11b) assumes the syntactic position of the direct object at D-structure due to the unaccusative nature of the verb "burned". The unaccusative verb cannot assign the case to its object, resulting in a caseless state for the house if it remains in the direct object position, thereby contravening the Case Filter. In order to prevent this, the subject must be relocated to the inflexion phrase's specifier position and designated with a nominative case.³

3. Within the Minimalist Program, it has been posited that the subjects of unergative verbs occupy the specifier position of vP, whereas those of unaccusative verbs occupy the object position of VP. In both cases, these subjects undergo movement to the specifier position of TP for the purpose of feature-checking (Chomsky, 1995: 315-316; Radford, 1997).

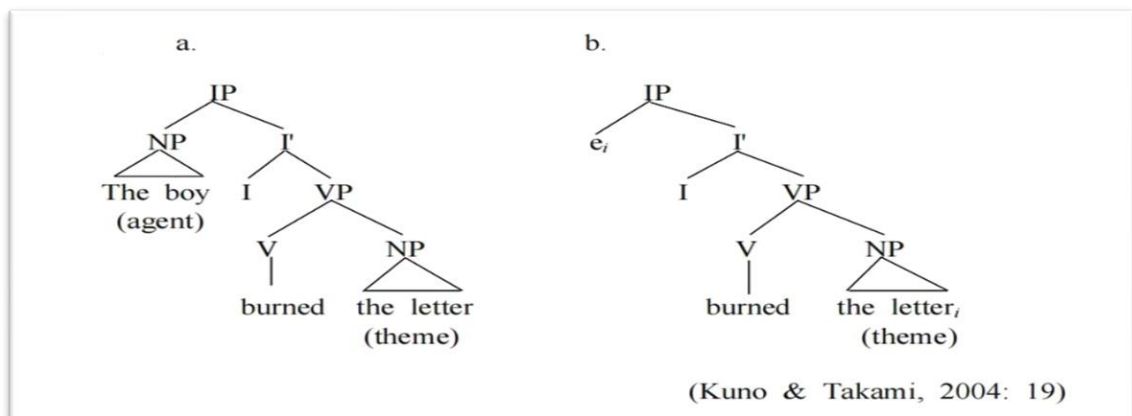


The syntactic distinctions outlined within the context of generative grammar have been denoted as the Unaccusative Hypothesis. The presence of an underlying object characterizes unaccusative clauses, but the absence of an underlying subject. The theoretical framework of generative grammar posits that passive sentence subjects occupy the direct object position at the D-structure and subsequently undergo movement to the specifier position of IP to receive nominative case assignment. Passive verbs are regarded as a subset of unaccusative verbs.

The syntactic analyses that propose distinct underlying grammatical relations for unergative and unaccusative verbs aim to convey the observation that the subjects of unaccusative verbs exhibit specific characteristics in common with the direct objects of transitive verbs, which are not shared by the subjects of unergative verbs.

- (12) a. The boy burned the letter. (transitive sentence)
 b. The letter burned. (unaccusative sentence)

(13)



As depicted, certain intransitive verbs that possess anti-causative counterparts, including but not limited to break, melt, drop, roll, and sink, are commonly referred to as ergative verbs. These verbs can function as both transitive and intransitive. The sentence in (12a) employs the transitive verb

"burn", as illustrated in (13a). The subject, denoted as "the boy," functions as the Agent, whereas the object, referred to as "the letter," is the theme. The sentence structure in (12b) lacks an explicit Agent, causing the theme of the letter to function as the subject of the sentence. Additionally, the verb "burn" is utilized as an unaccusative verb. As demonstrated in (13b), assuming that the theme of the letter occupies the object position at D-structure, it aligns with its role as the object in the transitive sentence presented in (12a). The NPs with the same semantic role of theme are structurally represented at the identical position, the object position, in both (13a) and the D-structure of (13b). It conforms to the Uniformity of Theta Assignment Hypothesis (UTAH) that was proposed by Baker (1988a: 46), as illustrated in (14).

(14) The Uniformity of Theta Assignment Hypothesis (UTAH) is a theoretical construct in linguistics.

The D-structure level exhibits a correspondence between the structural relationships of items and their thematic relationships, such that identical structural relationships reflect identical thematic relationships.

According to the Universal Theta Role Hypothesis (UTAH), a given thematic role is systematically associated with a specific syntactic position at the level of D-structure. The Agent is commonly posited in the specifier position of IP as an exogenous argument of the verb, while the theme is consistently posited in the complement position as an endogenous argument of the verb. Both (39a) and (39b) exhibit the phenomenon whereby the letter designated as fulfilling the semantic function of theme assumes the object position at D-structure and fulfils the Uniform Theta-role Assignment Hypothesis (UTAH). Hence, the theoretical desirability of regarding the subjects of unaccusative verbs as underlying objects has been posited.

Similarly, the presumption mentioned above is extended to unaccusative verbs that lack an intransitive-transitive alternation, including but not limited to happen, exist, appear, and occur. The semantic role of the theme is assigned to the subjects of unaccusative verbs, resulting in their placement at the object position in D-structure. Therefore, the UTAH is also deemed contented. In contrast, unergative verbs exhibit a lack of allowance for the alternation between intransitive-subject and transitive-object, as exemplified in (15) and (16) by Levin and Rappaport Hovav (1995: 80, 116).

- (15) a. The children played.
 b. *The teacher played with the children.
 (cf. The teacher made the children play.)
- (16) a. Kay coughed.
 b. *The doctor coughed Kay.
 (cf. The doctor made Kay cough.)

In sentence (15a), the children are assigned the semantic role of Agent, whereas in sentence (16a), Kay is assigned the semantic role of Experiencer. As demonstrated previously, the semantic roles attributed to the subjects of unergative verbs are limited to either Agents or Experiencers. Notably, these



subjects are not associated with the objects but rather with the subjects of transitive verbs, as exemplified below.

- (17) a. The children hit Mary. (transitive--Agent)
b. The children played. (unergative--Agent)
- (18) a. Mike loves Sue. (transitive--Experiencer)
b. Mike coughed. (unergative—Experiencer)

Based on the examples mentioned above, it is reasonable to infer that the entities acting as subjects of unergative verbs are initially positioned at the surface subject position.

2. A tentative analysis of existential construction

2.1. Definition and structural templates of existentials

According to Richards and Platt (1985: 126), English existential constructions (EC) are a specific type of sentence structure that frequently conveys the presence or position of individuals, animals, objects, or concepts. In formal language, the construction involves placing an unstressed "there" in the subject position, followed by a verb (typically "be") to convey the concept of existence. The post-verbal noun phrase then assumes the role of either the actual or notional subject, followed by the locative adverbial. The construction can be categorized into three subtypes based on the verbal predicates that are present, as demonstrated below.

- (7) Be-type existential: There + BE + NP + (PP)
 - a. There is a book on the desk.
 - b. There is a man standing in the platform.
- (8) NP inside the verbal unit existential: There + V + NP + (PP)
 - a. There came a bus.
 - b. There arrived a man at the party.
- (9) NP outside the verbal unit existential: There + V + PP + NP
 - a. There walked into the room a boy.
 - b. There ran out of the bushes a grizzly bear.

(Jenkins, 1975: 46)

In addition to existential there-constructions, locative inversion is a topic of extensive discourse within the realm of existential constructions, as it fulfils the same presentational purpose of introducing a novel entity into the ongoing discourse (Bolinger, 1977; Birner, 1994, 1995; Bresnan, 1994). The locative inversion and there-insertion construction are commonly regarded as surface diagnostics for unaccusativity in English. In the context of syntax, it is observed that the locative inversion construction does not entail a transformation of the D-structure object of unaccusative verbs into an S-structure subject. Instead, the object retains its position post-verbally. The syntactic structure of locative inversion in English is exemplified in (10).

- (10) PP + V + NP
 a. On the table is an account book.
 b. On the table, there is an account book.

One could argue that locative inversion is a derivative of the existential there-insertion construction. It is evidenced by the fact that the former can be converted into the latter by introducing the word "there" between the locative prepositional phrase and the verb. However, it should be noted that not all there-constructions possess equivalents in the form of locative inversion. The rationale behind the assertion that locative inversion serves as a diagnostic tool for unaccusative syntactic configuration has been expounded by various scholars (Bresnan & Kanerva, 1989; Coopmans, 1989; Hoekstra & Mulder, 1990; Levin, 1986). The collection of verbs manifests in locative inversion construction similar to the unaccusative verb category. The locative inversion construction predominantly uses "be" as the most frequently employed verb. A salient characteristic of this construction is the presence of prototypical unaccusative verbs, including but not limited to come, go, and appear.

2.2. *Properties of existential constructions*

Numerous conjectures and postulations have been posited to explicate the internal configuration and formal characteristics of ECs. The indefinite restriction on the conventional object is a notable characteristic of ECs. There has been a claim positing that definite lexical noun phrases are not permitted to follow the existential "there" in English sentences. Existential constructions are commonly acknowledged to serve the purpose of introducing novel information. Consequently, they adhere to the overarching principle that when new information is introduced into a discourse, it should be conveyed through indefinite noun phrases.

- (11) a. There is a student in the classroom.
 b. *There is the student in the classroom.

As demonstrated previously, the sole disparity between the two instances lies in the noun phrase following the verbal predicate. The utterance denoted as (11a) features the indefinite article 'a', indicating that the identity of the student in question is unknown to the addressee. The noun phrase "the student" in (11b) is marked as definite, indicating that it has been previously mentioned or known to the audience. Sentence (11b) is considered invalid in English due to the restriction that indefinite noun phrases can only follow the word "there". The second property pertains to the intimate correlation between the existentially quantified constructions and the locative inversion constructions. Numerous linguists consider these two structures to be a variety of locative constructions, as evidenced by the works of Clark (1978), Lyons (1967), Kuno (1971), and Freeze (1992). According to their perspective, constructions featuring explicit existential and locative inversions and sentences utilizing the locative predicate, such as (12a), are all products of a standard underlying structure. This structure



involves an empty subject and a predicate phrase incorporating a locative prepositional phrase, as exemplified in (12b).

- (12) a. Two students are in the classroom.
b. [e are two students [pp in the classroom.]

The realization of the standard structure is contingent upon the selection of the subject. When the NP argument is elevated to the subject position, the result is a sentence featuring a locative predicate (12a). The locative prepositional phrase or expletive *there* undergoing subject position-raising results in either a locative inversion or an expletive existential construction, as demonstrated in (12b).

The selection of verbs is another aspect incorporated into the existential structure. In existential constructions, unaccusative verbs, including but not limited to *exist*, *happen*, *occur*, and *come*, are consistently employed alongside the copular verb *be*. Conversely, unergative verbs typically do not feature in English existential constructions. Let us examine the subsequent illustrations.

- (13) a. There arose in his imagination visions of a world empire.
b. If ever again there happens an accident like that, we'll have only ourselves to blame. (Zhang, 2002: 524)
c. *There danced a girl in the room.
d. *There was laughing a little girl.

Burzio's (1986) analysis states that unaccusative verbs typically permit the presence of post-verbal noun phrases due to their inherent lack of an external argument, which precludes the assignment of accusative cases to their internal argument. The NP that appears after the verb is derived from its complement, associated with the unaccusative verb. The unaccusative structure can be interpreted as retaining the pertinent argument in its original position within the VP complement. The verbs should convey the semantic connotations of existence, appearance, or disappearance.

2.3. *Verb types and constraints in existential constructions*

Existential constructions are not compatible with all types of verbs. Existential constructions are subject to certain constraints regarding the selection of verbs. According to Burzio (1986), Lumsden (1988), and Levin & Rappaport Hovav (1995), the utilization of *there*-constructions is restricted to unaccusative verbs that signify existence and appearance. This limitation renders the construction valuable for distinguishing between unaccusative and unergative verbs. This section provides an overview of the verbs utilized in existential constructions. Initially, attention is directed towards the general distributional characteristics of the construction, which have been identified as an unaccusative diagnostic. Subsequently, the properties that present a challenge to this analysis are discussed—the present study endeavors to employ illustrative instances to refute the purportedly unsustainable nature of the unaccusative restriction. A preliminary

synthesis of the limitations imposed on verbs in existential constructions in both English and Chinese is also provided.

2.3.1. Unaccusative verbs in existentials

Existential verbs are generally considered unaccusative, including verbs denoting existence, verbs of configuration, disappearance, and directional motion. The following examples will illustrate.

- (14) Verbs of Existence
- a. There occurred a tragic event yesterday (in the royal family).
 - b. Once upon a time, there lived a monster.
 - c. Muqian hai cunzai henduo kunnan he wenti.
Currently still exist many difficulty and problems
'There still exist many difficulties and problems.'
- (15) Verbs of Appearance, Disappearance, and Directional Motion
- a. There has just appeared another book by Chomsky.
 - b. Jintian lai-le yi wei xin tongxue.
Today come-ASP one CL new classmate.
'A new classmate came today.'
- (16) Verbs of Spatial Configuration
- a. In the place of honor there sat a toad, blacker than the blackest pitch.
 - b. Chuang shang tang-zhe yi-ge ren.
Bed on lie-ASP one CL person
'A man is lying on the bed.'
- (17) Passivized Verbs
- a. There were placed many silver spoons on the table. (existence)
 - b. There was heard a rumbling noise. (appearance)
 - c. Zhuozi shang bei fang-le yi ben shu.
Table on PASS put-ASP one CL book
'A book has been put on the table.'

Nevertheless, it is worth noting that not all unaccusative verbs are present in this particular construction. Moreover, it is essential to highlight that the intransitive utilization of ergative verbs that signify a modification in the state is generally not observed in this construction, as exemplified below.

- (18) a. *On the street of Chicago melted a lot of snow.
b. *On the top floor of skyscraper broke many windows.
c. *On the backyard clothesline was dried the weekly washing.

As shown above, unaccusatives or ergatives denoting a state change are prohibited in locative inversion constructions. The tricky thing is that Chinese ergative verbs of change of state, unlike English, can be used in locative inversion, as exemplified below.



- (19) a. Yifu shang po-le yi ge dong.
clothes on break-ASP one CL hole
'There is a hole on the clothes'.
b. *On the top of floor break many windows.

The verb break in English usually causes the object to change state. However, the Chinese verb po 'break' does not pattern with the English one. That is, it indicates the state of the clothes in which a hole emerges by being broken. When the locative PP moves to the sentence-initial position, it mainly focuses on the existential meaning, which indicates that 'there is a hole in the clothes' or 'in the clothes exists a hole.' Such a sentence pattern in Chinese functions as an existential unaccusative. Therefore, we can see such a phenomenon that Chinese ergative verbs of change of state can be used in locative inversion, while English ones cannot.

2.3.2. *Unergative verbs in existentials*

Split intransitivity has been observed to show that not all intransitive verbs are qualified as possible candidates for existential. Generally, unergative verbs do not occur in existential constructions.

- (20) a. There came a man.
b. *There danced a young girl in the ballroom.

According to split intransitivity, all the intransitive verbs participating in locative inversion constructions are unaccusatives. However, some verbs found in existential constructions are seen as unergative verbs, a property observed and discussed by Hoekstra & Mulder (1990). The examples in (21) involve various types of verbs with animate subjects, including those considered prototypical unergative verbs.

- (21) a. Into my office dashed students.
b. On the third floor worked two women called Mary and Brent.
c. At one end, in crude bunks, slept Jed and Henry.
d. In the water swam a fish.
e. Shui li you-zhe yi tiao yu.
Water in swim-ASP one CL fish
'There is a swimming fish in the river.'
(Levin & Rappaport Hovav, 1995: 224)

Unaccusative and unergative verbs like dash, work, sleep, and swim are acceptable in existential sentences. The above examples show both the locative PPs and directional PPs appearing with unergative verbs.

3. Transitive verbs in existentials

Although transitive verbs do not enter locative inversion constructions in English, as put forward by Bresnan (1994: 77), a small number of transitive verbs are still applicable in existential there-constructions and

Chinese locative inversion constructions, as shown in (22) and (23) respectively.

- (22) a. All of a sudden, there reached her ear the sound of angle voice.
 b. There crossed her mind a most horrible thought.
 (Kayne, 1979: 715)
- (23) a. Heiban shang xie-zhe liang ge zi.
 blackboard on write-ASP two CL character
 'Two characters were written on the blackboard'.
 b. Tai shang chang-zhe daxi.
 stage on sing-ASP opera
 'There is an opera being staged on.'

Based on the above examples, Belletti (1988: 4) and Haegeman (1994: 65) claim that transitive verbs do not enter into existential there-constructions. It follows that existential there-constructions in English and locative inversion constructions in Chinese constrain the employment of transitive verbs, as shown below in (24) and (25).

- (24) a. *There ate an apple Mary.
 b. *There saw three children the pigs.
- (25) *Jiaoshi li du-zhe yi ben shu.
 classroom in read-ASP one CL book
 *'In the classroom read a book'.

Based on the analysis mentioned above, it can be inferred that there-constructions are not a reliable means of distinguishing between unaccusative and unergative verbs. It is a verifiable fact that the verbs which permit locative inversion exhibit inherent unaccusative characteristics, aligning with unaccusative verbs in terms of syntax and semantics. The unaccusative verbs, which primarily denote existence, appearance, and disappearance, are typical in existential constructions. Most unergative verbs do not appear in locative inversion because the syntax prohibits inversion. Some unergatives, however, can appear in such constructions because they undergo unaccusativization. For those with directional PPs, the change of location meaning is intensified. On the other hand, those with locative PPs focus on existential meaning. In a word, specific constraints exist on unergative and transitive verbs when they participate in existential constructions.

4. Conclusion

Based on the previous cross-linguistic studies, this paper is motivated to focus on the nature of unaccusativity. Relevant issues on intransitivity have been addressed by presenting the split intransitive behaviors associated with different intransitive verbs in English and Chinese. The significant findings of the paper are as follows: Firstly, the unaccusative-



unergative distinction, arising from the Unaccusative Hypothesis in Relational Grammar, adopted later in the transformational generative framework, is untenable in describing the verbal selection restrictions in existential constructions due to the existence of unaccusative mismatches. Due to their theory-internal conviction, the dichotomous treatment of intransitive predicates is usually derived only from a fixed syntactic configuration. However, the unaccusative account of overt linguistic structure is hardly convincing because of unaccusative mismatches across languages. Thus, the best way to identify the unaccusative-unergative distinction is to keep them alive in the covert level of syntactic representations rather than to quote them as explanations for different morphosyntactic behaviors of intransitive verbs in specific overt grammatical constructions. Secondly, the interaction between the so-called unaccusative diagnostics and the various types of intransitive predicates can only be accounted for by taking unaccusative diagnostics as inherently meaningful constructions.

The unaccusative mismatches cannot be adequately explained solely by the covert syntactic level or lexical semantic properties of verbs. Instead, combining syntactic and semantic factors is necessary to account for the diverse constructional representations. Examining the diverse categories of verbs and the limitations that arise in existential contexts, it becomes apparent that the limitations imposed by unaccusative verbs in existential constructions present a challenge. Unaccusativity is not considered a fully developed notion and is more accurately characterized as an artificial or fictitious differentiation that relies on the idealized syntactic and semantic features of intransitive verbs. Thirdly, investigating the unaccusative nature presents an opportune terrain for examining the correlation between semantics and syntax. The present study examines the distributional patterns of verb types in the purported unaccusative diagnostics in both English and Chinese. The present argument posits that the proposed differentiation between unaccusative and unergative verbs, predicated upon the characteristics of the transitive subject and object, is insufficient to forecast the groupings of verbs that can be utilized in conjunction with these constructions. Existential constructions exhibit insensitivity towards the distinction between unergative and unaccusative verbs.

Additionally, the commonly held belief that existential constructions function to identify the unergative-unaccusative distinction is not viable. Analyzing the semantic limitations inherent in these constructions can provide a more comprehensive explanation of the distributional arrangements of unergatives and unaccusatives. Moreover, the acceptability of these constructions is contingent not only on their syntactic structure but also on their semantic and discursal features, including the verbs and other constituents involved.

Acknowledgment

Funding: The Talent Inspiring Project from the Anhui University of Chinese Medicine supported this paper. Project Number: 2022rcyb022

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