1 Introduction

Kuno and Takami (2004:116) make the remarkable observation that some unaccusative verbs can occur with cognate objects.

(1) a. The tree grew a century’s growth within only ten years.
    b. The stock market dropped its largest drop in three years today.
    c. Stanley watched as the ball bounced a funny little bounce right into the shortstop’s glove.
    d. The apples fell just a short fall to the lower deck, and so were not too badly bruised.

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This observation contradicts the widely held generalization about the occurrence of cognate objects, which Kuno and Takami (2004:107) state as the Unergative Restriction on the Cognate Object Construction.

(2) **Unergative Restriction on the Cognate Object Construction**

Only unergative verbs can appear in the cognate object construction. No unaccusative verbs can.


A primary purpose of this squib is to argue that the fact in (1), though opposing (2), does not contradict the assumption from which (2) is drawn, namely, the Unaccusative Hypothesis (Perlmutter 1978; henceforth, the UH). The UH divides intransitive verbs into unergative and unaccusative ones, and differentiates their subject positions in underlying structures.

(3) **The Unaccusative Hypothesis**

Unergative and unaccusative verbs are syntactically differentiated; while unergative verbs have nonderived subjects (i.e. surface subjects are generated as subjects at D-structure), surface subjects of unaccusative verbs originate as direct objects. (Kuno and Takami 2004:19)

I will show in the squib that cognate objects like those in (1) are not argumental but adverbial; hence, they occupy adjunct position rather than object position. The assumption that cognate objects may occur in adjunct position as well as in object position will forge a way out of the long-lasting controversy over whether cognate objects are arguments (Massam 1992, Tenny 1994, Macfarland 1995, Matsumoto 1996) or adjuncts (Iwakura 1976, Jones 1988, Moltmann 1989). Furthermore, I will show that not all unaccusative verbs can occur with an adverbial cognate object, and I will suggest some ways to deal with this fact.

2 **Adverbial Cognate Objects**

The verbs in (1), repeated here, are obviously unaccusative, because they represent nonvolitional events involving nonhuman subjects, and they express the change of state or location of their referents (see Perlmutter 1978, Perlmutter and Postal 1984).

(4) a. The tree grew a century’s growth within only ten years.

b. The stock market dropped its largest drop in three years today.

c. Stanley watched as the ball bounced a funny little bounce right into the shortstop’s glove.\(^1\)

\(^1\) Brent De Chene (pers. comm.) has pointed out that the verb *bounce* in (4c) might be an unergative verb. As evidence for this, he notes that, like the
d. The apples fell just a short fall to the lower deck, and so were not too badly bruised.

Interestingly, the cognate objects in (3) can be replaced by objectlike DPs that are morphologically unrelated to the verbs and are surely not cognate objects (Christopher Tancredi, pers. comm.).

(5) a. The tree trunk grew a century’s expansion in only ten years.
b. The stock market dropped 250 points today.
c. The ball bounced a funny little curve right into the shortstop’s glove.
d. The apples fell the length of my arm.

The italicized DPs in (5) can be approximately paraphrased by using adverbial PPs representing the resultant extent of the events, as in (6).²

(6) a. The tree trunk grew by a century’s expansion in only ten years.
b. The stock market dropped by 250 points today.
c. The ball bounced with a funny little curve right into the shortstop’s glove.³
d. The apples fell {by/to} the length of my arm.

unergative verbs in (i), bounce can be followed by a resultative small clause, as illustrated in (ii). This does not hold true of unaccusative verbs, as shown in (iii).

(i) a. They laughed [him off the stage].
   b. Tom danced [her into Jim’s arms].

(ii) The ball bounced [the papers off the desk].

(iii) a. *They fell [him off the stage].
   b. *The visitors arrived [the table out of the living room].

² The extent DPs in (5) might seem to be arguments in light of the fact that the apparently similar DP in (ia) can be passivized. (I thank an anonymous reviewer for drawing my attention to this problem.)

(i) a. Clyde ran many miles.
   b. Many miles were run by Clyde.

However, there are a few syntactic differences between the argumental spatial DP in (ia) and the extent DPs in (5) besides the passivizability difference. For instance, the spatial DP in (ia), but not the extent DPs in (5), can be replaced by a DP not denoting extents (Morzycki 2001).

(ii) a. Clyde ran the race.
   b. *The tree trunk grew many year rings.

Moreover, the paraphrase using prepositions in (6) is not possible with the spatial DP in (ia).

(iii) *Clyde ran by ten miles.

³ The italicized phrases in (5c) and (6c) might not be extent phrases. However, the verb bounce can take a true extent DP.

(i) The ball bounced several yards farther before she could catch up with it.

See also footnote 1 regarding the treatment of bounce.
The cognate objects in (4), as well as the extent DPs in (5), cannot be passivized, as shown in (7) and (8).

(7)  a. *A century’s growth was grown within only ten years by the tree trunk.
    b. *The largest drop in three years was dropped by the stock market today.
    c. *A funny little bounce was bounced right into the short-stop’s glove by the ball.
    d. *Just a short fall was fallen to the lower deck by the apples.

(8)  a. *A century’s expansion was grown in only ten years by the tree trunk.
    b. *Two hundred and fifty points were dropped by the stock market today.
    c. *A funny little curve was bounced right into the short-stop’s glove by the ball.
    d. *The length of my arm was fallen by the apples.

In this respect, the cognate objects in (4) clearly contrast with more argument-like objects such as those in (9), which can be passivized, as demonstrated in (10), provided that necessary pragmatic conditions are adequately met (Macfarland 1995, Kuno and Takami 2004).

(9)  a. The baby slept a sound sleep.
    b. The woman lived a happy life.
    c. The boy dreamed a terrifying dream.

(10) a. A sound sleep was slept by the baby.
    b. A good life was lived by Susan.
    (Rice 1988:210)
    c. The same dream was repeatedly dreamed by Mary.

Another obvious difference between the cognate objects in (4) and the argumental ones in (9) lies in the \textit{wh}-interrogatives used to form \textit{wh}-questions. While the argumental cognate objects in (9) can be questioned by the interrogative nominal \textit{what kind of}, as shown in (11), those in (4) cannot. Instead, they take the interrogative adverbial \textit{how much} or \textit{how far}, as illustrated in (12).

(11) a. What kind of sleep did the baby sleep?
    b. What kind of life did the woman live?
    c. What kind of dream did the boy dream?

(12) a. \{How much/How far/*What kind of growth\} did the tree grow in ten years?
    b. \{How much/How far/*What kind of drop\} did the stock market drop today?
    c. \{How much/How far/*What kind of fall\} did the apples fall to the lower deck?

All these facts indicate that the cognate objects in (4) are not argumental, but adverbial. Hence, English has adverbial cognate ob-
jects in addition to argumental ones. The presence of the two classes of cognate objects is consistent with Pereltsvaig’s (1999, 2001) claim based mostly upon such languages as Russian, Hebrew, and Vietnamese (see section 5).

The UH in (3), which Kuno and Takami (2004) eventually attempt to dispute, assumes that the superficial subject of an unaccusative verb originates in the direct internal argument position (the object position) in VP, as shown in (13), whereas that of an unergative verb occurs in the external argument position, as shown in (14). The exact positions of adjuncts are not crucial to the argument here, but I assume for the sake of explicitness that an adjunct is immediately dominated by VP and is a sister of V’ (Chomsky 1995:331).

(13) Unaccusative

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(13) Unaccusative

VP
  /\   \
/  \  / \
V'  adjunct
  /\   \
/  \  / \
V  subject
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(14) Unergative

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(14) Unergative

vP
  /\   \
/  \  / \
subject VP
  /\   \
/  \  / \
V'  adjunct
  /\   \
/  \  / \
V
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In the unaccusative VP in (13), object position is already occupied by a superficial subject. It has therefore been widely assumed, as stated in (2), that unaccusative verbs cannot take a cognate object in object position. Notice, however, that adjunct position is still available for adverbial phrases. Given that the cognate objects in (4) are adverbial, they can occur in adjunct position without competing with a superficial subject for object position. Hence, the adverbial cognate objects in (4) can be compatible with the unaccusative verbs.

Another unaccusative verb that can be followed by a cognate object is *die*, as exemplified in (15a). The cognate object in (15a) can be roughly paraphrased by a manner adverb, as shown in (15b), and cannot be passivized, as shown in (15c). The cognate object of *die* may also be supposed to be adverbial.
(15) a. Mark Twain died a gruesome death.  
   (Kuno and Takami 2004:111)  
  b. Mark Twain died gruesomely.  
  c. *A gruesome death was died by Mark Twain.  

The cognate objects in (4) and the one in (15a), though both adverbial, have different interpretations; the former represent the resultant extent of the action, whereas the latter represents the manner of the achievement. This interpretation difference is supposed to come from the distinct classification of the verbs’ eventuality. The verbs in (4), such as grow, drop, and fall, are accomplishment verbs in the sense of Vendler (1967), and the one in (15a), die, is an achievement verb. An achievement verb and an accomplishment verb both represent an event that results in a change of state, yet the former, but not the latter, expresses that the change occurs instantaneously. Thus, the meaning of an achievement verb itself designates the resultant end state, which comes into being simultaneously with the event expressed by the verb. The achievement verb die, for example, represents the resulting end state of being dead. Since achievement verbs inherently represent resulting final states, they cannot cooccur with another result expression like a resultative secondary predicate, as is clear from *He died stiff and *Willa arrived breathless, where the adjectives are intended as resultative phrases (see Levin and Rappaport Hovav 1995: 56). Similarly, when an achievement verb occurs with a cognate object, the cognate object cannot have the result interpretation, including that of resultant extent. Thus, the cognate object of die in (15a) rules out the result reading and instead receives that of a manner adverb related to the modifying adjective.

In contrast, an accomplishment verb does not necessarily represent an end state, and it may take an expression that further specifies its end state. For example, the accomplishment verb grow can take a resultative (e.g., The tree grew tall), a goal phrase (The seed grew into a tree), or an extent phrase (The tree grew ten inches), to further specify the resulting state of growth. In the same vein, the cognate objects in (4) specify the resulting states—in this case, the resulting extents.

3 Ambiguity of Unergative Verbs’ Cognate Objects

Since cognate objects may occur in adjunct position, the unergative VP structure in (14) provides two possible positions for cognate objects: object position (the vacant position on the right side of V in (14)) and adjunct position. The availability of two positions for cognate objects reconciles the two opposing assumptions about their status: cognate objects as arguments versus cognate objects as adjuncts.

4 Regarding the interpretation of cognate objects, see Moltmann 1989 and Macfarland 1995, for example.
Under the analysis proposed here, cognate objects can, in principle, occur in either of the two positions. Actually, cognate objects of unergative verbs can basically be understood ambiguously, roughly with the result reading or with the modification reading (e.g., manner, duration, frequency, extent), with the proviso that one of the two readings is likely to be preferred depending on the meaning of the particular verb, the meaning of the object modifier, or some other factors. The result reading corresponds to the interpretation of the cognate object in object position, and the modification reading, to its interpretation in adjunct position. The examples in (16) can in fact be understood ambiguously as having both readings.

(16) a. The woman lived a happy life.
   b. The baby slept a very sound sleep.
   c. The resting girl dreamed a secret dream.

Sentence (16a), for example, means either that the woman lived in a happy way or that her life (though it may have had its ups and downs) resulted in her being happy. Similarly, (16b) means either that the baby slept deeply or that the baby had a deep and good sleep.

The passive counterparts to the sentences in (16), however, tend to give preference to the result reading, for the cognate objects with the result reading originally occupy object position.

(17) a. A happy life was lived by the woman.
   b. A very sound sleep was slept by the baby.
   c. A secret dream was dreamed by the resting girl.

As is evident from (18), unergative verbs such as laugh and dance can be modified by a for-phrase, but not by an in-phrase. This fact indicates that the unergative verbs are atelic, or that they describe nondelimited events, to use Tenny’s (1994) term.

(18) a. Mary laughed {for an hour/*in an hour}.
   b. Josie danced {for an hour/*in an hour}.
   c. Martha sang {for an hour/*in an hour}.

(all from Tenny 1994:39)

Interestingly enough, Tenny (1994:39) reports that when an unergative verb occurs with a cognate object, both a for-phrase and an in-phrase are possible.

(19) a. Mary laughed a mirthless laugh {for an hour/in an hour}.
   b. Josie danced a silly dance {for an hour/in an hour}.
   c. Martha sang a joyful song {for an hour/in an hour}.

Macfarland (1995:48) strictly limits the range of cognate objects, by “incorporating into the definition of the cognate object construction the constraint that the cognate object must be a result object.” This limitation obviously disregards one of the two readings, the adverbial one, a fact pointed out by many traditional and generative grammarians, such as Visser (1963), Quirk et al. (1985), Zubizarreta (1987), Jones (1988), and Moltmann (1989).
This means that the unergative verbs occurring together with the cognate objects in (19) are either delimited or nondelimited. The ambiguity strongly suggests that the cognate objects taken by the unergative verbs play two different syntactic roles and correspondingly have two distinct semantic meanings. One role is that of a measuring-out argument, which changes the eventuality of the verbs from nondelimited to delimited, and the other is the role of a modifier adjunct, which just elaborates the meanings of the verbs and does not alter their eventuality. The former role has the result meaning and is compatible with an in-PP, whereas the latter has the modification meaning and is compatible with a for-PP.

4 Adverbial Cognate Objects as Accusative Adverbials

The occurrence of adverbial cognate objects in adjunct position enables unaccusative verbs to take this type of cognate object. It is not the case, however, that any unaccusative verb can take an adverbial cognate object. The unaccusative verb in (20) cannot occur with a cognate object.

(20) a. *The coup d’état occurred a sudden occurrence in the Middle East.
   b. *The train arrived a punctual arrival.
   c. *The submarine emerged an abrupt emergence.
   d. *The sun appeared a bright appearance this morning.
   e. *He existed a dangerous existence.

A clue to distinguishing the unaccusatives that can take cognate objects from those that cannot seems to lie in Case assignment. The adverbial cognate objects in (4), as well as the objectlike extent DPs in (5), can be supposed to bear accusative Case. Evidence for this is that in the nominalization of the verbs, the cognate objects are accompanied by the preposition of, which is the realization of accusative Case in nominalization.7

(21) a. The tree’s growth of a century’s growth in only ten years (surprised me).
   b. The stock market’s drop of its largest drop in three years (was a shock to me).

6 It is noteworthy that Curme (1931:98–99) calls a cognate object a cognate accusative.
7 Cognate objects in German take accusative Case.

(i) a. Maria ist einen weiten Sprung gesprungen.
   ‘Maria jumped a long jump.’
   b. Hans ist einen qualvollen Tod gestorben.
   ‘Hans died a painful death.’
(Moltmann 1989)
c. The ball’s bounce of a funny little bounce into the short-stop’s glove (cannot be forgotten).

d. The apples’ fall of just a short fall to the lower deck (relieved me).

In contrast, the verbs in (20) cannot be followed by any type of DP, indicating that they have no potential to assign a Case.⁸

(22) a. *The coup d’etat occurred {a riot/Mideast peace}.
b. *The train arrived {the passengers/applause}.
c. *The journalist emerged {the problem/a sensation}.
d. *The sun appeared {the eastern sky/light}.
e. *He existed {a good life/a difficult condition}.

Like the unaccusatives that can take cognate objects, unergatives can be followed by a certain type of DP (see (23)) and have the type of nominalization in which the cognate object is accompanied by of (see (24)). Unergatives are also supposed to be able to assign accusative Case somehow.

(23) a. Pauline smiled her thanks.
    (Levin 1993:98)
b. She slept {ten hours/the long afternoon}.
c. He dreamed the actual execution, including his head being separated from his body.

(24) a. The girl’s smile of a genuinely cheerful smile (warmed our hearts).
b. The baby’s sleep of a deep sleep (delighted his mother).
c. His dream of a funny dream (is forever unforgettable).

Assuming that cognate objects are somehow assigned accusative Case and that accusative Case is assigned only once, it straightforwardly follows that cognate objects do not occur with transitive verbs and that unergatives may take at most one cognate object even though their VP structure has two positions available for cognate objects, the object and adjunct positions.

How accusative Case is assigned to adverbial cognate objects is a topic far beyond the scope of this squib, but a few possibilities suggest themselves. One possibility is to assume, along with Perels-tvaig (2000), that adverbial cognate objects are accusative adverbials, to which accusative Case is assigned in some functional maximal pro-

⁸ The unaccusative verb die can precede a noun phrase. Example (ia), cited from the Oxford English Dictionary (2nd ed.), though very archaic, contains the noun phrase the death; this noun phrase is distinct from a cognate object, which always requires some modifier, as illustrated in (ib). Another candidate is a noun phrase like the one in (ic), which is sometimes taken as a depictive secondary predicate.

(i) a. to die the death
    b. to die a *(sad) death
       (see Huddleston and Pullum 2002:673)
    c. He died a beggar.
jection. Another possibility is to assume that an accusative adverbial is assigned “pseudo” accusative Case by the verb that precedes it, as long as the two are linearly adjacent. I leave this issue to future investigation.

5 Conclusion

Kuno and Takami’s (2004) observation that some unaccusative verbs can take cognate objects is very significant to the extent that it demonstrates that the Unergative Restriction in (2) does not obtain as stated. However, their observation does not contradict the Unaccusative Hypothesis in (3), from which the Unergative Restriction in (2) is drawn.

Since it has been demonstrated that some unaccusative verbs can take cognate objects, the Unergative Restriction in (2) does not hold as stated. It should be modified to specify that only unergative verbs can take cognate objects with an interpretation similar to that of “result objects” (resultant state or product); unaccusative verbs may take cognate objects with adverbial meanings (manner, extent, etc.).

The existence of adverbial cognate objects in English fills the gap in Pereltsvaig’s (1999, 2001) claim that while Russian, Vietnamese, and Hebrew have two types of cognate objects, argumental and adverbial, English has only argumental ones.

References


