

# Generic and Existential Readings of Bare Plurals, and Contextual Factors

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Cohen and Erteschik-Shir (2002) propose that topic/focus structure determines the generic and existential interpretations of bare plurals. They propose that topic bare plurals are interpreted generically, whereas focused bare plurals are interpreted existentially. They further propose that individual/stage-level predicate distinction plus other predicate type distinctions, argument/adjunct distinction, and presuppositional/non-presuppositional verb distinction play a role in determining the topic/focus structure of a sentence. If we delve into the data more closely, however, it is revealed that these proposed determining factors do not apply across the board. In this context, one purpose of this paper is to point out some problems of Cohen and Erteschik-Shir's account on bare plural interpretation. The other purpose is to present a new comprehensive approach, based on notions such as "current situation satisfaction," "sloppy reading," and "context and world knowledge," which cause the process of domain narrowing of quantification.

**Key words:** bare plurals, generic/existential reading, individual/stage-level predicates, topic/focus structure, current situation satisfaction, sloppy reading, context and world knowledge, domain narrowing

## 1. Introduction

As generally accepted, bare plurals (henceforth, BPs) are interpreted both generically and existentially:

- (1) a. Tigers are ferocious.
- b. Tigers are in that zoo.

Given no special context, the prominent, and probably the only avail-

able, reading of (1a) is generic while that of (1b) is existential. That is, (1a) means that, in general, tigers are ferocious, and (1b) means that some tigers are in that zoo.

BPs in object position are also interpreted generically and existentially:

- (2) a. Siegfried and Roy love tigers.  
 b. Siegfried and Roy live with tigers.

(2a) is interpreted generically while (2b) is read existentially.

Concerning determining factors for these two interpretations, a number of linguists have proposed various accounts. For example, Carlson (1977) argues that individual-level predicates (henceforth, I-level predicates) always derive a generic reading, whereas stage-level predicates (henceforth, S-level predicates) derive an existential reading. However, as pointed out by Diesing (1992) and Kratzer (1995) among others, the following examples show that S-level predicates may also derive a generic reading:

- (3) a. Children are sick. (de Smet 1997)  
 b. Plates are dirty. (Kiss 1998)

(3a) says that children in general tend to be sick, and (3b) also says that, in general, plates tend to be dirty.<sup>1)</sup>

Taking another approach, McNally (1998), Dobrovie-Sorin and Laca (1996), Dobrovie-Sorin (1998), and Glasbey (1998), among others, propose that “location” plays an important role in deriving an existential reading:

- (4) a. Farmers were sleeping in the street.  
 b. Butter was melting on a plate.  
 c. Monkeys live in that tree.

According to them, the predicates in (4) are all “localized” so that all of the sentences receive an existential interpretation.

Again, however, as pointed out by Cohen and Erteschik-Shir (2002) (henceforth, C & E), counterexamples to this position exist as follows:

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1) It will be shown later in section 3.2. that (3a, b) can also receive an existential reading given a specific context.

- (5) a. Investors are interested.
- b. Family members are proud of John.
- c. Voters are undecided.
- d. Guests are reluctant to confirm.

None of the predicates of the sentences in (5) is localized, but all of them receive an existential interpretation.

Given this, C & E propose that topic/focus structure determines the interpretation of BPs. As mentioned by C & E, linguists such as Laca (1990), Kamp and Reyle (1993), and Krifka et al. (1995) have already noted the importance of topic/focus structure in the interpretation of BPs. And yet, none of them has proposed a complete theory of BP interpretation based on topic/focus structure.

C & E also propose that predicate type distinctions including I/S-level predicate distinction and argument/adjunct distinction play an important role in determining the topic/focus structure of a sentence, which decides the interpretation of a BP. They further resort to presuppositional/non-presuppositional verb distinction, in order to account for counterexamples found in the interpretation of object BPs.

In the following paragraphs, C & E's account will be discussed, and some problems of their account will be exposed and examined. A new approach will also be proposed, one which accounts for the phenomenon comprehensively, based on notions such as "current situation satisfaction," "sloppy reading," and "context/world knowledge," which ideas or perceptions cause the process of domain narrowing of quantification.

This paper is organized as follows: In section 2 C & E's theory will be reviewed, and in section 3 some problems of their account will be discussed. In section 4 a new comprehensive approach will be presented.

## 2. Cohen and Erteschik-Shir's Account

### 2.1. Topic/Focus and Argument/Adjunct Distinction

The main thesis of C & E's theory is that topic BPs are interpreted generically and focused BPs are interpreted existentially. Have a look at the following examples from C & E (2002: 140):

- (6) a. Boys are brave.  
 b. Boys are present.  
 c. Boys are hungry.

According to these researchers, every sentence must have a topic, and the only available topic in (6a) is the subject, since it contains an I-level predicate. Hence, the topic BP is interpreted generically. As for (6b), the BP could receive both a generic and existential reading, since the sentence includes an S-level predicate, which introduces a “spatiotemporal” variable. If this variable works as a topic and the subject BP is focused, it is read existentially. If the BP is a topic, then it is read generically. They say, however, that the predicate in (6b) is perceived to indicate a temporary property, so that the generic reading is unacceptable. They compare (6b) to the following example (7), which is interpreted generically. Here, the difference is that the predicate in (7) indicates “a property that is expected to hold well into the future” (C & E: 141).

- (7) Penguins are present in Antarctica.

Then, what about (6c), which also includes an S-level predicate? Is only the existential interpretation available for (6c), since, unlike the predicate *present*, the predicate in (6c) could indicate only a temporary property? Consider the following examples from C & E:

- (8) a. In the dining room, John was hungry.  
 b. ?In the dining room, John was present.

Since adjuncts can occur sentence initially but arguments cannot, the location *in the dining room* in (8a) is an adjunct while that in (8b) is an argument. They argue that adjuncts are typically not topics. Consequently, the spatiotemporal variable in (6c) is hard to be construed as a topic, and the BP must be the topic. Consequently, similar to (7), the predicate in (6c) must indicate a non-temporary property, and the BP must be interpreted generically. That is, the only available reading for (6c) is that in general, boys tend to be hungry.

Similarly, none of the following examples can be interpreted existentially:

- (9) a. Plates/children are dirty. (Kiss 1998)  
 b. Shirts are still damp. (McNally 1998)  
 c. Committee members were bored. (McNally 1998)  
 d. People in the office were in a good mood. (McNally 1998)  
 e. Children are sick. (de Smet 1997)  
 f. During the class, farmers were hungry/tired/cheerful.  
 (Dobrovie-Sorin and Laca 1996, Dobrovie-Sorin 1998)  
 g. Yesterday butter was old/fresh. (Dobrovie-Sorin and Laca 1996,  
 Dobrovie-Sorin 1998)

C & E argue that in all the above sentences, the spatiotemporal variable introduced by the S-level predicate is an adjunct. Hence, it cannot be a topic and the BP should be a topic, which leads to a generic interpretation.

## 2.2. Predicate Types

C & E also argue that the BPs in existentials receive only existential, not generic, interpretations:

- (10) a. There were nametags near every plate.  
 b. There were unicorns in the garden.  
 c. There were firemen in the blazing inferno.

They argue that existentials predicate a property of a stage topic. Since this stage topic is the spatiotemporal variable, the BP must receive an existential reading.

They further argue that unaccusative verbs also select locative arguments, so that BP subjects of intransitive unaccusatives could be interpreted existentially if this locative argument is a topic, like the following:

- (11) a. POLICEMEN appeared/arrived (at the scene of the crime).  
 b. GUESTS left (because of the weather).

As for the spatiotemporal variable introduced by stage-level unergative verbs, it is not an argument but an adjunct so that it cannot be a topic. And yet, they claim, that in an appropriate context, an unergative verb could indicate a change of state and this spatiotemporal variable can be construed as a topic. Hence, the BPs in (12B) receive existential inter-

pretations:

- (12) A: What happened during the earthquake?  
 B: CHILDREN cried, PEOPLE yelled, and DOGS barked.

So far, we have seen only the cases where the so-called spatiotemporal variable works as a topic and this leads the BP to receive an existential interpretation. However, C & E show that if a sentence contains more than two arguments, it should not necessarily have a spatiotemporal argument variable in order for the BP to be interpreted existentially. First, consider the following examples (C & E: 144):

- (13) a. Student guides took visitors to two museums.  
 b. Spectators put contributions in the hat.

In the above two sentences, which contain three arguments each, the locational goal argument may be a topic and the subject BP in focus is interpreted existentially.

Then, what about sentences with I-level predicates? Have a look at the following examples from C & E:

- (14) a. Monkeys live in that tree.  
 b. Family members are proud of John.  
 c. Criminals own this club.

According to them, the same reasoning applies to I-level predicates. That is, if a predicate denotes more than a two-place relation, the subject may be in focus and receive an existential interpretation, since one of the other arguments may be a topic. Hence, in (14a), for example, *that tree* is the topic and *monkeys* is in focus, which leads to an existential interpretation. Similarly, in (14b, c), *John* and *this club* are the topics, and *family members* and *criminals* are interpreted existentially.

### 2.3. Stressed Subjects and Objects

Diesing (1992) and Kratzer (1995) argue that only in passives and unaccusatives, whose subjects originate inside the VP, hence are subject to existential closure, as the following, the stressed focused subject BPs re-

ceive existential interpretations:

- (15) a. She thinks that COUNTEREXAMPLES are known to us.  
 b. PONDS belong to this lot.  
 c. POLICEMEN arrived at the scene of the crime.

However, Kratzer (1995) argues that the following stressed focused subject BP receives a generic reading:

- (16) FIREMEN are altruistic.

Faced with this counterexample, C & E argue that the subject of (16) is not a focus but a contrastive topic. Therefore, it is in line with their proposal that topic BPs are read generically. That is, they claim that (17a) questions the subject of (15a) felicitously. (17b), however, does not felicitously question the subject of (16), while (17c) does:

- (17) a. What does she think is known to us (about this matter)?  
 b. #Who is altruistic?  
 c. I wonder whether I should encourage firemen, paramedics, or police officers to take part in charity activities. Who is altruistic?

Link (1995), while agreeing with C & E's view that all BP topics are generic, argues that whereas the focused object of (18a) is existential, that of (18b) is generic:

- (18) a. Cowboys carry GUNS.  
 b. Frogs catch FLIES.

Again, faced with this counterexample, C & E claim that the objects of both sentences are interpreted existentially. They claim that the monotonicity test confirms this. That is, (19a, b) entail (18a, b) respectively:

- (19) a. Cowboys carry large guns.  
 b. Frogs catch fruit flies.

Link rebuts that the two objects in (18) are interpreted differently.

That is, (18a) is interpreted roughly as in (20), but (18b) is interpreted as in (22), not as in (21):

(20) In general, if  $x$  is a cowboy, there is a gun  $y$  s.t.  $x$  carries  $y$ .

(21) In general, if  $x$  is a frog, there is a fly  $y$  s.t.  $x$  catches  $y$ .

(22) In general, if  $x$  is a frog and  $y$  is a fly and  $y$  is around  $x$ ,  $x$  catches  $y$ .

Therefore, Link concludes that the object of (18a) is existential, but the object of (18b) is generic.

And yet, C & E claim that the correct interpretation of (18b) is not (22), but (23). Hence, they claim that their view still holds with examples like (18a, b).

(23) In general, if  $x$  is a frog and  $s$  is a stage, there is a fly  $y$  s.t.  $x$  catches  $y$  on stage  $s$ .

#### 2.4. Presuppositional/Non-presuppositional Verbs

Let us first consider the following examples:

(24) a. John hates lawyers.

b. John knows lawyers.

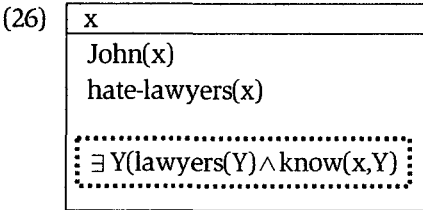
The object BP in (24a) is interpreted only generically, whereas the object BP in (24b) is interpreted both existentially and generically. Where does this difference come from?

Some linguists such as Diesing (1992), Kratzer (1995), Dobrovie-Sorin (1998), and Laca (1990) among others have proposed some analyses based on such notions as scrambling, spatial localization, and topic. However, as discussed by C & E, none of these proposals works. Laca proposes, in line with C & E, that *hate*-type verbs require their objects to be topics. and so the topic objects of sentences like (24a) should receive generic interpretations. And yet, Laca doesn't provide any rationale for the requirement. Furthermore, C & E demonstrate that the object of *hate* may be a focus, as in the following:

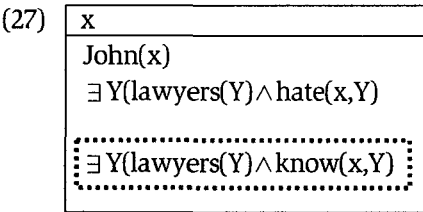


- (25) A: Whom does John hate?  
 B: John hates PETER.

In this context, C & E propose that presuppositional verbs such as *hate* cannot receive an existential reading. Using the framework of van der Sandt’s (1992) presupposition theory based on DRT (Discourse Representation Theory), they provide an account as follows. That is, (24a) could be represented as in (26):<sup>2</sup>



After type-shifting, DRS (26) becomes DRS (27):



According to C & E, DRS (27) asserts that there are lawyers whom John hates, and presupposes that there are lawyers whom he knows. The problem is, however, that what (27) represents is not the meaning of (24a). What is required here is that the same hated lawyers be known by John. DRS (27) could be verified even if John does not know the lawyers he hates, so long as he knows some lawyers. Consequently, the BP object in (24a) should be interpreted only generically. If we compare (24a) with (28), any lawyer that verifies the DRS for (28) is presupposed to be known by John, since *some lawyers* introduces a discourse referent, but *lawyers* does not, as argued by C & E.

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2) The conditions inside the dotted boxes in both (26) and (27) represent presuppositions.

(28) John hates some lawyers.

C & E provide more examples of presuppositional verbs, as follows:

- (29) a. John likes honest lawyers.  
 b. John recognizes crooked lawyers.

According to C & E, A's liking or disliking B presupposes that A knows B, and A's recognition of B presupposes that A sees B.

In contrast, neither *own* nor *be near* in (30) is a presuppositional verb. No relation between *John* and *boats* in (30a) or between *this house* and *lakes* in (30b) is presupposed. Hence, the BP objects in (30a, b) are read existentially, contrary to the BP in (24a).

- (30) a. John owns boats. .  
 b. This house is near lakes.

### 3. Problems of Cohen and Erteschik-Shir's Account

#### 3.1. Topic/Focus and Argument/Adjunct Distinction

As discussed in section 2.1., C & E propose that topic/focus structure determines the generic and existential interpretations of BPs. That is, topic BPs receive generic readings, whereas BPs in focus receive existential readings. In case of S-level predicates, they introduce a spatio-temporal variable, which may be a topic of the sentence, if it is an argument, not an adjunct. Hence, the BP subject of a sentence containing an S-level predicate which introduces a spatiotemporal argument variable, may be in focus and interpreted existentially.

Although C & E argue for topic/focus structure as the main determining factor for BP interpretation as above, neither focus nor, especially, topic is a well-established concept, as also pointed out by Kamp & Reyle (1993). Furthermore, leaving aside the problem of vagueness in the notions, C & E's argument based on these notions is not without counter-examples.

First of all, topic BPs do tend to be interpreted generically, but they may also be interpreted existentially, depending on the context. Further-

more, BPs in focus may be interpreted generically as well as existentially. Take a look at the following examples:

- (31) A: What sport do financially established people play?  
 B: Financially established people play GOLF.

- (32) A: Who play golf?  
 B: FINANCIALLY ESTABLISHED PEOPLE AND PEOPLE WITH TOO MUCH TIME ON THEIR HANDS play golf.

- (33) A: We need good lawyers to win this case.  
 B: Don't worry. JOHN KNOWS (good) lawyers.

In (31B), the BP is a topic and receives a generic interpretation. However, in (32B), the complex BP NP is in focus, but it could be read generically as well as existentially.<sup>3)</sup> As well, although the BP in (33B) is a topic, it receives an existential, not a generic, interpretation, contrary to C & E's argument.

Second, as discussed in section 2.3, C & E claim that (34A) cannot be an appropriate question for (34B). That is, in sentences like (34B), the BP can only be a contrastive topic, not a focus, and an appropriate question for (34B) should be something like (34A'). Therefore, their generalization that generically interpreted BPs must be topics holds.

- (34) A: #Who is altruistic?  
 B: FIREMEN are altruistic.  
 A': I wonder whether I should encourage firemen, paramedics, or police officers to take part in charity activities. Who is altruistic?

Intuitively, and contrary to C & E's claim, (34A) is an appropriate question for (34B). Furthermore, in the following example (35), it seems

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3) As for (32), C & E might argue that the generic reading is not available for the BP in (32B), and that if the BP is to be interpreted generically, (32A) cannot be an appropriate question for (32B) and the BP should be a contrastive topic, not a focus, just like they have argued for the BP in (34B). And yet, we can observe that (32A) could be an appropriate question for (32B) regardless of whether the BP is read generically or existentially, and that the BP in (32B) is in focus, as will also be observed for the BPs in (34B) and (35B).

obvious that the complex BP NP is in focus, but it is interpreted generically, not existentially.<sup>4)</sup>

(35) A: Who do you think are altruistic?

B: I think that FIREMEN, PARAMEDICS, AND MOTHERS are altruistic.

Also, consider the following, which is a replica of the question-answer pair (34A', B):

(36) A: I wonder who own most of the land in this area, Europeans or Americans. Who are they?

B: AMERICANS own most of the land in this area.

According to C & E's logic, the BP in (36B) should be a contrastive topic and be interpreted generically. However, the BP is interpreted existentially, not generically. That is, what (36B) means is that some Americans own most of the land in this area.<sup>5)</sup>

Another thing to consider is C & E's argument based on the distinction between an argument and an adjunct variable. Have a look at the following examples recited from section 2.1:

(37) a. Boys are present.

b. Boys are hungry.

(38=8) a. In the dining room, John was hungry.

b. ?In the dining room, John was present.

C & E argue that since adjuncts can occur sentence initially but arguments cannot, the location *in the dining room* in (38a) is an adjunct while that in (38b) is an argument, as the question mark for (38b) in-

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4) (31-33) and (35-36) are my own examples, whereas (34B) is Kratzer's (1995) example provided as a counterexample to C & E's analysis. (34A, A') are utterances added by C & E to counterattack Kratzer's argument, as discussed in section 2.3.

5) One reviewer points out that the stressed BP in (34B) as an answer to (34A') is a contrastive focus, not a contrastive topic. The BP in (36B) is also a contrastive focus. Regardless of whether they are contrastive topics or foci, they still pose as a problem for C & E's analysis, since their interpretations are different despite their being topics or foci at the same time.

dicates its inappropriateness. They also argue that adjuncts are typically not topics, but arguments are. Hence, in (37a), the spatiotemporal variable is an argument and can be a topic, and the BP can be read existentially. And yet, their generalization is not without counterexamples, as can be observed in (39):

- (39) a. Bodyguards are ready.  
 b. In the dining room, John was ready.

As the appropriateness of (39b) indicates, the location *in the dining room* in (39b) is observed to be an adjunct, so that the spatiotemporal variable in (39a) with the same predicate cannot be a topic. Hence, the BP must be a topic and interpreted generically. However, intuitively, the BP could be read existentially, similar to the BP in (37a).

One could conclude from this section that, contrary to C & E's argument, the topic/focus structure of the sentence is not an absolute determinant for the BP interpretation. The argument/adjunct distinction proposed to account for the difference between sentences like (37a) and (37b) is also problematic.

### 3.2. Predicate Types

As discussed in section 2.2., C & E argue that existentials introduce a spatiotemporal variable, which works as a stage topic. Unaccusative verbs also select a locative argument, which could work as a topic. Hence, existential sentences and sentences with an unaccusative verb could be interpreted existentially.

However, when it comes to S-level unergative verbs, the spatiotemporal variable introduced by them is not an argument but an adjunct so that it cannot be a topic. Nonetheless, C & E claim that if an appropriate context is given, they could indicate a change of state and the spatiotemporal variable can be a topic.

As for other S-level predicates that introduce a spatiotemporal variable which is an adjunct, as in sentences (9a-g) in section 2.1., C & E also claim that "in the appropriate context, where it is clear that the sentence makes some sort of statement *about* the adjunct, it may be construed as a topic" (C & E: 142). Therefore, the following sentences are interpreted existentially:

- (40) a. This is an awful kitchen - **plates are dirty and glasses are broken!**  
 b. It is a very humid day - **shirts are still damp.**  
 c. This was a terrible lecture - even **committee members were bored.**  
 d. What a happy day! Strangers greeted each other on the street, and **people in the office were in a good mood.**  
 e. Mr. President, you must declare an emergency! **Children are sick,** and this is a very dangerous situation!

Furthermore, they propose that I-level predicates could also be interpreted existentially if they select more than two arguments, since another argument other than the BP could be a topic, as in (41), recited from 2.2.:

- (41 = 14) a. Monkeys live in that tree.  
 b. Family members are proud of John.  
 c. Criminals own this club.

And yet, we can observe that the interpretation of the BPs in sentences (41a-c) is clearly not generic, whereas that of the BPs in sentences (42) is not existential, regardless of the topic-focus structure of the sentence.<sup>6)</sup>

- (42) a. Monkeys live in Africa.  
 b. Koreans are proud of King Sejong.  
 c. Indians used to own this land of America.

Furthermore, the BP contained in a sentence with an I-level predicate that selects only one argument could also be interpreted existentially in an appropriate context. The BP in (43B) could be interpreted existentially, given (43A).<sup>7)</sup>

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6) One reviewer suggests that in Korean, the subjects in (41) are marked in nominative plural by default except for in contrastive situations, while the subjects in (42) are marked in topic singular or plural, which leads to a natural distinction between the two sets of examples.

7) The predominant reading of the BP in (43B) received by the five informants I have consulted with is the generic reading. Concerning its existential reading, two of them said that it could be obtained as a remote reading, whereas the other three said that the ex-

(43) A: We need some brave volunteers who could demonstrate an escape fire drill.

B: Boys in this class are brave.

Consider more examples:

(44) a. Penguins are present in Antarctica.

b. Penguins are present in the Galapagos Islands.

(45) a. Monkeys live in Africa.

b. Monkeys live in that tree.

(46) a. Americans own this beautiful country with abundant natural resources.

b. Americans own most of the land in this area.

What can be observed in (44-46) is that apart from topic/focus structure and I/S-level predicate distinction, the modifier within the predicate does seem to determine the interpretation of each BP. That is, each pair of examples contain the same predicate, but receive different readings. Sentences in (a) receive a generic reading, whereas sentences in (b) receive an existential reading. What causes this difference?

The answer to this question seems to have to do with the language users' "world knowledge." It is generally known that Antarctica is the representative habitat of penguins, while it is not well-known that the Galapagos Islands is also inhabited by penguins. This knowledge helps (44a) receive a generic reading, and (44b), an existential reading.<sup>8)</sup> Similarly, in (45b), the BP cannot possibly be read generically, since in one tree, only a limited number of monkeys can possibly live, whereas (45a) means that generally monkeys live in Africa. Again, a limited area of land may not be owned by Americans in general, so that the BP in (46b) can only be read existentially. On the other hand, as for (46a), the country is reasonably owned by Americans in general, and this leads to

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istential reading is impossible. Based on the former two informants' intuition, I have decided that the BP in (43B) could be interpreted existentially, even as a remote reading.

8) Depending on the "world knowledge" of the language users, the interpretation of the BP in (44b) could be different. For example, those people who know only about the penguins in the Galapagos Islands will interpret the BP in (44b) generically, not existentially.

a generic interpretation.

In sum, some other factors such as the language users' "world knowledge," "common sense," and "contextual information" seem to determine the interpretation of the BPs in (41-46). It should also be noted that C & E's account based on the notions of spatiotemporal variable, predicate types, and argument/adjunct distinction seems to be sometimes quite ad hoc. That is, counterexamples exist for each component of their account, but C & E blur the issue by stating that such examples could exist only if appropriate contexts are given.

### 3.3. Stressed Subjects and Objects

Concerning the following example of stressed subject BP, we have already discussed in section 3.1. that contrary to C & E's argument, the stressed subject BP could be a focus, not a contrastive topic, which is read generically, not existentially:

(47) FIREMEN are altruistic.

Now, when it comes to stressed object BPs, consider the following examples, recited from section 2.3:

(48 = 18) a. Cowboys carry GUNS.  
b. Frogs catch FLIES.

(49 = 19) a. Cowboys carry large guns.  
b. Frogs catch fruit flies.

As discussed earlier, C & E argue that the stressed object BPs in (48a, b) are interpreted existentially, since (49a, b) entail (48a, b) respectively. And yet, this entailment relation does not seem to hold. Consider the following example:

(50) A: What food does Jerry like?  
B: Jerry loves MANGOS.  
A: Oh, Jerry loves FRUIT!  
B: Yes, he likes MANGOS, KIWIS, AND GRAPES.



As can be observed by A's second statement and B's second statement, discourse (50) is accepting C & E's proposed type of entailment between (48) and (49). That is, the entailment relation from the sentence with the hyponym object BP (B's first statement) to the sentence with the superordinate object (A's second statement) holds in (50). However, observe that the following discourse is also possible:

- (51) A: What food does Jerry like?  
 B: Jerry loves MANGOS.  
 A: He loves FRUIT, doesn't he?  
 B: No, he likes MANGOS, KIWIS, AND GRAPES, but he doesn't like OTHER fruits.

In (51), as can be observed by B's second statement, the above kind of entailment relation does not hold. That is, the focused object in A's second statement of (51) is read generically, whereas that of (50) is read existentially.

Consider another example:

- (52) A: What does Kurt hunt?  
 B: Kurt hunts BIRDS.  
 C: No, Kurt does not hunt ALL birds. He hunts only PHEASANTS.

If it is assumed for (52) that B is aware of the fact that Kurt is a pheasant hunter, the focused object BP in B's statement is interpreted existentially by B while it is interpreted generically by C.

Turning back to examples (48) and (49), the entailment relations from (49a, b) to (48a, b) respectively, argued by C & E, also do not necessarily hold in all situations. For example, the following discourse is possible:

- (53) A: What insects do frogs catch?  
 B: Frogs catch FLIES.  
 C: No, frogs do not catch ALL flies. Frogs catch only FRUIT FLIES.

Again, if we assume that B is just as familiar with scientific facts about frogs as C in (53), B is interpreting the focused object BP in (53B) existentially, whereas C is interpreting it generically.

It should then be concluded that C & E's generalization that focused object BPs are interpreted existentially does not always hold. Furthermore, factors other than the topic/focus structure of the sentence should also be considered as determinants in order to fully account for the interpretation of BPs.

### 3.4. Presuppositional/Non-presuppositional Verbs

As discussed in section 2.4., C & E classify such verbs as in (54) as presuppositional verbs, and they claim that the object BPs in (54) cannot be interpreted existentially, unlike the other object BPs with non-presuppositional verbs as in (55):

- (54) a. John hates lawyers.  
 b. John likes honest lawyers.  
 c. John recognizes crooked lawyers.

- (55) a. John knows lawyers.  
 b. John owns boats.  
 c. This house is near lakes.

According to them, if we say that John hates lawyers, we presuppose that he knows the lawyers he hates. Similarly, that John likes honest lawyers presupposes that he knows the honest lawyers. A's recognition of B also presupposes that A sees B.

Concerning the reason why the object BP of a presuppositional verb cannot be read existentially, C & E provides an account by means of DRT, as discussed in section 2.4. Since a BP does not introduce a discourse referent and the BP is incorporated by the verb, it is impossible to construct a DRS (Discourse Representation Structure) corresponding to an existential interpretation of the BP.

However, C & E admit a counterexample provided by Fred Landman. They state that presuppositions are dependent on context. That is, they admit that the object BP of *hate* could be read existentially, depending on the context. In an example provided by Fred Landman, in which John has composed a list of all the people he hates, and we are checking various individuals to see whether they are on the list or not, (54a) may be uttered truthfully even if only a few of the individuals on the

list are lawyers. In this situation, there is no presupposition involved. What (54a) means in this situation is that there are some lawyers John hates on the list.

If the object BP of *hate* could be interpreted both generically and existentially as discussed above, we cannot make any distinction between the non-presuppositional verb *know* and the presuppositional verb *hate*, since the object BP of both *know* and *hate* could be interpreted existentially as well as generically.

Also, consider the following examples:

- (56) a. John hates women.  
b. John likes women.

Sentence (56a), even without any specific context like the above one for (54a) given, intuitively, does not presuppose that John knows the women he hates. Similarly, (56b) also doesn't seem to presuppose John's knowing of the women he likes. It is possible that one hates or likes a group of entities without knowing all of them.

Once again, C & E's argument based on the distinction between presuppositional and non-presuppositional verbs neither much helps to explain the interpretation of object BPs, nor seems to be well supported by the data.

#### 4. An Alternative Account

We have discussed above C & E's account of the interpretation of BPs and some problems of their analysis. Based on this, in this section, we will try to present a comprehensive analysis of BP interpretation in an attempt to complement the problems of C & E's theory.

As we have seen above, we cannot argue that topic structure does not play any role in the interpretation of BPs. And yet, we have also seen that contrary to C & E's claim, not all topic BPs are read generically.

Generally, if a sentence is a statement about a permanent property of a whole group of entities as in (57a), the BP is usually the topic of the sentence and read generically. However, if a sentence is a statement about a current state of affairs of a whole group of entities as in (57b), it is not necessarily the topic of the sentence, but it is read generically.

- (57) a. Tigers leave their skins behind after dying, whereas humans leave their names.  
 b. Tigers are facing the crisis of extinction.

On the other hand, a sentence with a BP which receives an existential reading is usually not a statement about a permanent property of the BP. The most prominent characteristic of this kind of sentence is being an assertion of the existence of an entity or entities that satisfy a current specific feature or situation. Hence, BPs with an S-level predicate are usually, but not always, read existentially as in (58a, b):

- (58) a. Firemen are available.  
 b. Policemen are present.

BPs with an I-level predicate may also be read existentially. However, in this case, the scope of the BP must be "narrowed down" by the context to a portion of the whole group of entities, as in (59) and (60):

- (59) A: This game was released several months ago, but it doesn't sell. Nobody seems to like this game.  
 B: Little boys like this game.

- (60 = 43) A: We need some brave volunteers who could demonstrate an escape fire drill.  
 B: Boys in this class are brave.

That is, in (59), A's statement that nobody seems to like the computer game could narrow down the extent of the BP in B's statement. B could argue for the mere existence of some people who like the game, i.e., some little boys, not necessarily all little boys. In other words, the BP in (59B) could be interpreted existentially as well as generically.<sup>9)</sup> As for (60), similarly, A's statement could also shrink the set of entities of the

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9) Also for the BP in (59B), three of my five informants said that the existential reading is impossible. Here, again, the I-level predicate *like*, similar to the I-level predicate *being brave* in (60B = 43B), seems to be playing an important role in strongly influencing the interpretation of the BP toward the generic one. Again, however, I have decided that the existential reading is also possible for the BP, based on the other two informants' affirmative intuition.

BP in B's statement. B could be arguing for the existence of some brave boys in the class who could volunteer for the fire drill demonstration.

If we summarize these tendencies, we get the following generalizations:

- (61) i) If a BP is the topic of the sentence, it is usually read generically and the sentence is usually a statement about a permanent property of the whole group of entities.
- ii) If a BP is with an I-level predicate, it is usually read generically.
- iii) If a BP is with an S-level predicate, it is usually read existentially.

(61i, ii, iii) are just general tendencies with numerous exceptions, although they provide a valuable insight into the whole picture of the interpretation of BPs. That is, what we would like to propose is that in addition to these factors, the pragmatic process of "domain narrowing," which "overrides" the whole tendencies, is at work here in the interpretation of BPs.<sup>10</sup> We suggest that the domain of the set of entities of a BP is determined "primarily" by pragmatic information such as the "contextual information" and the language users' "world knowledge," "common sense," "beliefs," and "sloppiness," among others.

#### 4.1. World Knowledge

Let us consider some examples, including some discussed in the previous sections, in order to elaborate on the process of domain narrowing based on the language users' "world knowledge."

First, examine the following set of examples:

- (62) a. Penguins are present in Australia.
- b. Penguins are present in South Africa.

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10) The concept of "domain narrowing" is borrowed from Barker (1993, 1996). He uses this concept to account for the universal and existential reading of donkey sentences. That is, Barker proposes that the domain of quantification for a donkey pronoun could be narrowed down by contexts as well as by the content of the sentence. Similarly, we argue that this concept could also apply to the interpretation of BPs. One notable difference between the interpretation of donkey pronouns and that of BPs is that in the former, the issue is the distinction between the universal and existential reading while in the latter, it is between the generic and existential reading.

- c. Penguins are present in the West coast of South America.
- d. Penguins are present in the Galapagos Islands.
- e. Penguins are present in Antarctica.

As discussed above, according to C & E, the predicate *present* could be interpreted to have a temporary property or “a property that is expected to hold well into the future.” Then, what determines which of the two properties is selected for each interpretation? As pointed out in section 3.2., intuitively, the language users’ “world knowledge” plays a role here. The fact is that penguins live in Australia, South Africa, the West coast of South America, and the Galapagos Islands as well as in Antarctica. And yet, it is well known to people that penguins live in Antarctica while it is relatively unknown that penguins also live in the other places. Consequently, people tend to interpret sentences like (62a, b, c, d) existentially, since it is obvious that not all penguins are present in a relatively unknown habitat like Australia, South Africa, the Westcoast of South America, or the Galapagos Islands.<sup>11)</sup>

The following is another set of similar examples to (62):

- (63) a. Tigers live in that jungle.
- b. Tigers live in India.
- c. Tigers live in Asia.
- d. Tigers live in Siberia.
- e. Tigers live in Africa.

As for (63a), it is our common sense that only a portion of the whole tiger family could live in a specific jungle. Hence, (63a) is read only existentially. When it comes to the interpretations of (63b, c, d, e), the language users’ “world knowledge” plays a role, as in (62). That is, unlike penguins, tigers are relatively well-known to be ubiquitous on numerous continents, so that those people who are familiar with this ubiquity of tigers could interpret the BPs in (63b, c, d, e) existentially. On the other hand, as confirmed by my informants, these BPs could also be interpre-

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11) As already pointed out with (44a, b) in section 3.2., the BPs in (62) could be interpreted differently from what has been discussed here, depending on the language users’ “world knowledge.” For example, those people who have never left Australia and who are familiar with only the penguins in Australia will interpret the BP in (62a) generically, rather than existentially.

ted generically by a taxonomic reading. That is, since we are also familiar with the information that there exist several kinds of tigers and their habitats, each of the BPs in (63b, c, d, e) could be interpreted to cover all the tigers in one area and/or one kind of tigers, which is the taxonomic generic reading.<sup>12)</sup>

Also consider the following two sets of examples:

- (64) a. Koreans eat Kimchi.  
 b. Koreans eat rice.  
 c. Koreans eat dogs.
- (65) a. French people eat baguettes.  
 b. French people drink wine.  
 c. French people eat swallows' nests.

First, Koreans interpret (64a, b) generically while they interpret (64c) existentially, in accordance with their “world knowledge” shared as a group. Similarly, French people will interpret (65a, b) generically while they interpret (65c) existentially, again, based on their “world knowledge” shared as a group. However, it sometimes happens that people have misconceptions and prejudices about other groups of people. Consequently, some relatively misinformed and/or prejudiced people could utter and/or interpret (64c) and (65c) generically, not existentially. This situation could also apply to examples (62) and (63).

#### 4.2. Common Sense

The following are some examples of the BPs whose domain of quantification is determined based on the language users’ “common sense,” similar to (63a):

- (66) a. Ladies are in the room.  
 b. Boys left the house.  
 c. Monkeys are in that zoo.

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12) It is generally known that there exist eight kinds of tigers, namely, Indian (=Bengal), Siberian, Indochinese, South China, Sumatran, Javan, Caspian, and Bali tigers. Also, rather loosely, people generally know that places like India, Asia, Siberia, and Africa are tigers' habitats.

Based on the contents of the predicates and the language users' common sense, (64a, b, c) are read only existentially.

### 4.3. Sloppy Reading

Now, let us have a look at the following examples, which illustrate the process of domain narrowing by "sloppy reading."

- (67) a. John likes fruit.  
       b. John likes dance musicians.

We argue that (67a, b) could be interpreted both generically and existentially. That is, although John likes several, not all, kinds of fruit, and he likes several, not all, dance musicians, (67a, b) could be uttered. The reasoning is again based on the examples from section 3.3., recited as (68-69):

- (68 = 50) A: What food does Jerry like?  
           B: Jerry loves MANGOS.  
           A: Oh, Jerry loves FRUIT!  
           B: Yes, he likes MANGOS, KIWIS, AND GRAPES.

- (69 = 51) A: What food does Jerry like?  
           B: Jerry loves MANGOS.  
           A: He loves FRUIT, doesn't he?  
           B: No, he likes MANGOS, KIWIS, AND GRAPES, but he doesn't like OTHER fruits.

As can be observed in (68-69), the same utterance is differently interpreted, existentially in (68) and generically in (69). What we would like to propose is that the generic reading is the norm, but the existential reading could also be obtained as a "sloppy reading" here.

There is a tendency that people generalize things based on a few available examples. Say, if you have found out about John's favorite musicians and the list includes several dance musicians, you tend to generalize that John likes dance musicians. Journalists are also well-known to make generalizations based on their limited collected materials. That is, they tend to report "people said something," although they have con-



sulted with just several persons. People are also aware of this tendency of generalization by language users. That is why we have examples like (68-69) and why the sentences like (67a, b) are interpreted both generically and existentially.

#### 4.4. Summary

Now, have a look at the following C & E's examples, recited from section 1:

- (70 = 5) a. Investors are interested.  
 b. Family members are proud of John.  
 c. Voters are undecided.  
 d. Guests are reluctant to confirm.

As discussed earlier, all the examples in (70) are read existentially. Furthermore, C & E add that it could be argued that the sentences in (70) imply stronger than simple existential claims, and that (70b), for example, implies that more than a handful of family members are proud of John.

We propose that not only the existential interpretation of the utterances in (70) but also the stronger or weaker implication is decided by the process of domain narrowing in context. For example, (70a) could imply that there exist at least a few investors who are interested, or that a considerable number of investors are interested, depending on the context. Also, depending on the object of investment, only a few interested investors could count as "many."

But, compare (70a) with the following sentence:

- (71) Investors are disinterested.

Contrary to (70a), (71) seems to imply that all or most, not just some, of the investors are disinterested. Here, the interpretation difference involved in the BPs with the predicate *interested* and *disinterested* could be argued to come from the distinction between "partial" and "total" predicates, in the sense of Yoon (1996). That is, the partiality of the predicate *interested* causes the BP to be interpreted existentially, whereas the totality of the predicate *disinterested* causes the BP to be interpreted

generically. Given this, what we can observe is that a property of the predicate other than the distinction between S-level and I-level predicates could also play a role in the interpretation of BPs. However, also in these cases, the contextual information overrides the contents of the predicate in determining the readings of BPs.

Also consider the following examples with I-level predicates:

(72) Japanese housewives adore Yonsama.

(73) A: What are we going to do with the leftover food?

B: Boys in this class are hungry.

Concerning (72), based on what we know, as language users, about the current state of affairs, we could reasonably guess that less than a half or even less than a tenth of the whole Japanese housewives adore Yonsama. Notwithstanding, (72) describes perfectly well the current Korean fever in Japan which originated from a Korean TV drama starring the actor Yong-Jun Bae, known in Japan as Yonsama. As for (73B), the given context could narrow down the scope of the BP to a portion of the whole boys in the class who are hungry enough to desire to eat the leftover food.<sup>13)</sup>

On the other hand, the following example with an S-level predicate is read only generically. Our “world knowledge” and “common sense” do not allow an existential reading:

(74) Americans are going through emotional trauma after the 911 incident.

To summarize our account discussed so far, we have seen above that the topic structure, but not the focus structure, and the properties of the predicate seem to play a certain role in the interpretation of BPs. And yet, we have also observed that pragmatic information overrides these factors in determining the readings of BPs. For example, the domain of quantification of a BP could be narrowed down mainly by “satisfying a current situation” as in (58a, b) and (73). In other words, the situation

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13) Similar to the BPs in (43B=60B) and (59B), the generic reading seems to be much more easily obtained for the BP in (73B).

could narrow down the domain of quantification of the BP to an existential domain. In (58a, b), the availability of firemen and the presence of policemen are being stated, and the given situations are about whether available firemen and present policemen are existent or not. Also in (73), the given situation is about whether some boys in the class who are hungry enough to be able to eat the leftover food are existent or not. The domain of quantification of a BP could also be narrowed down by other contextual factors such as the language users' "world knowledge" including misconceptions and prejudices as in (62), (63b, c, d, e), and (64-65), their "common sense" as in (63a) and (66), and their "sloppy generalizations" as in (67-69).

## 5. Conclusion

First, in this paper, we have discussed C & E's account on the BP interpretation based on factors such as topic/focus structure, I/S-level predicate distinction, argument/adjunct distinction, and presuppositional/non-presuppositional verb distinction. Second, it has also been discussed that BP interpretation cannot be fully accounted for by these proposed determining factors.

Given this, third, we have proposed that linguistic factors such as topic structure and predicate types do seem to play a role in determining the interpretation of BPs. And yet, contextual factors such as "current situation satisfaction," "world knowledge," "common sense," and "sloppy generalization" override the linguistic determining factors. The pragmatic process of domain narrowing has also been proposed to play a role in BP interpretation as well as in the interpretation of donkey pronouns.

Given this, it might be argued that pragmatics is again resorted to as a waste basket. And yet, it is true that, let alone phenomena like *metaphor*, *irony*, and *humor*, even *presupposition* and *focus*, which are two of the most important semantic phenomena, cannot be accounted for without pragmatic concepts such as context and discourse.<sup>14)</sup>

In sum, it could be argued that not so surprisingly, BP interpretation phenomenon also shows that semantics and pragmatics cannot be sepa-

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14) For example, Kadmon (2001) analyzes *focus* and *presupposition* phenomena in terms of a so-called formal pragmatic account.

rated, in order to fully account for semantic phenomena.

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