

# The Number Agreement of the English Coordinated Subject

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Kim, Kyooshiek. 2002. The Number Agreement of the English Coordinated Subject *SNU Working Papers in English Language and Linguistics* 1, 17-29. English has various kinds of coordinated subjects, such as *not only A but also B*, *either A or B*, etc. There seems to be, however, no number agreement between those coordinated subjects and the main theory which provides a proper explanation on the problem of the verbs. This paper proposes that two kinds of agreement rules independently work in determining the number agreement in the construction. First, in the syntactic agreement, the head determines the agreement if there is a single syntactic head in the subject phrase whose number feature percolates up to the node dominating all the conjoined NPs. Second, in the semantic agreement, the meaning of the subject NP determines the plurality of the phrase and triggers the agreement: the phrase is interpreted as plural only when it includes the inclusive "and." We will observe that the semantic agreement rule takes the priority of the two. (Seoul National University)

**Keywords:** coordinated subjects, number agreement, syntactic heads, inclusive "and"

## 1. Introduction

The aim of this paper is to explain the problems of the number agreement between the coordinated subject and the main verb inflection in English. I.e., this paper will propose that the number agreement is syntactic when the number feature of **only one NP** of the coordinated subject structure percolates up to the node which dominates all the conjoined NPs. It will also posit that the semantic(sometimes pragmatic) agreement is preferred when the coordinated subject structure is presented with the inclusive 'and'. And of the two, the semantic approach has the priority. This position will be termed, for the sake of convenience, as

**"Alternative Hypothesis".**(This Alternative Hypothesis will not merge the syntactic approach and the semantic one into a single claim. The principle, on the other hand, will set the hierarchy between the two contrastive approaches.)

To be more specific, all of the number agreements are not syntactic. All of them are not semantic, either. This fact is shown in (1)-(4).<sup>1</sup>

- (1) The committee **has** decided.
- (2) The committee **have** decided.
- (3) **This** committee sat late.
- (4) **\*These** committee sat late.

The agreement shown in (1), (3) is syntactic. The semantic agreement is also possible as in (2). But semantic agreement is restricted as in (4). (In other cases, syntactic agreement can also be restricted. That will be shown in later sections.) As shown above, the problem of number agreement is no easy matter. Furthermore, when the subject of a sentence is coordinated by various connectives, this problem becomes more complex. The aim of this paper is to give forth a systematic explanation on the complexity.

The position of this paper will be presented on the basis of the criticism of Corbett(1983) and Quirk et al(1985). I.e., the position of this paper will start where Corbett(1983) and Quirk et al(1985) failed to present any more appropriate explanations of the present issue. *However*, the position of Corbett and that of Quirk et al will not be treated as the opposing hypotheses in the sense that those positions are compared and contrasted with the claim of this paper in every issue. Such comparisons and contrasts are next to impossible. Those positions will be criticized, only in that they can't give a proper explanation for the wide variety of number agreement problems(i.e. explanation power is limited).

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<sup>1</sup> These quotations are from Corbett, G.G.(1978)-*The agreement hierarchy*, *Journal of Linguistics*, vol 15, p.203.

## 2. Previous views

### 2.1. Corbett(1983) : 'number resolution' approach

One of the previous views on the number agreement problems concerning the coordinated subject is that of Corbett(1983)<sup>2</sup>. In that paper, Corbett presented some "resolution rules" for person, number, and gender. Since this paper focuses on only the number agreement, here only the "number resolution rule" is presented as follows.<sup>3</sup>

#### (5) Number resolution

1. if there are two conjuncts only, both of which are in the singular, then dual agreement forms will be used;
2. in all other cases, providing there is at least one non-plural conjunct, plural agreement forms will be used.

He tried to establish a language universal rule for the agreement of coordinated structures. But it seems as if his effort had not been paid fully. Especially, when it comes to the English coordinated subject, his rules are not appropriate. First, contrary to (5)-1, there are no 'dual' agreement forms in English. In old English, the number feature 'dual' actually existed, but it is not used any more in contemporary English. Second, even though there is one or more non-plural conjunct in English, plural agreement forms are NOT always used. This will be shown in later sections.

Corbett(1983) added the following<sup>4</sup> :

- (6) When the resolution rules do not apply, agreement is normally with the nearest conjunct, but this is not the only possibility.

However, the "nearest conjunct" rule that (6) proposed is not as normal in English. Only in the limited number of examples (i.e.

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2. Corbett, G.G.(1983), *Resolution rules: agreement in person, number, and gender*, Gazdar et al, *Order, Concord and Constituency*, Foris Publication, pp.175-206.

3. Ibid, p.177

4. Ibid, p.180


only in the examples with the 'or' connective and in the examples of 'correlative structures'), the claim of (6) can be accepted.

Seeing the failure of Corbett(1983) in explaining the number agreement problems in the English coordinated subject, it can be concluded that the solution of number agreement problem, in nature, is language specific rather than language universal.

## 2.2. Quirk(1985) : semantic and pragmatic approach

Quirk et al(1985)<sup>5</sup> gives a very different explanation from Corbett(1983). The position of Quirk et al(1985) is mainly semantic and pragmatic. It is true that Quirk et al not only adopted a semantic/pragmatic approach. They, however, also adopted grammatical approach.(e.g. with regard to the treatment of the coordination of 'or' and 'nor'.<sup>6</sup>) But their MAIN approach is semantic/pragmatic.

And, in fact, their semantic/pragmatic approach is helpful as in explaining the following<sup>7</sup>:

- 7) His aged servant and the subsequent editor of his collected papers  with him at his deathbed.

In (7), the selection of main verb is determined only by the pragmatic criteria. I.e. if the coordinated subject 'His aged ..... his collected papers' refers to the identical person, 'was' will be selected; while 'were' will be selected if the coordinated subject refer to the two different persons.

However, sometimes such semantic/pragmatic approach will crash. The examples of such crash will be presented in the following section(i.e. section 3.2.), not here for the sake of paper

5. Quirk, R. et al(1985), *A comprehensive grammar of the English language*, Longman, pp.759-767

6. Ibid, p.762.

7. Ibid, p.761

saving. Anyhow, it is obvious that there are so many cases only syntactic approach will work for the solution of the present issue.

### 3. Syntactic agreement vs. Semantic agreement

In English, the problem of the number agreement between the coordinated subject and the main verb inflection can be solved in two ways.

One is to approach the issue syntactically, i.e. to show the syntactic agreement(=morphosyntactic co-occurrence). That is, if there is a single syntactic head of the coordinated subjects and it determines the number agreement relation, that kind is called the syntactic agreement.

Secondly, in the semantic agreement, the meaning of the subject NP determines the plurality of the phrase and triggers the agreement: the phrase is interpreted as plural only when it includes the inclusive "and."

However, there seems to remain still one question: **"What is the criteria for discriminating the syntactic approach and the semantic/pragmatic one?"** or **"When does the syntactic approach apply and when does the semantic/pragmatic one apply?"**

#### 3.1. Alternative Hypothesis

The answer to the above question is presented as follows.

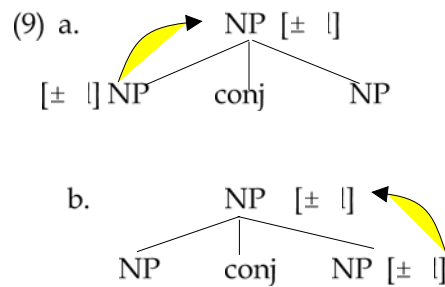
##### (8) Alternative Hypothesis

With regard to the number agreement between the coordinated subject and the main verb inflection in English,

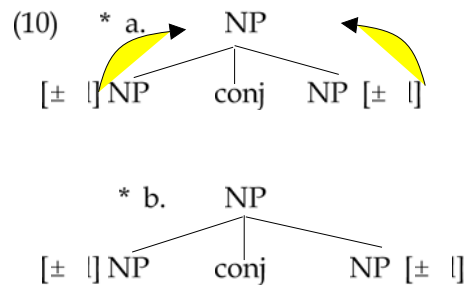
- a. The syntactic agreement is preferred when the number feature of only one NP of the coordinated subject structure percolates to the node which dominates all the conjoined NPs.
- b. The semantic(sometimes pragmatic) agreement is preferred when the coordinated subject structure is presented with the inclusive 'and'.

c. Of the two, the semantic approach takes the priority; the syntactic one could be applied only if the inclusive 'and' does not exist.

In the above, the meaning of "when the number feature of only one NP ... the conjoined NPs" is illustrated as follows.



In (9) a and b, the number feature of only one daughter NP percolates to the head NP, and then it dominates the whole NP. Thus the following structures are excluded from the examples of the syntactic agreement.



In (10) a, there is no number feature which dominates the whole NP since there occurs no percolation of the number feature to the head NP; while in (10) b, there is a collision between the two competing number features.

### 3.2. Syntactic agreement

#### 3.2.1. QP

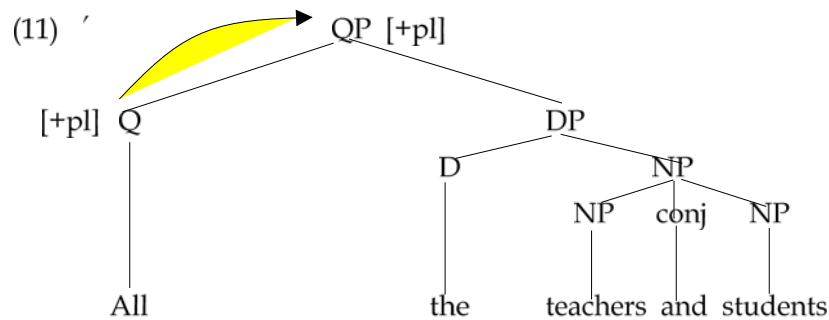
The most prominent example of syntactic agreement will be the case of QP(=quantifier phrase) as a coordinated subject. To be more specific, when a quantifier leads a coordinated noun phrase, it constitutes a QP(i.e. the quantifier becomes the HEAD of the QP.) And the number feature of the QP will be determined by that of the head Q.

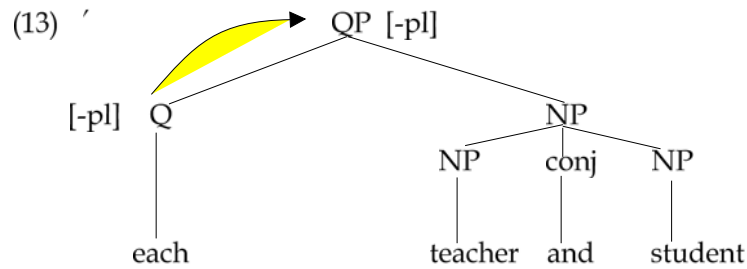
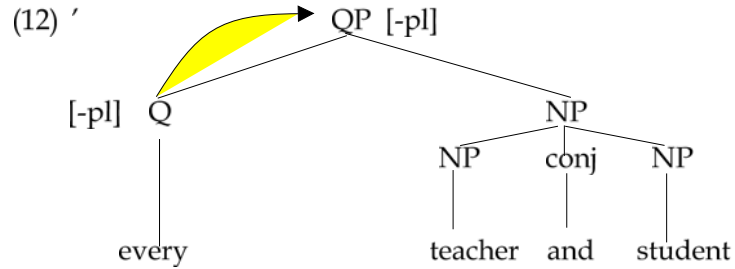
(11) [**All** the teachers and students] hate biology.

(12) [**Every** teacher and student] hates biology.

(13) [**Each** teacher and student] hates biology.

In (11)-(13), the quantifiers 'All', 'Every', and 'Each', are the head of each QP. And the number feature of each quantifier percolates to the entire QP, respectively. Thus in (11), the subject QP has the number feature [+pl]; while in (12) and (13), the subjects QP have the number feature [+sg]. In all of (11)-(13), only one part of the coordinated subject(i.e. the head Q) undergoes the percolation. Refer to the following tree diagrams.





But, semantic approach will not work for this problem. Though there are subtle semantic differences between them, (11)-(13) all presuppose the semantic plurality. Nevertheless, they are different in the syntactic agreement with the main verb inflection.

This claim can be further supported by another examples of (14) and (15). Though (14) and (15) are almost semantically equivalent, the main verb inflections are different. I.e. in the subject [Each of them] of (14), the number feature of quantifier 'each' undergoes the percolation, not that of NP 'them'.

(14) **Each** of them **has** signed the petition.

(15) They **have** **each** signed the petition.

### 3.2.2. The exclusive 'or'

The exclusive 'or' imposes the selection of only one part as

the head of the coordinated structure. In this case, 'or' selects the nearest one to the main verb, as in (16) and (17). The reason why 'or' should select the nearest one, not the farthest one, is not clear. Instead, this phenomenon is termed just as the 'adjacency rule'. The only possible conclusion is that the exclusive 'or' imposes the application of the 'adjacency rule' on the coordinated NP subject. And what is also important is that, in this case, only one part of the coordinated subject undergoes the percolation!

(16) Either you or **I am** to blame for the accident.

(17) Either you or **she is** to blame for the accident.

Here again, the semantic/pragmatic approach will fail. I.e., in 'either A or B' structures, even though the semantic importance of A and B are equal, the morphosyntactic co-occurrence does not agree with the semantic importance.

Consider also the following examples of 'the correlative structures'<sup>8</sup>, as in (18) and (19). It is very interesting that the correlative structures follow the morphosyntactic co-occurrence pattern of the 'either .... or ....' structure.

(18) [Not] you [but] **he is** to blame for the accident.

(19) [Not only] you [but also] **he is** to blame for the accident.

In addition, the 'there is/are ...' structure behaves similarly. See the following.<sup>9</sup> (20)-(23) also follow the adjacency rule.

(20) There **is a boy** and a girl.

(21) \* There **is two boys** and a girl.

(22) There **are two boys** and a girl.

(23) \* There **are a boy** and a girl.

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8. This term is borrowed from the Quirk et al(1985), p.763.

9. These examples were given by Prof. James. H. S. Yoon at a morphology class of the English Dept., SNU, at the fall semester, 1998.

### 3.2.3. Quasi coordination

Contrary to the 'either ... or ...' structure, some expressions are against the adjacency rule. Semantically, [as well as] and [rather than] equal [and]. Nevertheless, the quasi coordinators impose the selection of the farther part(from the main verb) as the head of the coordinated subject, thus making only the farther part undergo the number feature percolation, as in (24) and (25). So it can be concluded that the exclusive 'or' and the quasi coordinator impose the opposite selection of syntactic head of the coordinated subject.(I.e. they become mutual counter examples!)

(24) **The captain** [as well as] the other players **was** tired.

(25) **You** [rather than] he **make** a good money.

### 3.2.4. Premodifying vs. Postmodifying

The most problematic case of syntactic agreement can be shown in (26) and (27)<sup>10</sup>. The two sentences can be different in meaning. I.e., (26) can mean that the beer company is cooperated by Americans and Dutchmen. But (27) can't have that meaning. So, the difference of main verb inflections between (26) and (27) may seem to be due to the semantic difference.

(26) **American and Dutch** beer **are** much lighter than British **beer**.

(27) Beer **from America and Holland** is much lighter than British **beer**.

However, even when (26) and (27) are semantically equivalent(i.e. both means "some beer come from America and others from Holland, respectively"), their syntactic difference doesn't disappear. So here arises the need for syntactic explanation.

To say more correctly, (27) can be explained only in terms of the syntactic approach. I.e., in [Beer from America and Holland] 'beer' is the syntactic head and undergoes the number

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10. These examples are quoted from Anderson, S(1992), *A-morphus morphology*, p.105.

feature(=[+sg]) percolation. But 'from America and Holland' is just an adjunct, and it doesn't undergo such percolation. Whereas (26) can be still explained semantically. When a conjoined AP functions as modifiers, thus it could be concluded that the conjoined AP which **premodifies** a single NP needs the **semantic** approach and that the conjoined AP which **postmodifies** a single NP needs the **syntactic** approach.

### 3.3. Semantic agreement

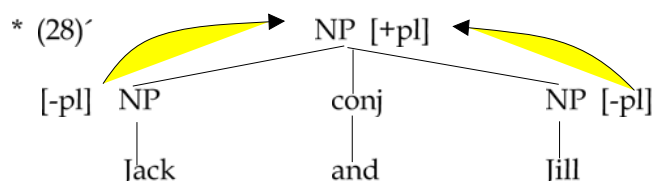
There are various examples which are properly explained only in terms of semantic approach. And such examples are mostly related with the inclusive 'and'. In other words, the inclusive 'and' has more than one semantic functions.

#### 3.3.1. The inclusive 'and'

##### 3.3.1.1. The derivation of number feature [+pl]

The most common and basic function of 'and' is to derive the number feature [+pl] through the combination of more than one [-pl] features. For example, in (28), there is no part having the [+pl] number feature in the coordinated subject 'Jack and Jill'. Both 'Jack' and 'Jill' have the [-pl] number feature. The percolation process can't derive the [+pl] number feature, as shown in (28)'. Thus, the introduction of semantic explanation cannot be avoided. That is, 'and' derives the [+pl] number feature by the conceptual process of adding, '[-pl] + [-pl] = [+pl]'.

(28) Jack **and** Jill **are** different in expressing love.



The same explanation can be applied to (29), also. In (29), the speaker "I" considers the 'what I say' and 'what I think' as

independent notional entities, and "I" performs the adding process of the two notional entities.

(29) What I say **and** what I think **are** my own affair.<sup>11</sup>

### 3.3.1.2. Pragmatic interpretation

In relation with (29), the following examples are also very interesting. In (30) and (31)<sup>12</sup>, the coordinated subject are syntactically identical, but the forms of the main verb inflections are different. Such difference can be explained only in pragmatic terms. Refer to Quirk et al(1985), p.760.(omitted here, I can't say no more.)

(30) What I say and do **is** my own affair.

(31) What I say and do **are** my own affair.

### 3.3.1.3. Fixed expressions

Used in expressing the names of dish, national flag, restaurant, etc, 'and' has no grammatical function except that of merging lexical item into phrase. 'and' has the only semantic function that makes the coordinated subject the name of a single entity.

(32) Bacon and eggs **makes** a good solid English breakfast.<sup>13</sup>

(33) The hammer and sickle **was** flying from the flag pole.

(34) Bat and Ball **sells** good beer.

### 3.3.2. 'neither ... nor...': the negative version of '(both) ... and ...'

One remaining example that needs the semantic approach is the case of 'neither ... nor ...'. That can be used either as singular or as plural, as shown in (35) and (36)<sup>14</sup>. This difference is due to the

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11. Quirk, R. et al, *ibid*, p. 759.

12. *Ibid*, p.760.

13. Anderson, S., *ibid*, p.105

14. Quirk, R., *ibid*, p.763

fact that in some situation 'neither ... nor ...' can be interpreted as the negative version of 'both ... and ...'. If it were not the case, 'neither ... nor...' needs the syntactic approach. In these cases, the key of selection(semantic or syntactic?) is 'and'!

(35) **Neither** he **nor** his wife **has** arrived.

(36) **Neither** he **nor** his wife **have** arrived.

#### 4. Conclusion: which one takes the priority?

So far, this paper has been trying to explain the problem of the number agreement of English coordinated subjects. Throughout this paper it has been claimed that there are different criteria for the syntactic agreement and the semantic one, respectively. The criteria for the former is whether the number feature of only one component of an NP percolates to the head or not. The criteria for the latter is whether the coordinated subject has the inclusive 'and'.

Then we still has one remaining question: which approach has the priority?

This is no easy question. To establish more coherent position, it would, however, be necessary to give priority to one approach than the other. Then it would be more probable to insist that the semantic approach has the priority. That is, the percolation of number feature of only one NP could be allowed only when the inclusive 'and' is not contained in the coordinated subject. The existence of the inclusive 'and' functions as a block to the syntactic approach.

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