

Number Disagreement in Definite Pronominal Anaphora*

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0. Introduction

In this paper, we are concerned mainly with discourses like (0).

- (0) Certainly Shingen himself never built *a castle*, and even though others did build *them* in Japan, it was only to protect the interests of the ruling class, not to repel a foreign invader.⁰

(Throughout this paper the phrases in italics are the ones under consideration. No particular semantic relation between them is necessarily intended.) In (0), *a castle* and *them* are in some intuitive sense anaphorically related, but they are not coreferential—*a castle* here has no referent at all. Even if it had, that is, even if Shingen had built a castle, the anaphor *them* and its antecedent *a castle* do not agree in number, and do not ipso facto refer to the same object(s).

What is such a noncoreferential, number-disagreeing pronominal use to be characterized? Under what conditions is such usage possible, then? To answer these two questions is our aim in this paper.

The chapters of this paper follow the process of our approach to the problem. In other words, we shall describe the course of approach as we have taken it, with a minimum of later reconstruction or modification. This may seem to be a roundabout way to the conclusion, but it will, hopefully, lend itself to a clearer characterization of this pronominal usage. Thus, in Chapter 1, we shall discuss several cases of number disagreement in coreferential anaphora. The discussion is intended to contrast coreferential and noncoreferential anaphora, the latter of which is dealt with in the remainder of this paper. In Chapter 2, as a preliminary consideration, we seek some clues for approaching the problem. Chapter 3 is concerned with the theoretical basis, upon which a number of disagreement cases are examined in Chapters 3 and 4. The results of the examination are summarized as a conclusion in Chapter 5.

requires no special statement in the grammar at all; hence a difficulty in formal approaches to pronominal anaphora. In short, (5) and (6) exemplify the fact that a definite pronoun with split antecedents must be plural, even if each of its antecedents is singular.

Observe, further, (7)–(10), where transitions from singular antecedents to plural anaphors are more evident.

- (7) *The city* should enforce the law strictly against everyone—and unless they're willing to do so, *they* should not enforce it against anyone.
- (8) He was physically unable to go up or downstairs without *great pain or difficulty*. The elevator enabled him to do so without *them*.
- (9) My little sister knows *every commercial* on TV and can act *them* out just like the performers.
- (10) *Nobody* danced last night; probably *they* were all too shy. (from Bosch (1983: 237))

Intuitively, all these transitions seem quite natural. In each of (7)–(10), amending the formal disagreement between anaphor and antecedent, that is, using *it* or *he/she* instead of *they/them*, would produce a serious semantic disagreement between the antecedent and consequent sentences. A comment on each of (7)–(10): In (7), the individual/set distinction applies again. *The city* itself is ambiguous in many ways, among which are the two interpretations: (i) the city as an individual, i.e. 'the governmental body as a whole,' and (ii) the city as a set, i.e. 'the set of city officials.'⁷ It is of course the latter that concerns the interpretation of (7). In (8), *or* of the phrase *without great pain or difficulty* is understood as meaning 'and/or,' or 'either, possibly both.' That is, *or* here is in function what the logician calls 'inclusive disjunction.' Just note, moreover, that *or* is the form stipulated in a *without*-phrase, as witness **without great pain and/or difficulty*, **without great pain and difficulty*. In (9), in the antecedent sentence, the plurality of commercials on TV is asserted by *every*, which by implication refers one by one to all the members of an aggregate (i.e. all the commercials on TV).⁸ This also applies to (10): the plurality of people is asserted by *nobody*, which by implication refers to all the members of an aggregate (i.e. all the people, or a certain group of people among them, who were present at an unspecified place last night) by negating their dancing one by one.⁹

Thus far, I have speculated as to sources of the implied plurality of the referents of *they/them* in (7)–(10). It may generally be said that, for the class of cases discussed here, the antecedent of *they/them* does not lie so much in the surface structure as in some underlying semantic or conceptual structure of a discourse.

2. Number Disagreement in Noncoreferential Anaphora: Preliminary Consideration

Let us now turn to a radically distinct class of cases of number disagreement between anaphor and antecedent, like (11)–(14).

- (11) *A German shepherd* bit me yesterday. *They* are really vicious beasts.
 (12) I played *a video game*. *They* are very entertaining.
 (13) I bought *a Japanese car* because *they* are inexpensive.
 (14) I met *a Swedish girl* yesterday. *They* are rather tall, blond, and have blue eyes, so you can recognize *them* at sight.¹⁰

There is a crucial point that distinguishes (11)–(14) from all the other examples cited so far. In (7)–(10), for example, the anaphor (*they/them*) and its antecedent are coreferential in each case, while in (11)–(14) they are not. In (11), the referent of *a German shepherd* is a specific dog, while the referent of *they* is not the specific dog nor a specific set of dogs, but rather the generic class of German shepherds. The speaker of (11) is making the generic statement that on the whole German shepherds are vicious. One thing we may notice here, however, is that the referent of *a German shepherd* is included in, or a member of, the referent of *they*. Of course, this relationship of including/included between the two referents does not establish the relationship of coreferentiality between the anaphor and antecedent. After all, *they* and *a German shepherd* are, without being coreferential, still anaphorically related in the sense that *they* depends on *a German shepherd* for the specification of its meaning. Essentially the same is the case with (12)–(14).¹¹

Can we freely produce discourses like (11)–(14)? Are there any constraints on the production of those discourses containing anaphor–antecedent number disagreements? We shall be concerned with this question in the remainder of this paper.

In order to find some clue that can help us obtain the answer to the question above, let us make some preliminary tests. Perceiving that all of the antecedents in (11)–(14) are indefinite NPs, we feel tempted to substitute definite NPs for them, as a first test, to see if the outcomes are acceptable discourses. For example,

- (15) *The biggest dog in the neighborhood, a German shepherd*, bit me yesterday.
They are really vicious beasts.
 (16) *My German shepherd Fido* bit me yesterday. *They* are really vicious beasts.

(15) and (16) are perfectly acceptable. (Notice that the second sentence of (15) is ambiguous between *German shepherds are really vicious beasts*, which is the predominant

reading, and *Dogs are really vicious beasts*.¹² In (16), this latter reading, if any, may be negligible.)

By way of a second test, let us see what will happen if those antecedent NPs are pluralized, as in (17) and (18).

- (17) *Two German shepherds* bit me yesterday. *They* are really vicious beasts.
 (18) While *my two German shepherds* are tame, *they* are usually vicious beasts.

(17) and (18) are all right and, what is more, the relationship between anaphor and antecedent remains intact in either of the examples: *two German shepherds* and *they* in (17) and *my two German shepherds* and *they* in (18), respectively, are anaphorically related, but they are not coreferential. (Notice, again, that the second sentence of (17) has another reading, a coreferential one: *The two just-mentioned German shepherds which bit me yesterday are really vicious beasts*. The second sentence of (18) has no such reading.)

Let us apply a third test. We may reasonably assume that only NPs that refer to a member of a class of entities, as those in (11)–(14), are qualified as antecedents of *they/them*, while NPs that refer to a rather unique or near-unique entity are not. The validity of this assumption may be tested in (19)–(21).

- (19) *Issac Newton discovered *the law of gravitation* in 1666. By that time, many other scholars had wanted to discover *them*.¹³ (*Them* is intended, erroneously, to refer to ‘the laws of gravitation.’)
 (20) *Issac Newton made *an important discovery* in 1666, and many other scholars also made *them* during the 17th century. (*Them* is intended to refer to ‘important discoveries.’)
 (21) One day in November, Issac Newton saw *an apple* fall from a tree in his garden. By that time, however, many other people had seen *them* fall from the same tree. (*Them* is intended to refer to ‘apples.’)

(19) and (20) are out, but (21) is all right, in spite of the fact that all of (19)–(21) are similar in structure and tense. It may be safe to say from this that the divergence of acceptability judgment seen in (19)–(21) is due to what we have assumed in advance. One thing we should notice, however, is that both of the antecedent NPs in (19) and (20), independent of the fact that one is definite and the other indefinite, refer to one and the same entity: the Newtonian law of gravitation. This law is a unique entity; it is not a member of a class.¹⁴ On the other hand, an apple referred to by *an apple* in (21) is a member of a class of apples. And, for that matter, a German shepherd referred to by the definite NP, *the biggest dog in the neighborhood* in (15) or *my German shepherd Fido* in (16), is considered a non-unique entity; it is a member

of a class of German shepherds. Thus, it is not the definite/indefinite distinction of antecedent NPs but the unique/non-unique distinction of their referents that counts.

Let us go on to a fourth test. The second sentences of the discourses (11)–(14) might be taken to suggest that such generic class references, or noncoreferential anaphora, are possible only by sentences in the present tense. To see if this is the case, we feel like changing the tense of those second sentences to, say, the past tense, as in (22)–(25).

- (22) * *A German shepherd* bit me yesterday. *They* were really vicious beasts.
 (23) * I played *a video game*. *They* were very entertaining.
 (24) * I bought *a Japanese car* because *they* were inexpensive.
 (25) * I met *a Swedish girl* yesterday. *They* were rather tall, blond, and had blue eyes, so you could recognize *them* at sight.

There is no hint of generic class reference felt in any of (22)–(25). These are felt to be just degenerate cases of coreferential anaphora, with mismatched anaphors and antecedents—so much so, that at first hearing/sight, the hearer/reader would think that the corrected versions of (22)–(25) are (26)–(29), rather than (11)–(14).

- (26) *A German shepherd* bit me yesterday. *It* was a really vicious beast.
 (27) I played *a video game*. *It* was very entertaining.
 (28) I bought *a Japanese car* because *it* was inexpensive.
 (29) I met *a Swedish girl* yesterday. *She* was rather tall, blond, and had blue eyes, so you could have recognized *her* at sight.^{15,16}

In each of (26)–(29), the anaphor and its antecedent are of course coreferential.

From the result of our fourth test, it may be said that, so far as (11)–(14) are concerned, the present tense of the second sentence in each case lends itself to establishing the noncoreferential anaphoric relationship between anaphor and antecedent. It serves to provide a context that permits the generic interpretation of *they/them*.

So far, we have not learned much from our four tests. Let us pursue the problem by looking at it from a different angle in the following chapter.

3. Number Disagreement in Noncoreferential Anaphora: Theoretical Basis

Quirk et al. (1985: 863) maintain that the bond between a pro-form and its antecedent is of two different kinds: COREFERENCE and SUBSTITUTION. They state

that “These relationships are in principle quite distinct... . Coreference, as the name implies, means the bond of ‘cross-reference’ between two items or expressions which refer to the same thing or set of things. It is...a typical function of personal pronouns such as *she* and *they*... . Substitution, as its name suggests, is a relation between pro-form and antecedent whereby the pro-form can be understood to have ‘replaced’ a repeated occurrence of the antecedent” (ibid.).¹⁷

According to this dichotomy of Quirk et al.’s, personal pronouns like *they/them*, which we are concerned with in this paper, are primarily pro-forms used for coreference. On the other hand, substitute pro-forms are, among others, indefinite pronouns, such as *one*, *ones*, and *some*. However, contrary to this basic principle of usage, personal pronouns are sometimes used for substitution. A well-known example of this is (30), which was first discussed in Karttunen (1969).

- (30) The man who gave *his paycheck* to his wife was wiser than the man who gave *it* to his mistress.

In a natural reading of (30), *his paycheck* and *it* are anaphorically related (in the sense that *it* depends on *his paycheck* for the specification of its meaning), but they are not coreferential. What the *it* refers to is not the other man’s paycheck, but his own; *it* just stands for the description *his paycheck*. It should be noted here that discourses like (30) are not necessarily acceptable to everyone. More people will prefer (31) to (30).

- (31) The man who gave *his paycheck* to his wife was wiser than the man who gave *his* to his mistress.

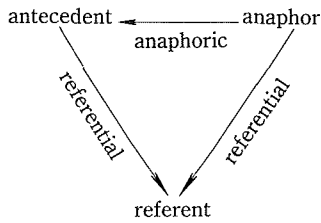
Examples of a plural personal pronoun used for substitution are found more often than those of a singular one.¹⁸ Observe (32) and (33), for example.

- (32) *People* on the continent either tell you the truth or lie; in England *they* hardly ever lie, but *they* would not dream of telling you the truth.
- (33) On the continent *stray cats* are judged individually on their merit—some are loved, some are only respected; in England *they* are universally worshiped as in ancient Egypt.

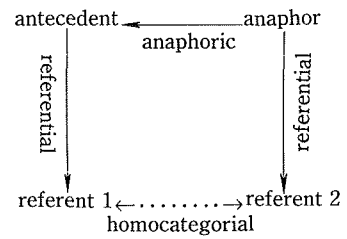
It is obvious, in some intuitive sense, that *people* and *they* in (32) refer to ‘continentals’ and ‘Englishmen,’ respectively, and *stray cats* and *they* in (33) refer to two different groups of cats. That is to say, as is the case with (30), the anaphor and its antecedent in either of (32) and (33) are anaphorically related without being coreferential. Geach (1968) coined the term ‘pronoun of laziness’ to describe such usage of pro-

nouns, namely, the substitution of a pronoun to avoid repetition of an identical linguistic expression. We shall call the noncoreferential anaphoric relationship between anaphor and antecedent *noncoreferential anaphora*, and reserve the term *substitution* for other substitutive uses of indefinite pronouns such as *one, ones, some*, etc. For comparison, coreferential and noncoreferential anaphora are schematically represented in (34).

(34) Coreferential Anaphora



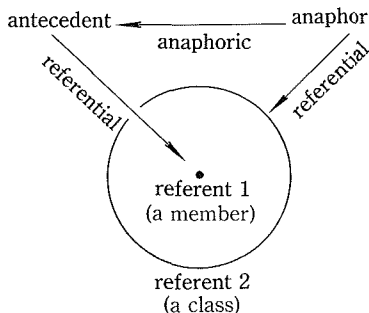
Noncoreferential Anaphora



- anaphoric: dependent for the specification of meaning
- referential: that refer to
- homocategorical: belonging to the same category for denotation, therefore representable by the same linguistic expression

It should now be seen that from (30), (32), or (33) it is but a step to those cases of generic class reference like (11)–(14) which we dealt with in the preceding chapter. The only difference between (30), (32), or (33) and those cases of generic class reference is that, in the former, the anaphor and its antecedent agree in number, while, in the latter, they do not—they constitute a number disagreement in each case. It is no doubt, therefore, that generic class references (and all the other examples we shall deal with hereafter) are subsumable under the category of noncoreferential anaphora, insofar as the referent of the anaphor and that of its antecedent are two different objects—even though they have a class/member, or including/included, relation between them. A case of generic class reference is schematically represented in (35).

(35) Noncoreferential Anaphora: Generic Class Reference



Bearing in mind the explication above, let us return to the question of number disagreement. We understand that, in a case of noncoreferential anaphora, a pronoun is used to avoid repetition of its antecedent NP. Then, is it possible, in all noncoreferential cases, to substitute pronouns for those repeated NPs? Take, for instance, a set of discourses like (36), in which two marginal ones are included just for the sake of variety.

- (36) I made *a doll* yesterday. { a . I often make *dolls* when I am free.
 b . I made *dolls* the day before yesterday, too.
 c . My children made *dolls*, too.
 d . ? I'll make *dolls* for my children tomorrow.
 e . ? I want to make *dolls* for my children.

What will become of (36a-e) if the NPs identical (except number) to their antecedent NPs are replaced by pronouns, as in (37)?

- (37) I made *a doll* yesterday. { a . ? I often make *them* when I am free.
 b . * I made *them* the day before yesterday, too.
 c . * My children made *them*, too.
 d . * I'll make *them* for my children tomorrow.
 e . * I want to make *them* for my children.¹⁹

Pronominalizing a repeated NP usually improves the discourse containing the NP. However, all of (36a-e) become the worse if the repeated NPs are replaced by pronouns, as seen in (37); it is better to leave those NPs as they are. It is assumed from this that using *they/them* in place of repeated full NPs, namely, cases of number disagreement, are rather restricted in distribution.

Then, before tracking down the causes for the restriction, let us see some distributive instances first. The following are discourses in which plural anaphors might be expected to appear. They are divided into two groups: (A) cases in which *they/them* is not possible, and (B) cases in which *they/them* is possible. The number in the parentheses attached to each choice indicates the preferability order of the choice in the set, e.g. (1): most preferable, (2): second preferable, (3): third preferable, etc., which are relative values in one set of choices. Two choices in one set can be rated as same in preferability.

A. Cases in which *they/them* is not possible.

- (38) I have *a mole* under the left eye. All my sisters have

- $$\left\{ \begin{array}{l} \text{a. } \textit{moles} \text{ (1)} \\ \text{b. } * \textit{them} \\ \text{c. } ? \textit{some} \text{ (2)} \\ \text{d. } * \textit{it} \\ \text{e. } \textit{one} \text{ (1)} \end{array} \right\} \text{ somewhere.}$$

(39) I was served *a good meal* at the hotel. My children were served

- $$\left\{ \begin{array}{l} \text{a. } \textit{good meals} \text{ (1)} \\ \text{b. } * \textit{them} \\ \text{c. } ?? \textit{some} \text{ (3)} \\ \text{d. } * \textit{it} \\ \text{e. } \textit{one} \text{ (2)} \end{array} \right\}, \text{ too.}$$

(40) I caught *a bad cold* last month. My children caught

$$\left\{ \begin{array}{l} \text{a. } \textit{bad colds} \text{ (1)} \\ \text{b. } * \textit{them} \\ \text{c. } * \textit{some} \\ \text{d. } \textit{it} \text{ (3)} \\ \text{e. } \textit{one} \text{ (2)} \end{array} \right\}, \text{ too.}$$

(41) I caught *a lobster* yesterday. My children caught

$$\left\{ \begin{array}{l} \text{a. } \textit{lobsters} \text{ (1)} \\ \text{b. } * \textit{them} \\ \text{c. } \textit{some} \text{ (2)} \\ \text{d. } * \textit{it} \\ \text{e. } \textit{one} \text{ (1)} \end{array} \right\}, \text{ too.}$$

(42) I played *a video game*. My children played

$$\left\{ \begin{array}{l} \text{a. } \textit{video games} \text{ (1)} \\ \text{b. } * \textit{them} \\ \text{c. } ? \textit{some} \text{ (4)} \\ \text{d. } \textit{it} \text{ (2)} \\ \text{e. } ? \textit{one} \text{ (3)} \\ \text{f. } \emptyset \text{ (1)} \end{array} \right\}, \text{ too.}$$

(43) I painted *a picture* yesterday. I often paint

$$\left\{ \begin{array}{l} \text{a. } \textit{pictures} \text{ (1)} \\ \text{b. } * \textit{them} \\ \text{c. } ? \textit{some} \text{ (3)} \\ \text{d. } * \textit{it} \\ \text{e. } ? \textit{one} \text{ (2)} \\ \text{f. } \emptyset \text{ (1)} \end{array} \right\} \text{ when I}$$

am free.

B. Cases in which *they/them* is possible.

(44) On Arbor Day, the Emperor himself planted *a wisteria* in the center of the

garden, and the congressmen planted $\left. \begin{array}{l} \text{a. } \textit{wisterias} \text{ (1)} \\ \text{b. } \textit{them} \text{ (3)} \\ \text{c. } \textit{some} \text{ (2)} \\ \text{d. } * \textit{it} \\ \text{e. } * \textit{one} \end{array} \right\}$ along the fence.

(45) A boy was brave enough to ask *a question* of the dreaded teacher.

This encouraged other students to ask $\left. \begin{array}{l} \text{a. } \textit{questions} \text{ (1)} \\ \text{b. } \textit{them} \text{ (3)} \\ \text{c. } \textit{some} \text{ (2)} \\ \text{d. } * \textit{it} \\ \text{e. } * \textit{one} \end{array} \right\}$ eventually.

(46) I bought *a Japanese car* because $\left. \begin{array}{l} \text{a. } \textit{Japanese cars are} \text{ (1)} \\ \text{b. } \textit{they are} \text{ (3)} \\ \text{c. } * \textit{some are} \\ \text{d. } \textit{it is} \text{ (2)} \\ \text{e. } * \textit{one is} \end{array} \right\}$ economical.

(47) John bought *a Veg-o-matic*, after seeing $\left. \begin{array}{l} \text{a. } \textit{Veg-o-matics} \text{ (1)} \\ \text{b. } \textit{them} \text{ (3)} \\ \text{c. } * \textit{some} \\ \text{d. } \textit{it} \text{ (2)} \\ \text{e. } * \textit{one} \end{array} \right\}$ advertised

on TV.²⁰

(48) I don't want *a Honda Civic*, because too many people have

$\left. \begin{array}{l} \text{a. } \textit{Honda Civics} \text{ (1)} \\ \text{b. } \textit{them} \text{ (3)} \\ \text{c. } * \textit{some} \\ \text{d. } * \textit{it} \\ \text{e. } \textit{one} \text{ (2)} \end{array} \right\}$

(49) John should not be allowed to have *an animal* because he doesn't know

how to treat $\left. \begin{array}{l} \text{a. } \textit{animals} \text{ (1)} \\ \text{b. } \textit{them} \text{ (2)} \\ \text{c. } * \textit{some} \\ \text{d. } * \textit{it} \\ \text{e. } \textit{one} \text{ (2)} \end{array} \right\}$

(50) Give me *a cigarette*, please. I have run out of $\left. \begin{array}{l} \text{a. } \textit{cigarettes} \text{ (1)} \\ \text{b. } \textit{them} \text{ (2)} \\ \text{c. } * \textit{some} \\ \text{d. } * \textit{it} \\ \text{e. } * \textit{one} \end{array} \right\}$.²¹

Those preferability orders of the choices in (38)–(50) are tabulated for ease of reviewing, as in (51) below. The table shows that, all through (38)–(50), full NP choices are not only possible, but most preferable from stylistic as well as semantic considerations. Nevertheless, *they/them* is not possible in group A. Even in group B where it is possible, *they/them* is lowest in the preferability scale; other pronouns, i.e. *some*, *it*, *one*, have priority for use over *they/them*.

(51)

discourses choices	A. <i>They/them</i> is not possible.						B. <i>They/them</i> is possible.						
	(38)	(39)	(40)	(41)	(42)	(43)	(44)	(45)	(46)	(47)	(48)	(49)	(50)
a. full NP	1	1	1	1	1	1	1	1	1	1	1	1	1
b. <i>they/them</i>	*	*	*	*	*	*	3	3	3	3	3	2	2
c. <i>some</i>	2	3	*	2	4	3	2	2	*	*	*	*	*
d. <i>it</i>	*	*	3	*	2	*	*	*	2	2	*	*	*
e. <i>one</i>	1	2	2	1	3	2	*	*	*	*	2	2	*
f. \emptyset					1	1							

This suggests a principle—a substitution principle that eventually produces a number-disagreeing anaphor *they/them*. The principle consists of the four maxims in (52), which should apply in this order. (We disregard cases of definite pronominal reference by *it*, such as those in (40d), (42d), (46d), and (47d).)

- (52) Given a discourse consisting of, at least, two sentences such that the preceding one contains a singular full NP (definite or indefinite), and the other preceded one contains a plural full NP (indefinite),²² and these NPs are identical except for the difference in number (and in definite/indefinite distinction, if any);
- (i) Leave those NPs as they are (as all of the *a*-choices in (38)–(50)), or else
 - (ii) Replace the plural NP by \emptyset (as in (42f) and (43f)) just in case the main verb of the second sentence containing the plural NP semantically includes the NP, or else
 - (iii) Replace the plural NP by *some* or *one* as appropriate (as in (38e), (39e), (40e), (41c, e), (44c), (45c), (48e), (49e)).²³
 - (iv) Only if neither *some* nor *one* is appropriate (as in (46), (47), (50)), or reference to a non-finite set is specifically required (as in (44), (45), (48), (49)), replace the plural NP by *they/them*.

(52) speaks for the marginal status of *they/them* used in those examples of non-coreferential anaphora.

We must recall, here, that definite pronouns like *they/them* are primarily pro-forms used for coreference. Unlike indefinite pronouns like *one*, *ones*, *some*, they

are not ordinarily used just as substitutes for repeated NPs (with plurality added). However, cases may arise in which *some* is not appropriate enough to substitute for an unquantified plural NP, since *some* keeps a quantifying function, meaning ‘certain but not all,’ and indicates a reference to a finite (though indefinite) quantity or amount. This is true of *one* which, of course, refers to one indefinite object. Thus, for want of a better substitute that indicates a reference to a non-finite set of objects, *they/them* is used as a makeshift, out of the bounds of its primary function of coreference; hence the maxim (iv) above. In this sense, *they/them* is in an awkward dilemma.

4. Number Disagreement in Noncoreferential Anaphora: Final Consideration

We have now come to the question: Under what conditions is noncoreferential *they/them*, i.e. a number disagreement, possible? Observe the difference in acceptability between (a) and (b) in each pair of discourses (53)–(55).

- (53) a. *I have *a car*, and many other students have *them*.
 b. I don’t have *a car*, but many other students have *them*.
- (54) a. *I bought *a lottery ticket*, and many people bought *them*.
 b. I’ve never bought *a lottery ticket* though many people buy *them*.
- (55) a. *One student wrote *a paper*, but the others did not write *them*.
 b. One student did not write *a paper*, but the others wrote *them*.

There is a difference in form between the acceptable and unacceptable discourses: all the acceptable discourses begin with a negative sentence, while the unacceptable ones begin with an affirmative sentence.

Here we should recall a fact pointed out by Karttunen (1976). An indefinite NP in an affirmative sentence like the *a*-alternatives in (53)–(55) presupposes the existence of the object referred to by the NP, while an indefinite NP in a negative sentence like the *b*-alternatives in (53)–(55) does not.²⁴ Take (53), for instance. *A car* in (53a) presupposes the existence of a specific car that can be referred to again with a pronoun or a definite NP, as in (56).

- (56) I have *a car*. $\left\{ \begin{array}{l} \text{a. } \textit{It} \text{ is scarlet.} \\ \text{b. } \textit{The car} \text{ is scarlet.} \\ \text{c. } \textit{My car} \text{ is scarlet.} \end{array} \right.$

On the other hand, *a car* in (53b) does not presuppose the existence of a specific

car. Therefore, no reference to a nonexistent car is possible, as in (57).

- (57) I don't have *a car*. $\left\{ \begin{array}{l} a. \quad *It \text{ is scarlet.} \\ b. \quad *The \text{ car is scarlet.} \\ c. \quad *My \text{ car is scarlet.} \end{array} \right.$

Karttunen says that an indefinite NP in a discourse like (56)—therefore the indefinite NPs in the *a*-alternatives in (53)–(55)—establishes a ‘discourse referent,’ and “it justifies the occurrence of a coreferential pronoun or a definite noun phrase later in the text” (ibid.).

It can now be seen from this why noncoreferential *they/them*, i.e. a number disagreement, is allowed in the *b*-alternatives in (53)–(55), while in the *a*-alternatives it is not. In each of the affirmative sentences of the *a*-alternatives, the indefinite NP establishes a ‘discourse referent,’ and this makes it difficult for a later pronoun to be interpreted as noncoreferential. On the other hand, no ‘discourse referent’ is established in each of the negative sentences of the *b*-alternatives. Therefore, a later pronoun must necessarily be interpreted as noncoreferential. Certainly, in the *a*-alternatives, the number disagreement in each case should ipso facto preclude a coreferential relation between the pronoun and NP. However, the pronoun *they/them* has its own drawback—it is primarily a coreferential pronoun—so it has no prior claim to noncoreferentiality. In the *b*-alternatives, in contrast, the noncoreferential interpretation of the pronoun is doubly guaranteed in each case: by the nonestablishment of ‘discourse referent’ and by the number disagreement between the pronoun and NP. All this is related to the dilemma of *they/them*, which we saw in the preceding chapter.

Alongside this first one is a second dilemma of noncoreferential *they/them*, which is another source of the marginality of *they/them*. What is meant by the term is this: A number disagreement as such is hardly acceptable, to begin with; disagreement is disagreement. It is assumed, therefore, that if noncoreferential *they/them* is to be used at all, its use should somehow be justified by some text structure or context.

Certainly, disagreement precludes a (noncoreferential) anaphoric relation in (58).

- (58) *I bought *a compact-disk player* two years ago. *They* were very expensive.

However, a certain addition to the text or context can restore the relation, as in (59).

- (59) I bought *a compact-disk player* two years ago. At that time, *they* had just come out and were still very expensive.

Likewise, (60) is hardly acceptable.

(60) * I bought *a cabbage* because *they* were cheap.

But (61) is an acceptable discourse.

(61) Vegetables are getting cheaper. I bought *a cabbage* this morning because *they* were very cheap.

Embedding a sentence containing *they/them* into another sentence seems to improve the discourse as a whole. It is noticeable, furthermore, that the deeper the sentence is embedded, the more acceptable the discourse becomes, as seen in (62).

(62) I dug *a deep hole*.

- a. * Then the other soldiers dug *them*.
- b. ? Then the other soldiers were told to dig *them*.
- c. Then I suggested to the officer that the other soldiers be told to dig *them*.

The embedding structures of (62a-c) are represented by brackets, as in (63).

(63) I dug *a deep hole*.

- a. * Then [_{S₁} the other soldiers dug *them*]_{S₁}.
- b. ? Then [_{S₁} the other soldiers were told [_{S₂} to dig *them*]_{S₂}]_{S₁}.
- c. Then [_{S₁} I suggested to the officer [_{S₂} that the other soldiers be told [_{S₃} to dig *them*]_{S₃}]_{S₂}]_{S₁}.

See other examples (64)–(66) below. The discourses are more or less improved, if not perfectly, by embedding the sentence containing *they/them* into another sentence.

(64) At the charity bazaar, I bought *a tie-dyed T-shirt*

- a. * because many other people bought *them*.
- b. because a salesgirl said many other people had bought *them*.

(65) I made *a doll* yesterday.

- a. * My children made *them*, too.
- b. ?? My children wanted to make *them*, too.
- c. ? I wondered if my children wanted to make *them*, too.

(66) I have *a car*, { a. * and many students have *them*.
b. ? and it is true that many students have *them*.

What do those additions (in (59) and (61)) and embeddings (in (62)–(66)) essentially do to improve discourses? The answer may be obvious: additions come between an anaphor (i.e. *they/them*) and its singular antecedent NP, so as to separate them away from each other. Embeddings serve the same purpose, too. The further they are separated from each other, the more likely the number disagreement between them is to be disregarded, due to the limitation of human memory. This is especially the case when we hear, but not read, those discourses. Therefore, (67) is of course unacceptable.

(67) * I played *a video game* yesterday. I want to play *them* again.

And (68) is still doubtful.

(68) ? I played *a video game* for the first time yesterday, and I want to play *them* again.

However, (69) will be accepted by most hearers,

(69) I played *a video game* for the first time yesterday, and now I'm really afraid that I'll want to play *them* all the time.

though it might still be rejected by some careful readers.

5. Conclusion

Noncoreferential *they/them* is a marginal usage of the pronoun. The marginality comes from its two dilemmas: (i) *they/them* is primarily a definite pronoun used for coreference, but in those examples of noncoreferential anaphora treated in Chapters 2–4, it is used as a substitute (with plurality added) for its singular antecedent NP, just as an indefinite pronoun like *one, ones, or some*; therefore, (ii) *they/them* does not agree in number with its antecedent NP.

Why, then, is *they/them* still used for all that? Brevity is one reason, as is the case with other pronominal uses, in order to reduce redundancy, thereby shortening (and hence simplifying) sentences. However, a more important reason is that it effects a contrast. For example, in (69) at the end of the preceding chapter, *for the first time* in the first sentence and *all the time* in the second make a rhetorical contrast; those two phrases are semantically the foci of that discourse. Repeating the antecedent NP in its full form will certainly blunt the contrast, by adding another possible focus.

Under what conditions is the use of noncoreferential *they/them* possible? The answer is already obvious: It is possible only when *they/them* is set free from those two dilemmas. That is, (i) when no ‘discourse referent’ in Karttunen’s (1976) sense is established by the antecedent NP, and therefore no coreferential relation between anaphor and antecedent is established (i.e. Freedom from Dilemma 1). In this case, the discourse is fully acceptable, as is example (0) at the beginning of this paper. (ii) When the number disagreement between anaphor and antecedent is somehow ‘blurred’ by the text structure and/or context (i.e. Freedom from Dilemma 2). In this case, the acceptability of the discourse is more or less fluctuating, as is example (69) above, depending on the blurriness of the number disagreement. This is what we now know.

Notes

* I wish to express my gratitude to Bruce W. Hawkins, who, as a talented linguist, offered me very valuable assistance in writing this paper. My thanks are also due to the many informants who were so generous with their native speaker intuition.

0. From Ben-Dasan, I., *The Japanese and the Jews* (English translation by Gage, R. L.), Kenkyusha, p.12.

1. I disregard agreement in person which is exemplified by the following sentences.

- a. *The Jones’* } said that *they* were leaving. (Wasow (1979: 53))
 b. * *We* }

2. Exceptional (in terms of gender) uses of *he* and *she* are common in cases of outright personification in informal use, e.g.

What’s wrong with *the car?*—*She* won’t start.

But this usage does not concern us here.

3. Concerning example (3), it should be noted that the same indefinite NP may have a specific or a nonspecific interpretation, depending on the context. For example, the NP *a job* in (3) suggests the nonspecific interpretation ‘any job,’ while the same NP in the following example suggests the specific interpretation ‘a certain job.’

Elias found *a job*, but *it* required that he have a car.

In this respect, Karttunen (1976: 368) seems right when he says that the meanings of “the verbs involved [i.e. *wanted* and *found* in our examples] partially disambiguate the sentence by making one interpretation far more plausible to the reader than the other.” We do not intend to pursue this question here any further.

4. Stenning’s (1978) term ‘unmatched antecedent’ seems inappropriate. Simply, an unmatchedness, if any, resides in the correlation between anaphor and antecedent, rather than solely in an anaphor or its antecedent.

5. I owe the terminology for this conceptual distinction to Webber (1979).

6. The oblique stroke ‘/’ of *they/them* indicates a choice relation.

7. I disregard the meaning, or implication, of *the* of *the city*, which is something like ‘that the speaker is directly concerned with.’

8. It is already known that, when a pronoun is preceded and c-commanded by the quantifier *every*, the pronoun is bound by the quantifier, and should be singular as in (i).

(i) *Every man* loves *his* mother.

Evans (1980: 341) confirms this by a negative instance like (ii).

(ii) **Every congressman* came to the party, and *he* had a marvelous time.

in which the pronoun *he* is not bound by the quantifier. An interesting fact, then, is that Evans’ example (iii):

(iii) ?*Every congressman* came to the party, and *they* had a marvelous time.

is better than (ii) but still questionable, while our example (9), in which the *every*-pronoun relation is the same as that in (iii), is perfectly acceptable. At present, I do not know why.

9. Bosch’s (1983: 237) claim on the interpretation of sentences containing *nobody* like (10) seems to be as follows. The first clause of (10)—or those of other such sentences—can only be interpreted with respect to what he calls a context model (CM), i.e. a mental model speaker and listener build of their environments. That is to say, the speaker and listener of (10) imagine, at the time of speaking/listening, a potential dancing situation (i.e. CM), in which there are normally a number of people about whom one can sensibly ask whether they danced. It is these CMs, so argues Bosch, that provide the referents for the pronoun *they*.

10. Linguists seem to have paid no particular attention to cases like (11)–(14). For example, Wasow (1979: 75) says that “there are some problems with number agreement,” and gives an example like the following:

John bought a *Veg-o-matic*, after seeing *them* advertised on TV.

But he is not concerned with this ‘problem’ any further. Webber (1979: 17–18) gives a few examples, but does not go any further beyond that. Quirk et al. (1985) does not give a single example.

11. The antecedent NP in each of (12)–(14) is considered to have a specific and a nonspecific interpretation. In (12), for example, *a video game* is understood as meaning ‘a particular video game, say, the one I had wanted to play’ or ‘just one of those games called video games.’ But this distinction in interpretation has no relevance here.

12. *Big dogs are really vicious beasts* may be an alternative reading.

13. An asterisk at the head of a discourse indicates that the discourse as a whole is unacceptable.

14. For specialists in physics, the law of gravitation might be a member of a class (of laws of physics). But, even for them, (19) and (20) are out.

15. Notice the following:

I met a Swedish girl yesterday. She was rather tall, blond, and had blue eyes, so $\left\{ \begin{array}{l} *you \\ I \end{array} \right\}$ could recognize her at sight.

16. Possibly, but less probably, the corrected versions of (22)–(25) are the ones in which the ante-

cedent NPs are pluralized to make them agree in number with their anaphors.

17. Quirk et al. (1985: 865) exhaustively catalogs the pro-forms used for coreference and those used for substitution.

18. I do not know why examples of a plural personal pronoun are easier to find than those of a singular one. However, it seems to have something to do with a fact pointed out by Grinder and Postal (1971), concerning a sentence like the following:

Harry insulted *his wife*₁, and Bill insulted $\left\{ \begin{array}{l} \textit{his wife}_2 \\ \textit{her} \end{array} \right\}$, too.

Notice that *his wife*₁ and *his wife*₂ refer to Harry's wife and Bill's wife, respectively, in one reading, but *her* does not refer to Bill's wife in any reading.

19. For the sake of comparison, see the following set of examples.

I made <i>a doll</i> yesterday.	{	a .	* I often make <i>some dolls</i> when I am free.
		b .	I made <i>some dolls</i> the day before yesterday, too.
		c .	My children made <i>some dolls</i> , too.
		d .	I'll make <i>some dolls</i> for my children tomorrow.
		e .	I want to make <i>some dolls</i> for my children.

20. (47) is borrowed from Wasow (1979: 75).

21. (50) is borrowed from Kawakami, M. (1980: 87), *Eigo sankosho no ayamari wo tadasu*, Taishukan.

22. A seeming exception to this (i.e. 'a plural full NP (indefinite)') is the following:

He was a reasonably healthy young man, and didn't catch *cold* often. But when he did, *they* (= *the colds*) were Grade A, -jumbos. *They* (= *the colds*) would start in his head, and work down into his chest.

However, this cannot be a counterexample. The antecedent of *they* is not *cold* in the surface, but what is implied by the sentence *when he did*, which is, derivationally, something like *when he caught colds*. The *colds* in this underlying structure is the antecedent of *they*, and therefore this example is not one of number disagreement. As we saw in Chapter 1, an antecedent structure does not in all examples lie in Surface Structure, but frequently in some earlier stage of its derivation.

23. *One*-choices of (38e), (39e), (40e), and (48e) are examples of 'distributive singular.' (41e) is ambiguous between a 'distributive singular' interpretation, i.e. 'Each of my children caught one lobster,' and 'My children cooperatively caught one lobster.' *Some* of (41c) is also ambiguous between a 'distributive plural' interpretation, i.e. 'Each of my children caught some lobsters,' and 'My children cooperatively caught some lobsters.' The same is true of (44c) and (45c).

24. Of course, not all indefinite NPs in affirmative sentences presuppose the existence of the specific objects referred to by those NPs. For example, an indefinite NP, when it appears in the predicate nominal position, whether in an affirmative or a negative sentence, refers to nothing. This is obvious in the following example.

I am *a student*. $\left\{ \begin{array}{l} *He \text{ is hardworking.} \\ *The \text{ student is hardworking.} \end{array} \right.$

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