



Title	Indirect Anaphors : A Cognitive Grammar Account
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Citation	北海道大學文學部紀要, 46(1), 1-22
Issue Date	1997-09-30
Doc URL	http://hdl.handle.net/2115/33689
Type	bulletin (article)
File Information	46(1)_PL1-22.pdf



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Indirect Anaphors : A Cognitive Grammar Account

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1. Introduction

Indirect Anaphor refers to a nominal which is linked via inference, as opposed to coreference, to some linguistic material across clauses or sentences. Example (1) illustrates:

(1) We moved to a farm two years ago. One winter night, a fox got into *the chicken house* and scattered *the inhabitants* far and wide....

In English, several referring forms appear as indirect anaphors. In this paper, I focus on nouns with definite articles appearing in a minimum stretch of discourse.

The aim of this paper is two-fold. First, it characterizes the rich variety of semantic relations between the indirect anaphor and the material in the preceding discourse. Specifically, I will discuss four major patterns, as represented in (2a)-(2d) :

(2a) I enjoy my work immensely. *The pay* is excellent. (INCLUSIVE)

(2b) Someone suggested we have backyard barbecue parties on week-ends with the wives and kids included. Everyone liked *the idea*.

(SUMMATION)

(2c) I had my palm read six months ago. *The woman* told me I would be moving and she was right.

(IMPLICIT PARTICIPANT)

(2d) I once hit a stuck window with my fists to try to shake it loose. One hand went through a glass pane. It took 10 stitches to close *the wound*.

(CONCOMITANT)

The second aim of this paper is to elucidate the principles which govern the use of indirect anaphors.

2. Approach

2.1 The Meaning of *the*

Let me begin my discussions with the semantic import of the definite article in English. Here I assume Langacker (1991)'s analyses of nouns with or without articles. That is, a bare noun like *house* only designates a type of thing. A noun with an indefinite article designates both a type and an instance of thing. A noun with a definite article like *the house* designates a type and a unique instance of HOUSE. An instance has a particular location in the domain of instantiation, while a type does not.

2.2 Reference Points and Dominions

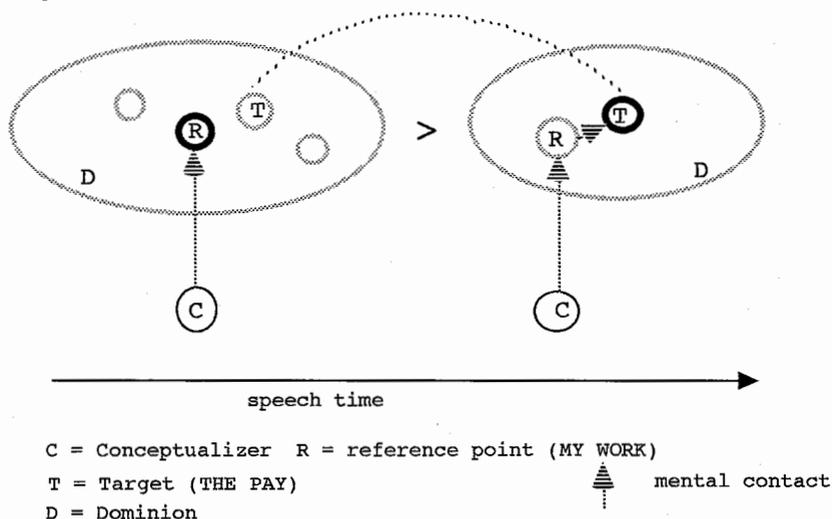
Next, let me explain in what way the definite form such as *the pay* in (2a) is interpreted as designating a unique instance. I claim that the image-schema of reference-point construction facilitates such an interpretation. Langacker 1993 proposes a *reference point* as "the ability to invoke the conception of one entity for purposes of establishing mental contact with another." A reference point is necessarily

anchored in a conceptual region called a 'dominion'. A dominion is a kind of mental space which contains a set of interrelated entities (or potential targets) which may be accessed via this reference point.

van Hoek 1992 demonstrates that pronominal anaphors can be best characterized in terms of reference-point construction. As a natural extension, I explore reference-point analyses of indirect anaphors. Let us look at the example in (2a). The first statement "I enjoy my work immensely," or the nominal "my work" in particular, establishes a topic in discourse. The subsequent statement concerning *the pay* can be interpreted as being located within the conceptual region set up by this topic. In such a case, the nominal *my work* may be analyzed as functioning as a reference point. We interpret the nominal *the pay* only through the conception of the nominal *my work*. Figure 1 sketches the reference-point configuration. Based on figures 2 and 3 in Langacker 1993, the small circle labeled C represents the conceptualizer (the speaker and addressee) and R is the reference point ("my work"). The ellipse labeled D represents the dominion and T represents the target ("the pay"). The dotted line connecting the two targets indicates the correspondence in referent. The vertical arrows indicate the conceptualizer's mental contact. The horizontal arrow, which indicates speech time, is intended to reflect the "on-line" nature of linguistic processing.

The basic idea of figure 1 is that the conception of *my work* in the first sentence is necessary for the interpretation of the anaphor *the pay*. Observe that a heavy line is used for R in the left dominion, whereas a light line is used in the right dominion. The intent is to show that the conception of MY WORK is fully activated and articulated in the first sentence, whereas it recedes into the conceptualizer's background awareness in the second sentence. This conception

<Figure 1>



changes from active to semi-active in the sense of Chafe 1987. Conversely, a light line is used for T in the left dominion but a heavy line is used in the right dominion. This illustrates that the notion of PAY is targeted and articulated; it changes from semi-active to active conception. One may speculate that the conception of MY WORK together with its dominion is operating inside the conceptualizer's head (as part of the short-term memory) throughout this short discourse.

Needless to say, the notion of PAY is not the only potential target. The dominion, by definition, comprises a variety of interrelated entities. Entities like CO-WORKERS and BOSS may also naturally belong in the dominion of the reference point MY WORK, so any of such items are potential targets. In fact, a statement like (2) fully exploits such potentiality:

(3) I enjoy my work immensely. *The pay* is excellent, and *the people*

are great. *The boss* is a pussycat ...

3. First Principle

3.1 Cognitive Models

The INCLUSIVE pattern, as analyzed in figure 1, exhibits the most productive pattern; hence we may consider it the prototype of indirect anaphor. This pattern very often involves a part-whole relationship, but I classify into INCLUSIVE any instance where a reference point is given by an explicit nominal.

The remaining three patterns are less noticed but they are by no means infrequent in English discourse. These patterns share one property. The reference point is provided not by a nominal, but by a clause or a combination of clauses. In this respect, the reference point is not a “point” but a process. However, I will argue that such preceding clauses can be still analyzed as a reference point to the extent that they mediate the conceptualizers’ mental contact with the referent of the anaphoric nominal.

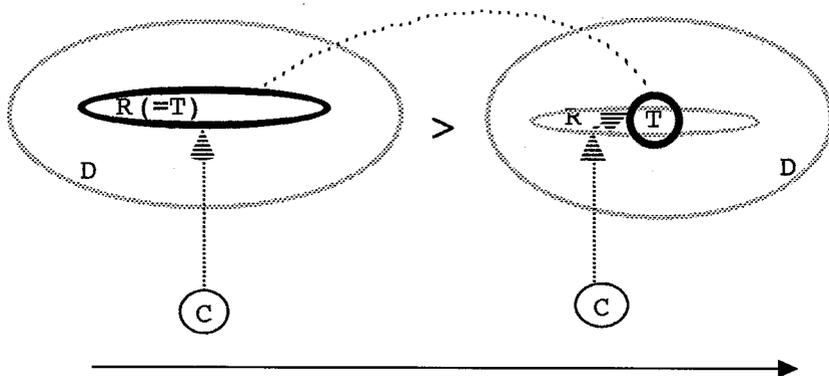
SUMMATION. By SUMMATION I mean cases in which the anaphor provides a one-word summary of an activity or state described in the preceding discourse. The anaphor in (2b) summarizes the specific activity proposed in the prior sentence; that activity is thereby construed as an object:

- (2b) Someone suggested we have backyard barbecue parties on weekends with the wives and kids included. Everyone liked *the idea*.

The reference-point model of this discourse would be something like figure 2:

The small, heavy-line, ellipse represents the reference point,

<Figure 2>



which involves an event comprising a number of entities such as *we*, *barbecue parties*, *wives* and *kids*, etc. This reference point mediates the interpretation of the nominal *the idea*. What is unique to SUMMATION is that the reference point and the target essentially share a common conceptual content. But they differ in construal—an entire event is paraphrased in a nominal; the change in shape of T reflects such switching in construal. This process may therefore qualify as a METAPHOR in the sense of Lakoff and Johnson (1980: 3) in that human cognition can deal with objects more easily than complex actions and states. We have similar instances in (4a) and (4b):

- (4a) Karen took the train to Rome yesterday. *The trip* took 3 hours.
 (Erku & Gundel 1987)
- (4b) My best friend, Linda, and her husband, Rod, recently divorced after eight years of marriage. *The split* was amicable, and I've kept in touch with them.

IMPLICIT PARTICIPANT. In IMPLICIT PARTICIPANT, the anaphoric nominal does not provide a summary of the preceding event;

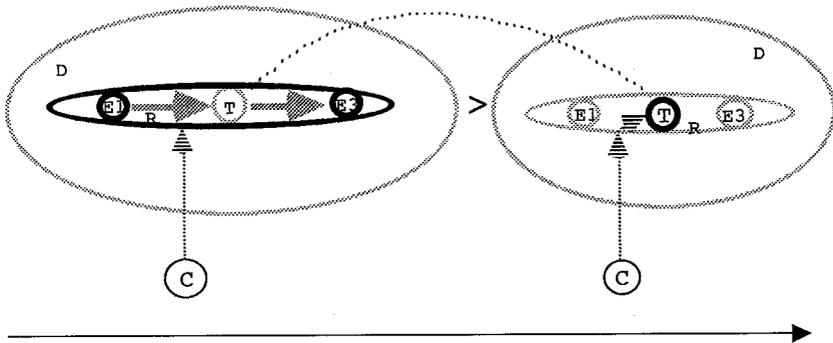
but it designates an entity which implicitly participates in the preceding event.

(2c) I had my palm read six months ago. *The woman* told me I would be moving and she was right.

Note that the first sentence of (2c) has a causative construction. It contains *have* as an analytic causative verb, which is followed by a passive transitive complement clause. Such a construction involves three participant roles, a Causer, a Causee+Agent, and a Patient. Obviously, the first sentence designates only two participants. The anaphoric nominal *the woman* refers to that participant who performs the palm reading, an individual who is both a CAUSEE and AGENT in the causative construal.

Figure 3 sketches the reference-point configuration of this anaphoric relationship.

<Figure 3>



E1= causer T= causee+agent E3= patient

→ the transmission of energy

E1 represents the causer, coded by *I*, and E3 represents the

patient, coded by *my palm*. T represents the target, both a causee and agent of the entire event. Note that a light-line circle is used for T in the left dominion, while a heavy line is used in the right dominion. As before, this shows a change from semi-active to fully active conception. Although figure 3 is not a complete portrayal of the conceptual structure of *have* causatives, I believe this is adequate for the present purpose; the figure shows the crucial role of the preceding event as mediator in the interpretation of the anaphoric nominal. We have similar examples in (5a) and (5b):

(5a) It was dark and stormy the night the millionaire was murdered.

The killer left no clues for the police to trace.

(Carpenter & Just 1977)

(5b) Mary dressed the baby. *The clothes* were made of pink wool.

(Sanford & Garrod 1981)

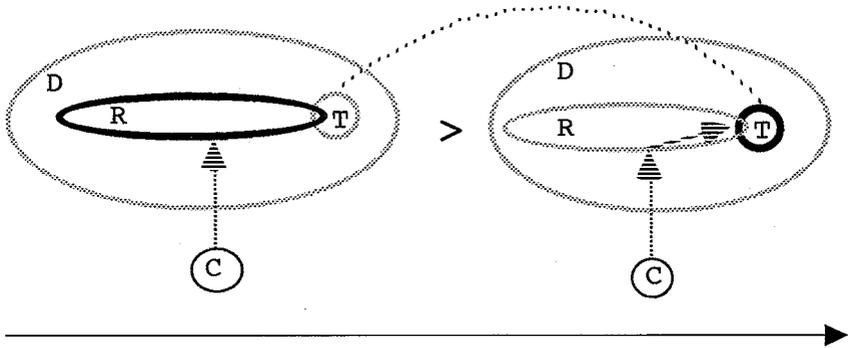
CONCOMITANT. Finally, the CONCOMITANT pattern refers to a case in which the anaphoric nominal designates the result of the preceding event or state:

(2d) I once hit a stuck window with my fists to shake it loose. One hand went through a glass pane. It took 10 stitches to close *the wound*.

The wound in (2d) designates a likely concomitant of the unfortunate experience portrayed in the preceding two sentences. Figure 4 offers the reference-point model of this anaphoric relationship.

Again, the conceptualizer makes mental contact with the referent of the anaphor only through the conception of the event depicted in the preceding two sentences. We have other instances in (6a) and (6b):

<Figure 4>



- (6a) My ex-fiance tried to get into my house through the window. I called 911 at 3:00 a. m., and *the response* was immediate.
- (6b) Ten years ago, Bill impregnated his girlfriend, Sally. Both were 16. When Sally's condition became obvious, her parents sent her to a maternity home out of state, and *the baby girl* was placed for adoption.

Let me stress that the four patterns we have discussed do not constitute an exhaustive list of indirect anaphors in English. I also do not believe that the dividing line between these patterns is always clear-cut. The main point has been to show that the reference-point model offers a coherent and explicit characterization of indirect anaphors.

3.2 First Principle

Having portrayed a reference-point model for each pattern, we are in a position to offer the first principle in (7):

- (7) Associability (=A) Principle:

The conceptualizer has mental contact with a referent (referent

A) associable with the referent (referent B) of *the N* in the immediately preceding discourse.

Here I employ the term “referent” in the sense of mental, as opposed to real world, object. By this term I mean not only an entity but also an event or state. The term “associability” should be understood as a gradient notion; one referent is MORE or LESS associable with another. Associability is ultimately based on our encyclopedic knowledge combined with the information from current discourse.

Defined this way, this principle is fully schematic. It accommodates not only the INCLUSIVE pattern, but also the other three patterns that involve clauses serving as reference points. In a nutshell, A principle predicts that referent A performs the role of reference point and that referent B must be such an entity that may belong in the dominion of referent A.

4. Second Principle

4.1 Problem

Next, look at the examples in (8a) and (8b):

(8a) We stopped for drinks at the New York Hilton before going to the Thai restaurant. *The waitress* was from Bangkok.

(Erku & Gundel 1987)

(8b) We stopped for drinks at the Hilton before going to the zoo.
?*The baby orangutan* was really cute. (Erku & Gundel 1987)

Erku and Gundel say that the primary reading of *the waitress* (from Bangkok) in (8a) is the waitress at the New York Hilton, despite its apparent association with the Thai restaurant. A

(sociability) Principle alone cannot deal with this problem. Erku & Gundel explain this reference assignment by the notion of topic. That is, an anaphor normally refers to the topic of the immediately preceding discourse; the topic of the first sentence in (8a) is in the main clause; and therefore *the waitress* refers to the one at the New York Hilton. To support their point, Erku and Gundel provide (8b), which they judge to be slightly odd. They explain that the reason for the oddity is because the topic of the first sentence is the Hilton in the main clause. But the notion of *the baby orangutan* is associable not with *the Hilton* but only with *the zoo* in the subordinate clause, a clause which does not contain the topic of the entire sentence.

However, look at (9a) and (9b) :

(9a) I couldn't attend the semantics lecture because I had a temperature. *The doctor* said it was flu. (Matsui 1993)

(9b) My brother studies very hard in order to pass the exam. *The questions* were exactly what he wanted. (Matsui 1993)

In these examples, the anaphor refers to the material in the subordinate clause, which is not normally considered the topic of the entire sentence. Evidently from (9a) and (9b), the topic account along the line of Erku and Gundel fails in many instances. In the rest of this paper I will argue that the notion of PROMINENCE GAP provides a better alternative.

4.2 A Cognitive Grammar treatment : Prominence Gap

Langacker maintains that linguistic constructions are inherently asymmetric. Clausal constructions such as (10) present subjects as more prominent than objects. Head-modifier constructions like (11) present head nominals as more prominent than non-head nominals.

And *before* constructions like (12) present main clauses as more prominent than subordinate clauses. Langacker invariably labels the most prominent element as a trajector, and the less prominent as landmarks:

(10) *Max met Jane at the station.*

TR LM LM

(11) *the cat on the carpet.*

TR LM

(12) *Alice left before Bill arrived.*

TR LM

(TR: Trajector, LM: Landmark cf. Langacker 1987, 1995)

My working assumption is that every linguistic construction incorporates its own distinctive DEGREE OF PROMINENCE GAP among its participants. The exact DEGREE of asymmetry varies from one construction to another. Based on this assumption, I propose (13) as specific claims:

(13) Claims on PROMINENCE GAP:

- a) *Before* constructions incorporate a large PROMINENCE GAP between main clause (trajector) and subordinate clause (landmark).
- b) Clausal constructions incorporate a small PROMINENCE GAP between subject (trajector) and object (landmark).

To substantiate these claims we need to measure the exact degree of prominence gap involved in these constructions. For this purpose, I employ pronominal anaphora. Several works suggest that a sentence participant's ability or inability to antecede a pronoun provides an important clue concerning the prominence of that participant.

Thus Ariel (1988) characterized pronouns as high accessibility markers; Sproat and Ward 1987 find that a pronoun's antecedent must be sufficiently salient; and van Hoek 1992 revealed that a high degree of accessibility of pronouns correlates with a high degree of prominence of antecedents. We may assume then that, the more prominent a given nominal is in the construction, the more easily that nominal can antecede a pronoun. Compare the three examples in (14). In each version the underlined pronoun is assumed to take the underlined nominal *a job applicant* as an antecedent:

- (14a) *A job applicant* showed up before Sally arrived at the office. He wore torn jeans and a T-shirt.
- (14b) Sally arrived at the office before *a job applicant* showed up. He wore torn jeans and a T-shirt.
- (14c) Sally cleaned up her office before having an interview with *a job applicant*. ?He wore torn jeans and a T-shirt.

The several speakers I consulted judged (14a) as perfectly acceptable, (14b) as acceptable but (14c) as not acceptable. The result suggests that the *before* construction presents the nonsubject in the subordinate clause as extremely low in prominence. Next, compare the two examples in (15).

- (15a) Jody arrived at the office before Sally showed up. She wore torn jeans and a T-shirt.
- (15b) Jody arrived at the office before having an interview with Sally. She wore torn jeans and a T-shirt.

In both versions, the speakers I consulted interpreted the underlined pronoun as referring to *Jody* but not *Sally*, even though this pronoun is potentially ambiguous between these two individuals. If pro-

nominal tests are reliable, the results in (14) and (15) support the claim in (13) a; that is, *before* constructions incorporate a large prominence gap between main and subordinate clauses. The degree of asymmetry involved in *before* constructions can be contrasted to clausal constructions like (16):

(16a) *Max* met Jane at the Amtrak station. *He* had been waiting for that moment for a long time.

(16b) Max met *Jane* at the Amtrak station. *She* had been waiting for that moment for a long time.

(16c) Max met Jane at *the Amtrak station*. *It* was very crowded.

Here the antecedent does not have to be a subject. The result in (16) supports the claim in (13b); clausal constructions incorporate only a small prominence gap. See also the example in (17):

(17) The dean expelled John because *he* discovered his secret.

(Green 1989)

Green (1989) explains that “There is no way of knowing who the underlined *he* ... is intended to refer to, short of being able to read the speaker’s mind.” (Green, 9). Green’s observation also supports the proposal in (13b).

If the two claims in (13a) and (13b) are correct, we may add a second principle which takes into account the prominence factor of a reference point:

(18) Prominence (=P) Principle:

The immediately preceding discourse normally contains one candidate for the role of reference point that is also a highly prominent figure.

Associability and Prominence Principles combine to make the following predictions. When the two principles are in harmony, we get a more appropriate instance of indirect anaphor; and when the two principles are in conflict, we get a less appropriate instance. Let us go back to the example in (8a). A-Principle predicts that both *the Hilton* and *the Thai restaurant* are potential candidates for reference point, although *the Thai restaurant* is the stronger. On the other hand, P-Principle predicts that the referent point should be *the New York Hilton* because this is the only participant high in prominence. Thus (8a) demonstrates a case where the two principles are in harmony, and P Principle prevails.

Next, (8b) strikes some speakers as slightly odd because the two principles are in serious conflict. On the one hand, A-Principle predicts that *the zoo* should be the only candidate for referent point. On the other, P-Principle dictates that *the zoo* should not be a reference point because this entity occurs in a low-profile position. (8b) can be contrasted to the example in (19), an alternative construction with the conjunction *after* which promotes *the zoo* into a more prominent position:

- (19) We went to the zoo after stopping for drinks at the Hilton. *The baby orangutan* was really cute.

Here, the two principles work in complete harmony. *The zoo* is the only possible candidate for reference point, and it occurs in a fully prominent grammatical position.

The two principles also capture examples like (9a) and (9b). In (9a), for instance, the reason the anaphor can refer to the subordinate clause in the first sentence can be ascribed to a small prominence gap of the *because* construction. This is evident from the fact that the

pronoun it in the second sentence refers to the subordinate clause of the preceding *because* sentence.

Finally, I would like to add that grammatical slot is not the only parameter of prominence of a given participant; prominence involves a variety of other factors such as semantic role, inherent semantic property, syntactic arrangement, pragmatic and intonational salience. In (20),

- (20) We stopped for drinks at the Hilton before going to the ZOO.
The baby orangutan was really cute.

with *the zoo* given a special intonational nucleus, the entire sequence becomes far more acceptable than the one in (8b).

In summary, I hope I have shown that cognitive grammar is useful in an account of indirect anaphors in English.

Footnotes

- * An earlier version of this paper was read at the fourth International Cognitive Linguistics Conference, held at the University of New Mexico, Albuquerque, July 17 through 21 in 1995. I am grateful to the comments I received there.

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