

# Propositional Relativization in Written Texts

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## Introduction

In this paper, an attempt will be made to describe some of the ways in which a phenomenon referred to as **propositional relativization** contributes to the organization of written texts. In Part 1, it is roughly defined as a type of mental operation in which two contexts, or worlds, are compared with respect to the truth value of a proposition asserted in them. The whole part is intended to illustrate that the phenomenon is a basic type of mental operation which is not only relevant to the organization of written texts but also other linguistic and rational activities.

In Part 2, some examples are presented of real texts in which propositional relativization is indentified. It is more formally defined as a comparison between two formulae consisting of three elements. The example texts are analyzed in terms of the formulae.

In Part 3, the **clause-relational approach** towards the analysis of discourse structure, which was systematized by Eugene Winter, is explained for the purpose of showing the link between his theory and this paper. Several important notions of the theory are introduced, though a certain modification is made to serve the purposes of this paper.

In Part 4, propositional relativization is described as part of a clause-relational network. Various functions of texts are construed as a result of the interaction between propositional relativization and other types of clause relations. Some examples of such functions are

presented and the definition of each function is attempted.

## **Part 1 Prevalence of the Phenomenon**

### **1.1 Relativity of a proposition**

“I had a dream last night. I was back in high school playing football. I scored three touch downs, including the winning touch-down, and I ended up with the most beautiful girl in the school. I said to her, ‘This is the most wonderful day of my life. Too bad it’s only a dream.’ And she said, ‘Yes, but in the dream it’s real.’”

By James Dickey (Time, February 17, 1997)

James’ girlfriend in his dream seems to have implied that reality is relative : Her beauty and James’ touchdowns were all “only a dream” and were not real in the world in which James was now waking up ; On the other hand, as long as he kept talking to her in the world called a dream, she was real and he did score three touchdowns. Whether an event is real or not depends on the world in which we are talking about it. We appear to relativize our conception freely by moving from one world to another or imagining different contexts in which it is to be conceived. Relativization of a conception, or of its linguistic counterpart, a **proposition**, is actually assumed to underlie various types of linguistic phenomenon.

This way of thinking might be provided with its theoretical basis by a view on the linguistic notion of a proposition which was presented by such a philosopher as Strawson (1950). In his theory of referring, he makes a clear distinction between the notions of a sentence and that of its use, which corresponds to another distinction he makes between the notions of an expression and of its use. He criticizes the **theory of description** presented by Russell for the confusion of the meaning and mentioning of such a uniquely referring expression as *the King of France*. As a result of the confusion, Russell was perplexed, like many of his contemporaries, by the fact that a sentence such as *The King of France is wise* was significant in spite of the

subject lacking its referent. If meaning is identified with referring, or mentioning, such a sentence must be meaningless, though it is obviously not. Russell presented his unique solution to this problem, which Strawson finds obviously wrong.

Strawson states that we are apt to fancy we are talking about expressions when we are actually talking about their uses. Mentioning, or referring, is not something an expression does but it is something that someone can use an expression to do. In other words, it is nonsensical to talk about the referent of an expression without specifying the particular occasion on which it is used. For instance, the expression *the King of France* would have referred to a definite person if the above mentioned sentence had been uttered under the French monarchy, whereas it would not if it were uttered in our talk about contemporary France. One and the same expression could be used in different ways on different occasions.

Similarly, a distinction is made between a sentence and its use. Just as referring, or mentioning, is not a function of an expression but of its use, so is the truth value (truth or falsity) not a function of a sentence but of its use. It would be absurd to question whether the sentence *The King of France is wise* is true or false without defining the context. It would have been true or false if it had been stated under the French monarchy but it would not if it were stated now. To cite Strawson on this point :

Obviously in the case of this sentence, and equally obviously in the case of many others, we cannot talk of *the sentence* being true or false, but only of its being used to make a true or false assertion or (if this is preferred) to express a true or a false proposition. And equally obviously we cannot talk of *the sentence* being about a particular person, for the same sentence may be used at different times to talk about quite different particular persons, but only of *a use* of the sentence to talk about a particular person. (ibid., 218-219)

The context dependency of a sentence, or of a proposition expressed in it, is the most important concept on which our study on the structure of written text is based. For it enables us to postulate a special type of mental operation which is referred to as **propositional relativization** in this paper. It is realized as an essential part of the structure of written texts. It is most typically a process in which two different contexts of use extant in the same text are compared with respect to the truth value of one common proposition. The context dependency of a proposition will be most conspicuously noted in the case where in one context a proposition is true whereas in the other it is not. Such a mental process, or its linguistic realization, seems to play an essential role in the organization of a text, of which description is one of the main purposes of this paper. Before embarking on this task, however, it might be useful to know how prevalently this mental operation could be identified in our linguistic and rational activities.

## 1.2 Propositional relativization as a prompt for speech acts

One type of linguistic phenomenon which is closely related to propositional relativization is speech acts. It is presumed to prompt various types of speech acts such as requesting, advising and warning. At some point in the process of performing them, the speaker is assumed to anticipate a course of events which is contradictory to the ideal one. For example, he might in his mind say, "I would like my wife to help me but she won't unless I ask her." The contrast between the anticipated and ideal futures with respect to the truth value of the proposition, *My wife helps me*, works as a prompt for making a request. His request is motivated by his intention to resolve the discrepancy between the two worlds by his utterance. He expects that by his request the truth value of the proposition in the normal course of events will change so that it will be compatible with his ideal. In other words, his utterance acts as a catalyst to set off a

change from two contrasting worlds to two harmonious ones. Likewise, it is possible to consider propositional relativization to be the essential factor that prompts the performance of other types of speech acts such as advising and warning.

This aspect of speech acts seems to be implied in Searle's theory of speech acts as well. Searle (1969) defines each type of act in terms of four kinds of rules respectively referred to as propositional content, preparatory, sincerity and essential rules. Requesting, for example, is appropriately performed only when these rules are abided by :

Propositional content rule : Future act *A* of *H*.

Preparatory rule : I. *H* is able to do *A*. *S* believes *H* is able to do *A*.

II. It is not obvious to both *S* and *H* that *H* will do *A* in the normal course of events of his own accord.

Sincerity rule : *S* wants *H* do to *A*.

Essential rule : Counts as an attempt to get *H* to do *A*.

(*H*, *S* and *A* respectively stand for the hearer, speaker and act.)

The content of a request is defined by the propositional content rule as "Future act *A* of *H*". If we describe it as a proposition *H will do A*, we could interpret the relationship between each rule as a process in which it is relativized. Its relativity will be most conspicuous when we compare the sincerity rule and a specific version of the preparatory rule II. If we take the view that the speaker's desire expressed by the term *wants* could be regarded as a kind of world, it might be possible to paraphrase the sincerity rule as *In S's ideal world, it is true that H will do A*. On the other hand, it is possible to consider a specific version of the preparatory rule II : *It is obvious to both S and H that H will not do A in the normal course of events of his own accord*.<sup>1</sup> If the phrase *in the normal course of events* is understood as

an expression defining a type of world, the proposition *He will do A* is not true in it. Thus, in Searle's theory we can see two worlds that are contrasted with respect to the truth value of a proposition.

A similar view on some types of speech acts is also expressed by Lyons (1977 : vol. II, 774). In his analysis of prohibition which is a type of speech act performed, for instance, by uttering a negative imperative sentence, such as *Don't open the door*, he states as follows :

The reason why he (the speaker) issues his prohibition is that he thinks that, in default of the prohibition, the addressee will, or may, bring about a state of affairs of which p (the contradictory of not p) would be true. It seems preferable, therefore, to treat prohibitions as having a negated topic : i.e. as resulting from modal negation.

This also seems to be another description of a type of speech act in terms of propositional relativization. The proposition p (e.g. *The addressee will open the door*) is true in a type of world, that is, *a state of affairs the addressee will or may bring about*. It is contrasted to the speaker's ideal world in which the contradictory proposition not-p (e.g. *The addressee will not open the door*) is true, or in which the proposition p is not true.

It is important, however, to note that propositional relativization is in operation not only when contradictory propositions are present although this might be the most noticeable case. It is also in operation when a proposition that is true in a world is true in another world as well. In such a case the relationship between the two worlds is not contradictory but compatible. Conceiving another world in which the same proposition is also true virtually means that the speaker finds its truth value relative. For he will not move out of one world if he finds its truth value absolute.

Comparison between two compatible worlds is also considered to prompt some types of speech acts such as confirming. Although Searle's analysis of this particular type of act is not available, it

would be possible to see it as prompted by the mental operation in which some proposition asserted in a world is also affirmed to be true in the world of the speaker's belief. Such an operation is at work, for example, when he/she confirms a rumour.<sup>2</sup>

### 1.3 Propositional relativization in the process of reasoning

Propositional relativization is, at least in a certain cognitive model, considered to play an essential role in one of the most basic processes of reasoning. In such a model, some part of our knowledge is described as logical chains of propositions. The minimum unit of such knowledge is a logical relation between two propositions which is represented as  $p \rightarrow q$ . It roughly means that the proposition  $q$  logically follows the proposition  $p$ . On the other hand, we have a set of relational concepts called **binary relations**, such as the cause-effect relation and the purpose-means relation. In the ordinary use of language, the logical relation  $p \rightarrow q$  is realized as a binary relation: *p is the cause for the effect q*, or *p is the means for the purpose q*, etc. The term *binary* means that the two elements comprising the relation function together as a unit, and the presence of one element anticipates that of the other; If one proposition is assigned the effect membership, then another proposition that functions as its cause member is also expected to be identified.<sup>3</sup> If the proposition of this function is not automatically available, some process of reasoning is necessary for its identification. The search for it is done both deductively and inductively on the basis of our general knowledge. For instance, seeing a student working unusually hard, we might guess that it is caused by his sitting for an important test.<sup>4</sup>

It is sometimes the case, however, that a proposition thus attained turns out to be false. For instance, we may somehow find out that the student is not actually going to have an important test. It is on such an occasion that relativity of a proposition becomes most manifest: The proposition *The student is going to have an important test* is true

in a world postulated on the basis of our general knowledge whereas it is not true in this particular situation.

One of the possible steps to be taken in the face of such contradiction is to investigate what makes this particular situation so different from the general world or why the reasoning that holds in the latter does not in the former. As a result of the investigation, it might, for example, be found that the student is financially rewarded for his study by his parents, which makes this particular situation conspicuously different from the general one.

It should be noted that the new fact functions as the true cause member of the binary relation in place of the proposition *The student is going to have an important test*. This is a kind of correction process in which the application of general knowledge is rejected in a particular world and a new binary relation is established in it. This is one of the ways in which propositional relativization contributes to the elaboration and refinement of the structure of our general knowledge.

#### **1.4 Propositional relativization as a semantic property of lexical items**

In 1.2, it was discussed that propositional relativization prompts various types of speech acts. Though the linguistic devices to perform the act was not discussed, it might be possible to assume that propositional relativization is expected, or implied by, the semantics of the performative verbs and their derivatives which are used for performing it. For example, a performative verb such as *request* is considered to partly mean, or imply, that an ideal world and a likely future are contrasted with each other with respect to the truth value of a proposition. This semantic property, however, is not unique to performative verbs or their derivatives but common among other types of lexical items as well.

There is, for example, a type of lexical item that is called a



change-of-state verb. It is possible to analyze the meaning of this type of verb as indicating a shift from a situation in which a proposition is true to another in which it is not. It is how we interpret the meaning of a sentence such as *Tom stopped working hard after the test*, which includes a change-of-state verb *stop*. Namely, it is possible to posit two contrasting worlds: one that precedes the test in the time sequence and the other that follows it. In the former, the proposition *Tom is working hard* is true whereas in the latter it is not.<sup>5</sup> Though the content of the proposition is supplied by other lexical items in the sentence, it is the semantic property of the verb *stop* that gives this analysis its structure.

One example of a noun in which semantics might be similarly explained is the lexical item *indecision*. According to Longman Dictionary of Contemporary English, it means “a state of being unable to decide between two things, possible courses of action, etc.” The part of the definition *two possible courses of action* might be paraphrased in our terms as two possible worlds in one of which a proposition representing an action is true and in the other it is not. The presence of lexical items such as this and those mentioned above in language is a concrete testament to the relevance of the phenomenon in question at the most basic level of our linguistic activity.

## **Part 2 Textual Realization of Propositional Relativization**

### **2.1 A formulaic description**

In Part 1, we discussed that propositional relativization seemed to play a crucial role in our linguistic and rational activities. The propositional relativization related to these activities might be commonly described as a comparative operation in which two worlds, or contexts of use, are compared with respect to the truth value of a proposition:

The world X compares with the world Y affirmatively or negatively with respect to the truth value of proposition p.

Affirmative comparisons made between two worlds might be represented in such a formulaic manner as follows :

Formulaic Description 1

- (a) In the world X, it is true that p
- (b) Also in the world Y, it is true that p

Negative comparison, which is the case where propositional relativity is more conspicuous, might be represented as a contrast between two formulae (a) and (b) or (a) and (b') shown below :

Formulaic Description 2

- (a) In the world X, it is true that p
- (b) But in the world Y, it isn't true that p  
(In the world Y, p is denied)
- (b') But in the world Y, it is true that not-p  
(In the world Y, not-p is asserted)

These formulae reflect our view on a proposition that it is awarded some truth value only when it is asserted or denied in some specific context of use or world. It might be possible to identify three elements comprising each formula : **the world-defining element** (in the world X/Y), **the assertional element** (it is/isn't true) and **the propositional element** (p/not-p). The relationship among them might be better understood by analogy to that among their syntactic counterparts : the subject, the copula *be* and the subject complement. Just as the copula *be* functions as a link between the subject and the subject complement, so the assertional element functions as the link between the other two elements in each formula. Just as we can say the subject complement is "affirmed" or "not affirmed" of its subject, so we can say a proposition is "asserted" or "not asserted" in the world or the context of use. For instance, in Formulaic Description 2, (a) shows that the proposition p is asserted in the world X whereas (b) shows that it isn't in the world Y. The difference between (b) and (b') might also be explained as corresponding to the syntactic difference between so-called predicate denial (e.g. Mary isn't happy) and predi-

cate term negation (e.g. Mary is unhappy). It is well known that the former is often understood as the latter as a result of informational strengthening.<sup>6</sup> In a similar way, (b) is often strengthened in the informational sense and counts as (b') since, strictly speaking, the inclusion of *not* in the assertional element only means that it does not assert the proposition. It is not informative enough only to deny the link between the proposition and the world Y. What is going to be attempted in the rest of this paper is to describe some of the basic ways in which propositional relativization thus described is actualized in written texts.

At this point, however, it is important to note that in the above discussion we are actually not talking about propositional relativization as a process but only as a product. That is to say, a clear distinction must be made between its formulaic description and the process in which it is realized as part of real texts. The formulaic description only shows the final result of the whole process in which it is realized with all the necessary elements identified in a fixed order. When the process is actualized in real texts, however, the order in which each element is linguistically presented varies. Besides, not all of the elements are necessarily expressed as real sentences ; Some of them are only implied. Even when they are expressed in the text, there is, usually, no one-to-one relationship between each element and individual sentences. It is natural, however, that the process has many different types of actualization since it is assumed to change according to uique communicational purpose of each text. Therefore, it is important for us to identify some relationships between such different types of actualization and their unique communicational purposes. In the next few sections, I would like to further expand on this point.

## 2.2 Three elements in a real text

It might be useful to present an example of real text to show how

the linguistic realization of propositional relativization contributes to the structural organization of texts. The following text is a letter to the editor of a newspaper, and every sentence is numbered for the sake of referential convenience :

Text 2-1 What Germany pays teachers

(1) Mary Kenny is mistaken when she writes that high school teachers in Germany are paid £45,000 a year. (2) The annual salary of a 40-year-old teacher in a state grammar school is approximately £28,000. (3) I expect Miss Kenny's mistakes arose from a mistranslation of Hochshullehurer, a general term for university professor.

(The Sunday Telegraph, October 7, 1990)

The purpose for the writer to produce this text is to *correct* the wrong information presented by Mary Kenny, another encoder. Here, we could identify a comparative operation with respect to a proposition *high school teachers In Germany are paid £45,000 a year*, which is true in the world of Mary's writing but is not true in the world the writer knows. The contrast between the two worlds is basically regarded as one between two different sources of information. The propositional relativization in operation here might be shown in a formulaic manner as follows :

(1)' In the world of Mary Kenny's writing (when she writes)

it is true (implicit)

p (that high school teachers in Germany are paid £45,000 a year)

But in the world I know (implicit)

it is not true (Mary Kenny is mistaken)

p (that high school teachers in Germany are paid £45,000 a year)

<Part of the text shown in the parentheses corresponds to the elements of the formulae. *Implicit* means that the element is not expressed in the text.>

(1)' implies that a formulaic representation of even a fairly simple text is based on various assumptions since there is no clear correspondence between the three elements and the linguistic units representing them. For example, the proposition *p* is actually expressed only once in the text, though in (1)' it is repeated. For that matter, in (1)' the second formula as a whole is inferred from the main clause of (1) alone.

The discrepancy between the formulaic description of propositional relativization and its textual realization, however, does not necessarily mean that the former is just an abstract notion of no use. For one thing, it enables us to consider seemingly different texts as contextual variations of basically the same mental operation. In order to illustrate this point, (1) in Text 2-1 is compared with (1)'' in which two world-defining elements are expressed :

(1)'' Mary Kenny writes that high school teachers in Germany are paid £45,000 a year. But *to my knowledge* it is not true. In (1)'' the fact that Mary reported the amount of annual salary is taken to be **new** information, and therefore, expressed in an independent sentence. Only after that is her report judged wrong. On the other hand, in (1), the fact of her reporting is taken to be **given** or **known** information, and accordingly, it is shown in a subordinate clause. The judgment about the validity of the information is expressed by the term *mistaken* in the main clause at the beginning of the whole text. This difference is probably caused by the communicational characteristics of the original text, a letter to the editor in a newspaper. This type of writing is a kind of response to some information presented in articles published before. This enables the writer to take a lot of shared information for granted. Such information is often expressed in a subordinate clause.

There are various types of sentences that could possibly be used for representing the formula *But, in the world Y, it is not true that p.*<sup>7</sup> Among them, the sentence *But to my knowledge it isn't true* looks

structurally close to the formula since it explicitly shows the world-defining element in the phrase *to my knowledge*. In many cases, however, the world-defining element is not explicitly shown in such a way. It is expressed only when the writer finds it necessary to show the information source clearly for some reasons. For example, the writer quotes other people's remarks, or he is not sure of the truth of the proposition and wants to show that it is only his personal information which has not been substantiated. Otherwise, the world-defining element is not explicitly shown. For that matter, it might be possible to say that *she writes* in the adverbial clause of (1) in Text 2-1 also indicates the subjectivity of Mary's information which is to be corrected.

Contextual factors such as those mentioned above influence text structure and give each text their unique characteristics. Accordingly, propositional relativization is realized in various forms. It should, however, be remembered that only by defining some contextually neutral model such as those shown in Formulaic Descriptions 1 and 2 could we describe in any satisfactory manner those contextually dependent characteristics. This point will be more obvious when we later discuss different textual functions that are presumed to be realized by the same mental operation.

### **2.3 Informational incompleteness**

In the previous section, we presumed that (1) in Text 2-1 was a type of linguistic realization of propositional relativization. However, our discussion has not gone beyond the boundary of the sentence though it has been claimed that the mental operation plays an important role in the organization of a larger portion of text. Besides, the process of correcting the wrong information, which is the main purpose of the whole text, is not completed in (1) since it expresses the information to be corrected but not the correct information itself. So, it is appropriate to discuss how the process of propositional

relativization, or its linguistic realization, connects with other sentences.

As long as our analysis is confined within the comparative structure composed of the pair of contrasting formulae, nothing more can be done other than identifying the three elements of the formulae. The comparative structure by itself only means that a proposition is true in one world but not in another. (1) in Text 2-1, for example, would simply be analyzed as meaning that the proposition asserted in Mary's writing is not asserted in the writer's belief. This is not informative enough because what is asserted in the writer's belief has not been stated yet. In other words, at this point, the writer himself is not committed to the truth of any proposition. Indeed, a sentence corresponding to the formula *In the World Y, it isn't true that p*, by itself, does not have so much informational value. It is no more informative than saying, while describing a car, it isn't of a particular color. Just as some definite color must be affirmed as a quality of the car for the description to be informative enough, so some proposition must be asserted in the writer's world.

For this reason, in the daily use of language, sentences realizing *In the world Y, it isn't true that p* are usually construed as equal to those realizing *In the world Y, it is true that not-p*, as a result of informational strengthening based on a pragmatic rule: If the literal meaning of the original sentence is too general and not informative enough in the situation, it is properly strengthened.<sup>8</sup> The former formula only denies the relationship between the world Y and the proposition p, while the latter formula asserts the proposition not-p in the world Y.

The effect of the informational strengthening might be illustrated by some type of text such as Text 2-2:

Text 2-2

(1) One of the witnesses says Diana was alive just after the accident. (2) But it isn't true. (made-up)

If we assume that (2) corresponds to *But in the world I know, it isn't true that Diana was alive just after the accident*, it is informatively strengthened and understood as *It is true that Diana was not alive just after the accident*. In addition, in this case, because of the semantic characteristics of the lexical item *alive* involved in the propositional element, further strengthening of the information occurs: the proposition is taken to imply *Diana was dead just after the accident*. Thus, the text as a whole is regarded as fairly informative.

With regard to (1) in Text 2-1, however, even when not-p is taken to be asserted in the writer's belief, it is still not informative enough. That is illustrated by the fact that in (1)", shown in the previous section, even if we replace *But to my knowledge it is not true* with *But they are not*, which can be looked upon as a direct realization of not-p, it does not make the text more informative with respect to the true amount of salary; The informational strengthening, in this case, does not have any significant effect on the informativeness of the sentence.

The difference in formativeness between (1) of Text 2-1, or (1)", and Text 2-2 is ultimately reducible to that between *not alive* and *not £45,000*, of which the former is more definite than the latter. The former concept has been lexicalized as *dead*, which can be inferred as a result of informational strengthening. Indeed, it is possible to express it in the text as follows:

Text 2-3

(1) One of the witnesses says Diana was alive just after the accident. (2) But it isn't true. (3) She was dead.

It is obvious that the function of (3) in this text is the same as that of (2) in Text 2-1: the function of presenting the correct information. Just as the number *28,000* corrects *45,000*, the term *dead* corrects *alive*. Thus, we can explicitly show correct information even after a fairly informative text as well as an uninformative one. This fact



implies that informativeness of the text such as Text 2-2 is rather accidental. Although, in such cases, simply expressing *In the world Y, it is not true that p* or *In the world Y, it is true that not-p* could be informative enough, usually, it is not. To complete that process of correction, some more definite information must be added. It is this informational incompleteness intrinsic to the process of propositional relativization that connects its linguistic realization to other portions of text. This means that it is not only by virtue of the elements within the operation itself but also by virtue of its relationship with other sentences in the text that propositional relativization plays any meaningful role in the structural organization of texts.

#### 2.4 Textual functions

Text 2-1 as a whole is explained to have been produced for the purpose of correcting the wrong information, and the linguistic realization of propositional relativization plays an important organizational role. It is combined with a sentence expressing the correct information to complete the function of correcting. When the linguistic realization of propositional relativization connects with other parts of text by virtue of its informational incompleteness and they, as a whole, play some textual role such as **correction**, this textual role is tentatively referred to as a **textual function**.

Correction is only one of the textual functions, and for the purpose of describing how propositional relativization contributes to the organization of text, it is essential to define many other textual functions and the differences between them. The text below is an article cited from a magazine for this purpose :

Text 2-4 The Year of the Tiger

(1) As golf's hottest property stepped up to the first tee at a tournament in Bangkok last week, firecrackers sounded in the distance, ushering in the Lunar New Year. (2) Astrologically speaking, it's the Year of the Ox. (3) Not so in Thailand. (4) Here,

fans of the young superstar they claim as a countryman have christened it the Year of the Tiger. (5) For in Thailand, the emphasis is on the Thai part of the African-American-Thai-Chinese-Native American-European blood running through the veins of the 21-year-old sensation from the United States, Tiger Woods. ... (Time, February 17, 1997)

This text is the first part of a much longer text which reports the golfer's personality and family background. The process of propositional relativization is realized as (2) and (3). Its formulaic representation of the three elements is shown below with another element represented by NOT-p, which, as we will later see, represents the proposition strengthening or specifying not-p:

In general (Astrologically speaking)  
 it is true (implicit)  
 p (it's the Year of the Ox)  
 But in a particular world (in Thailand)  
 it is true (implicit)  
 not-p (Not so)  
 Not-p (christened it the Year of the Tiger)

By virtue of their informational incompleteness, (2) and (3), just as (1) in Text 2-1, require more definite information. It is supplied by (4), from which a proposition *It's the Year of the Tiger* could be attained. The term *Ox* of the proposition p has been replaced by the term *Tiger* in this proposition. Although the structure of the text explained in this way seems to be the same as that of Text 2-1, the replacement of the information taking place here is not naturally regarded as that of wrong information with correct information.

The textual function, correction, depends on the writer's evaluation of the two contrasting worlds basically regarded as two different sources: one is positively evaluated and the other negatively. The evaluation might be achieved by means of either directly judging the value of the worlds themselves or indirectly through the judgment of

the propositions asserted in them. In Text 2-1, for example, the world of Mary's writing, or the world X, is negatively evaluated, which is implied by the evaluative term *mistaken*. It not only implies that the proposition asserted in the world X cannot be asserted in the world Y but also negatively evaluates the world X, invalidating it. It should also be noted that in Text 2-1, the world Y is not explicitly shown, which usually indicates that it can be regarded as the world of the writer's knowledge or belief. It is normally taken to be valid when the world X is invalidated by means of negative evaluation.

In Text 2-4, on the other hand, both of the worlds are explicitly shown in the phrases, *astrologically speaking* and *in Thailand*. Unlike the worlds in Text 2-1, they are not naturally regarded as two different sources of information. Instead, their contrast might be ultimately reduced to that between **general** and **particular** as is shown in the formulaic representation above.

Furthermore, neither world is negatively evaluated by such a term as *mistaken*; Neither astrology nor Thailand as a world is invalidated. By virtue of these differences, this text has a different textual function from that of Text 2-1. Instead of correction, it might be more appropriately referred to as **deviation**.

In Text 2-4, Thailand as a particular world is contrasted with the general world where the astrological convention is abided by. Proposition p in the texts of this type is often understood as a general principle or a conventional rule.

Deviation as a textual function quite frequently appears in the first part of articles in newspaper and magazines. There, the writer often intends to attract the attention of his/her readers since many readers read only the first few line of articles to decide whether to go on reading them or not. This purpose is better achieved by presenting the information as abnormal or unusual in comparison to the accepted norm than simply by reporting it straightforward. This point might also be demonstrated by the following text taken from

the same magazine :

Text 2-5 Approaching Disaster

(1) Talking openly about problems is not in North Korea's character. (2) Neither is appealing for foreign assistance. (3) So when the proudly self-reliant hermit state admits that its 23 million people are suffering "temporary food problems" and asks for help, it merits attention. (4) With rare candor, the Stalinist nation last week said it has only about half the amount of grain needed to feed its people. ... (my underline)

(Time, February 17, 1997)

Propositional relativisation in operation here might be described in a formulaic manner as follows :

In general (in North Korea's character)

it is not true (is not)/(Neither is)

p (Talking openly about problems)/(appealing for foreign assistance)

But in a particular world (when)

it is true (implicit)

p (... hermit state admits ... problems)/(asks for help)

In this text, two worlds are contrasted with respect to two propositions and therefore, two comparative processes are in operation. Just to complicate matters, the negative formula precedes the affirmative one. In Text 2-4, p is asserted first and then, not-p, whereas the order here is converse. Because of this reversed order, there is no replacement of information which corresponds to that of Cow with Tiger in the previous text. The expressions *admits ... problems* and *ask for help* only seem to paraphrase *talking openly* and *appealing for ... assistance*, respectively. Hence, the propositions attained in (3) are simply shown as p.

Of all the characteristics of this text, it would be especially interesting to point out that the writer has expressed the purpose of producing a text of this type : *it merits attention*. The textual function,

deviation, often serves this purpose.

Thus, propositional relativization can be related to various textual functions. Only one of them, deviation, has been discussed in this section in comparison with another, correction. Though it has been rather arbitrarily discussed here, every textual function must be defined more consistently; A more theoretical basis for analysis is needed. For this purpose, in Part 3, I refer to the theory on the organisation of texts which was presented by Eugene Winter and his associates.

### **Part 3 The Clause-Relational Approach**

#### **3.1 Clause relations**

Before we go on to analyze more texts, I would like to refer to an approach towards the analysis of the structure of texts which was presented by Eugene Winter. One purpose of referring to his theory is to briefly introduce it since, despite its significant effect on this paper, it is relatively unknown. Another purpose is to locate what is being attempted here in a much larger framework of study on discourse presented by him. It will also be attempted to incorporate its theoretical basis and analytical procedures.

Since linguists' attention has been drawn to the regularity beyond the sentence boundary, particularly with the emergence of discourse analysis and text linguistics, many attempts have been made for identifying and defining some structures of written text. One such attempt was made by Eugene Winter and his associates such as Michael Hoey, who established the analytical approach based on the relational notion called **clause relation**.

The clause relational approach is based on an assumption that the moment two clauses are put together for the purpose of communication, they enter into a special relation in which the understanding of one clause in some way depends on the understanding of the other clause as a minimal context. Winter defines the notion of a clause

relation as follows :

A clause relation is the cognitive process whereby we interpret the meaning of a sentence or group of sentences in the light of its adjoining sentence or group of sentences. (Winter, 1971, 1974) In this definition, the terms *sentence* and *clause* are interchangeable.

As the above definition implies, a clause relation consists of two parts, and they are referred to as **members**. The notion of a member, which Winter owes to Quirk (1954), is the basic unit of discourse, and if a clause or group of clauses is assigned a membership, it “anticipates” in the same discourse the presence of another clause or group of clauses which is assigned the other membership. For instance, if a clause is assigned its membership of *cause*, then it anticipates in the same discourse the presence of another clause which functions as its *effect* member. The cause-effect is a type of clause relation.

There are various types of clause relations and they can be “named” by a special kind of lexical item referred to as **vocabulary 3**, such as *achievement, affirm, cause, compare, deny, different, effect, example, mean, method, purpose, reason, result, reverse, same, true, etc.*<sup>10</sup> Winter claims that clause relations are finite in number. Their finiteness is guaranteed by setting a criterion that the items included in vocabulary 3 are usually substituted for both or either of the other two types of connectives which are regarded as closed or finite systems.<sup>11</sup> One type is referred to as **vocabulary 1**, which is Winter’s term for subordinators such as *whereas*. The other type is **vocabulary 2**, which consists of the items traditionally referred to as sentence conjunctions, such as *on the other hand*. For example, the vocabulary 3 item *truth* which is used as the name of a type of clause relation, *the truth relation*, can be substituted for two other types of connectives as the sentences below illustrate :

#### Example 3.1.1

- (1) The princes were afraid of the enemy. This is not *true* of their followers. (Vocabulary 3)

- (2) *Whereas* the princes were afraid of the enemy, their followers weren't. (Vocabulary 1)
- (3) The princes were afraid of the enemy. *In contrast*, their followers weren't. (Vocabulary 2)

These sentences have different contextual significance from each other, and the three types of vocabulary are not exchangeable in a real text. By virtue of this paraphrasability, however, vocabulary 3 items are considered to be differentiated from other lexical items belonging to the open system. One of the most conspicuous characteristics of Winter's study is the description of vocabulary 3 items which can be located on the continuum between open- and closed-systems.

Clause relations are classified into two broad types: **the logical sequence relation** and **the matching relation**. The first is defined as follows:

The Logical Sequence Relation is a general term for clauses which are related by the semantics of a deductive reasoning which implies the logic of time sequence or by the time sequence itself. In logical sequence the meaning of the sequence itself is crucial to identifying the relation. (Winter 1982: 88)

In other places, the logical sequence relation is explained in terms of the typical lexical items which function as its signals:

(Its) characteristic lexical items are *connect* and *time* as in the question, "How does X event connect with Y event (in time)?" In this relation, the time sequence is central to the semantics of interpretation. Included in this sequence is deductive sequence, whose explicit marker is the conjunction *therefore* which signals that the sequence is *premise* → *conclusion*. (Winter 1977: 6)

This definition reflects Winter's emphasis on the identification of clause-relational markers and his view that the identification of clause-relational types can be regarded as an interactional process between the encoder (writer) and the decoder (reader). When the clause-relational type between two clauses is not explicitly signaled

by its maker in the text, the decoder might be able to ask the general question in order to identify it.: *How does X event connect with Y event (in time) ?* The answer to this question indicates the particular type.<sup>12</sup> If the type is identified in this way, it is possible to show it explicitly by adding its typical markers to the sentences.

The second type of clause relation is referred to as the matching relation. Its definition is shown below :

In contrast with logical sequence, the matching relation does not impose a logic of sequence upon its members other than that of the logic of comparison. In the matching relation, we are connected with a matching or comparing of people, things, attributes, action, states, description, etc. (Winter 1982 : 88)

There is also a definition based on the interactional point of view :

(It is a type of relation) one of whose characteristic items is *compare*, as in the question, "How does X compare with Y in respect of Z feature?" and whose reply could be paraphrased as *What is true of X is (not) true of Y.* (Winter 1977 : 6)

The matching relation is further classified into two subgroups: **the comparative affirmation** and **the comparative denial**. The former is where the comparison is made in terms of similarity. In other words, it is in operation when the reply to the question in the above definition is positive: *What is true of X is true of Y.* On the other hand, the latter is where the comparison is made in terms of difference. It is in operation when the question is replied negatively: *What is true of X is not true of Y.* An example of the comparative denial can be seen in (1)-(3) of Example 3.1.1. It might be described as *What is true of the princes is not true of their followers.*

This definition is of great significance to our study since it suggests that our formulaic description of propositional relativization might be understood as a special type of the matching relation. There is a clear correspondence between the above definition and our formulaic description: *What is true of X is (not) true of Y* might be regarded



as a general expression for *The proposition which is true in the world X is (not) true in the world Y*. Accordingly, when the proposition *p* is true in both the world *X* and the world *Y*, a type of comparative affirmation is in operation. On the other hand, when it is true in the world *X* but not in the world *Y*, a type of comparative denial is in operation.

The special quality of propositional relativization as a type of matching relation might be better understood if we compare it with another type of matching relation. For instance, it is different from the comparative denial exemplified in (1)–(3) of Example 3.1.1. In these sentences, comparison is made between two groups of people with respect to their behavior, whereas in propositional relativization, comparison is made between two worlds or contexts of use with respect to the truth value of a proposition.

### 3.2 Identification of clause relations

In the previous section, it was mentioned that clause-relational types are named by lexical items belonging to vocabulary 3. Since they can be rewritten using the other two types of vocabulary, the identification of the clause-relational type is not so difficult if some items of these types of vocabulary are included in the group of clauses. The connectives in (1) and (2) below, for example, are both considered to signal the comparative denial, since both of them can be paraphrased as (3) which includes vocabulary 3 items *true* and *not*. They are the most typical signals for the comparative denial :

#### Example 3.2.1

- (1) *Although* Mary Kenny writes that high school teachers in Germany are paid £45,000 a year, they are not. (Vocabulary 1)
- (2) Mary Kenny writes that high school teachers in Germany are paid £45,000 a year. *In fact*, they are not. (Vocabulary 2)
- (3) Mary Kenny writes that high school teachers in Germany

are paid £45,000 a year. It is *not true*. (Vocabulary 3)

The problem arises, however, when there are no explicit markers in the sentences. The text below is an example of such cases :

Text 3-1

When the cinema has the courage of its original convictions, it is unsurpassed as a medium of entertainment. When it panders to the lowest common denominator, it becomes just another sordid peep-show and, as such, deserves ultimately to disappear.

(Reader's Digest, March 1985)

In this text, there are no explicit markers to signal a type of clause relation between two main clauses. One of the simplest ways to determine the type of clause relation in such a case is to rewrite the sentences so that they include an explicit signal. For example, the above text might be rewritten as follows :

Text 3-1.a

When the cinema has the courage of its original convictions, it is unsurpassed as a medium of entertainment. When it panders to the lowest common denominator, *however*, it becomes just another sordid peep-show and, as such, deserves ultimately to disappear. (Vocabulary 2)

Text 3-1.b

When the cinema has the courage of its original convictions, it is unsurpassed as a medium of entertainment. When it panders to the lowest common denominator, this is *not the case*. Then, it becomes just another sordid peep-show and, as such, deserves ultimately to disappear. (Vocabulary 3)

The items *however* and *not the case* are also signals for the comparative denial.

A more elaborate way of determining the type of implicit clause relations is putting the text into the form of a dialog between the writer and the reader by means of inserting interrogative sentences

called rhetorical questions. One of their characteristics is that vocabulary 3 items are included in them. For example, Text 3-1 might be rewritten as follows :

Text 3-1.c

When the cinema has the courage of its original convictions, it is unsurpassed as a medium of entertainment.

(Is it also *true* when it panders to the lowest common denominator?)

(No.)

When it panders to the lowest common denominator, it becomes just another sordid peep-show and, as such deserves ultimately to disappear.

The rhetorical question includes the vocabulary 3 item *true*, and the negative answer to it indicates that the comparative denial is in operation. The rhetorical question *Is it also true in the world Y ?* is one of the most useful devices to identify the implicit matching relation with which we are concerned.

In connection with the identification of clause relational types, it should be added that Winter pays attention to a certain type of clause whose function simply seems to be signaling the type of relation between adjoining clauses. For example, (2) of Text 3-2, which was made up for our discussion, is an example of such clauses :

Text 3-2

(1) He bought a camera. (2) There was a reason for this. (3) He was going on trip to France the next day.

(2) in this text does not add any information about the event being described but simply shows the type of clause relation between (1) and (3) explicitly. In this sense, it plays the same connective function as the three types of vocabulary, except for the fact that its grammatical status is an independent clause.

Though it is expressed as an independent clause, (2) combined with only (1) does not complete the clause relation in the informational

sense. For it does not say anything about the content of the reason member. It is no more informative than finishing one's talk with simply signaling the relation: "He bought a camera because ...". The content of the reason member is supplied only by (3). Winter refers to sentences of this type as **connective sentences** or **signaling sentences**.

This point reminds us of our discussion in 2.3 on informational incompleteness caused by simply saying *In the world Y, it isn't true that p*, which is the second formula in our formulaic description of propositional relativization. There is some new piece of information in this formula: In place of *the world X* of the first formula, *the world Y* is newly included. However, it is not informative enough and must be supported by another piece of information which strengthens it. Otherwise, no content of correction in the case of Text 2-1 and no content of deviation in the case of Text 2-4 or Text 2-5, for instance, is supplied. Except for some special cases where the lexical characteristics of the proposition *p* makes not-*p* informative enough, propositional relativization or the comparative denial, by itself, is not sufficient.

Based on such an observation, Winter actually regards the denial clause, which corresponds to our *In the world Y it is not true p*, as a type of connective sentence between the clause preceding it and that succeeding it. In text 2-4, for instance, *Not so in Thailand* could be looked upon as a type of connective sentence between the two sentences it mediates. For that matter, the second sentence of Text 3-1.b is also a connective sentence. In an attempt to rewrite the original text by means of explicitly showing the vocabulary 3 item *true*, we were actually inserting the connective sentence at the same time. Just as other types of connectives, connective sentences can be only implicit, which might be seen in Text 3-1.

Thus, there are various signals and techniques to facilitate the identification of clause-relational types.

### 3.3 Repetition and replacement

The intermediary characteristics of connective sentences, which were discussed at the end of the previous section, might also be explained in terms of the two important notions of the clause relational approach: **repetition** and **replacement**.

Repetition is where the same information is repeated between two clauses by means of simple repetition of lexical items, substitution, ellipsis and so forth. The repeated information in the second clause enables the reader to focus his attention on the newly presented information which replaces some part of the first clause. It is necessary for the second clause to include some kind of new information. Otherwise, the two clauses do not make sense as a whole. With regard to this point, Winter (1982 : 31) claims that replacement is a requirement of intelligibility since without it the relation between two clauses is unintelligible, except for the strictly limited purpose of emphasis. (1)\* is an example of the unintelligible sequence :

(1)\* It is the Year of the Cow in Japan ; it is the Year of the Cow in Japan.

It should be noticed that inserting the item *not* as the only new information in the second clause makes the relation no more intelligible than the total repetition :

(2)\* It is the Year of the Cow in Japan. Not so in Japan.

The simple change in the sentence form, from affirmative to negative, is not regarded as a case of replacement, but just a contradiction.

In order for the sentences as a whole to make sense, there must be another type of replacement :

(3) It is the Year of the Cow in Japan. Not so in Thailand.

(4) It is the Year of the Cow in Japan. It has never been that before.

In (3), *Japan* is replaced by *Thailand* while in (4), the present tense is replaced by the present perfect. In these sentences, we can identify a

case of propositional relativization, or a type of comparative denial, with which we are concerned.

Based on these observations, we might be able to talk about propositional relativization in terms of repetition and replacement: It is a matching relation between two clauses where only the world-defining element is replaced with the other two elements totally repeated, though in the case of the comparative denial, the negative operator *not* is added to the assertional or propositional element.

The comparative denial as such is usually not informative enough and is supported by another clause which, in the informational sense, strengthens the second clause. (3), for instance, is followed by such a clause in (5):

(5) It is the Year of the Cow in Japan. Not so in Thailand.

There, it is the Year of the Tiger.

In (5), we can identify a case of replacement in the propositional element between the first and third sentences: the lexical item *Cow* is replaced with the lexical item *Tiger*. As a result, between these sentences, there are two cases of replacement in all. One of them, however, has been replaced in the second sentence as we have discussed and is repeated in the last sentence. It might be said that in the whole process, the second sentence functions as an intermediary between the other two sentences.

There are various kinds of replacements but when we compare two clauses with respect to this notion, it seems to be essential to distinguish between two types: one in which the new information can basically be regarded as synonymous to the replaced information and the other in which the new information is regarded as contradictory to the replaced one. Though it adds new information, the former can ultimately be regarded as the expansion of repetition, whereas the latter implies that the comparative denial is in operation.

The text below was taken from a magazine to show an example of the former kind of replacement:

## Text 3-3 The Future of Hong Kong

(1) I predict that the Island of Hong Kong will not be engulfed by China ; (2) it will expand into the mainland. (3) The dragon will not devour what the unicorn left. (Time, August 4, 1997)

First, between the subordinate clause of (1) and (2), the subject *the Island of Hong Kong* is repeated by means of substitution, but in (3), the same referent is now referred to as *what the unicorn left*. This is a kind of replacement in which the referent of the two expressions remain the same or repeated. Similarly, *China* in (1) is replaced with *the mainland* in (2) and further replaced with *the dragon* in (3). In addition, part of the predicate *not be engulfed by* in (1) is replaced with *expand into* in (2), which is in turn replaced with *not devour* in (3). In order for the whole text to be intelligible, however, these expressions must be understood as synonymous. Eventually, in this text the same proposition is assumed to be repeated three times.

The latter type of replacement is exemplified in Text 3-1 where the replacement of the whole predicate can be observed between the two main clauses of the first two complex sentences. The relevant part of the text is shown below :

When the cinema has the courage of its original convictions, it *is unsurpassed as a medium of entertainment*. When it pandes to the lowest common denominator, it *becomes just another sordid peep show ...* (replaced information italicized)

The contradictory relation between the two predicates can be shown explicitly, as in Text 3-1.b, by inserting the connective sentence *this is not the case*, which is considered to be the total repetition of the first main clause plus *not*. Because of the informational incompleteness of the connective sentence, more specific information is required. It is supplied by the second main clause, or to be more exact, by the replacing predicate in it.

It is important to note that between the implicit connective sentence and the second main clause expressing more specific informa-

tion, we can assume a type of repetition. In other words, the same proposition not-p is repeated between them since specification is basically a type of repetition. The second not-p, however, is more informative or specific than the first. To make this distinction clearer, in this paper, I will let NOT-p represent the strengthened proposition.

The same line of argument holds true of the replacement of £ 45,000 with *approximately* £ 28,000 in Text 2-1. There, the main clause of (1), *Mary Kenny is mistaken*, plays the same role as a connective sentence. The new information, *approximately* £ 28,000, is contrary to the replaced information, £ 45,000. It is often the case that the new and replaced information in this type of replacement can be expressed in the structure *In the world Y, it is not A but B*. For instance, *To my knowledge, it is not £ 45,000 but £ 28,000*, or *In Thailand, it is not the Year of the Ox but the Year of the Tiger*. Winter refers to this type of replacement as **the corrective replacement**. This naming, however, seems to me to imply that the function of replacing information is mainly to correct some wrong information, which is not the case. For this reason, I prefer referring to it as **the contrary replacement**, which should be contrasted with the other type of replacement referred to as **the synonymous replacement**.

In the end, it should be added that repetition and replacement are regarded as a type of signal for the two general types of clause relations. Significant amount of the repetition between two clauses is a signal for the matching relation, while a significant amount of replacement is a signal for the logical sequence relation.

### 3.4 The Larger Clause Relation

So far, clause relations have been talked about mainly as various types of semantic relations established between two members: the comparative denial between a statement and its denial clause, and the specification relation between the denial clause and the correction



clause. It is possible, however, to identify some predictable combinations of various clause relations. Such a composite of clause relations is referred to as a **larger clause relation** or a **meta-structure** by Winter (1977 : 19). Some examples are the **problem-solution pattern** and the **hypothetical-real pattern**.

The problem-solution pattern has been studied most intensively by one of Winter's associates, Hoey (1983). It is analyzed in more detail as the chain of four elements: *situation-problem-solution (or response)-evaluation*. It is a very productive pattern and prevails over various types of writing. Particularly, it is frequently found in scientific writing. Though matching relations can also be involved in each of its elements, its whole organization is predominantly based on logical sequence relations.

What we are most interested in here, however, is the hypothetical-real pattern. It is most typically understood as a pattern where another encoder's view is first presented (the hypothetical), and then either affirmed or rejected by the encoder of the text (the real). Rejection may take the form either of a **denial** followed by a **basis** or a **correction** followed optionally by a basis or some combination of these.

It would be obvious by now that Text 2-1 is an example of texts organized in this pattern. We could identify each element of the pattern in the text: *high school teachers in Germany are paid £ 45,000* in (1) is a hypothetical element; *Mary Kenny is mistaken* in (1) is a denial; *The annual salary ... is approximately £ 28,000* in (2) is a correction.

The distinction between a correction and a basis can most simply be made by seeing whether there is a conspicuous amount of repetition between the clause in question and the hypothetical element. If it is a correction, presumably, there is a conspicuous amount of repetition between them. If not, the clause is most probably a basis. This criterion for distinguishing between the two elements works

well for Text 2-1 as well. Between the hypothetical clause and (2), except for the replaced information about the amount of money, all the information can be regarded as being repeated.<sup>13</sup> Therefore, (2) is a correction. On the other hand, between the hypothetical and (3), there is no repetition. (3), therefore, appears to be a basis.

Calling some clause simply a basis, however, does not mean anything unless we can define what the basis is for, that is, the other member of the binary relation. In this pattern, most typically, a basis following a correction is its basis. (3), however, is not exactly a basis for the correction, but it is more appropriately regarded as a cause for the denial: *Mary Kenny is mistaken*. It is explicitly shown by rewriting (3) so that it includes the vocabulary 3 item *cause* :

(3)' I expect Miss Kenny's mistakes were *caused* by a mistranslation of Hochshullehurer, a general term for university professor.

We can also insert a rhetorical question between (2) and (3) to certify the type of clause relation. An example of such a question is *Why do you think Miss Kenny's mistakes were caused?* or *What do you think is the cause for Miss Kenny's mistakes?* which elicits (3) as its answer. In contrast, a question intended to ask for a basis for the correction such as *What is the basis for your saying the annual salary of a 40-year-old teacher in a state grammar school is approximately £28,000 ?* does not elicit (3) as its natural answer.

## **Part 4 Propositional Relativization in the Clause-Relational Network**

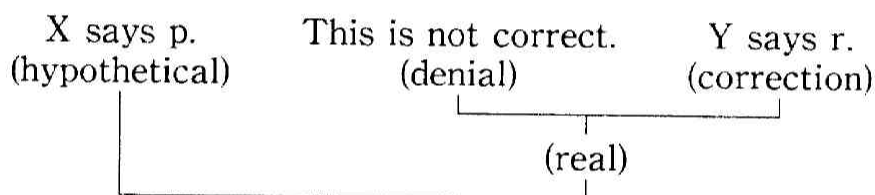
### **4.1 Clause-relational hierarchy**

In Section 3.4, the notion of a larger clause relation was introduced as a composite of various types of clause relations organized in a predictable way. One of the examples of larger clause relations was the hypothetical-real pattern of which the most typical type is the sequence of the hypothetical, denial and correction components.

Among them, the last two are regarded as the elements of the real member of the pattern.

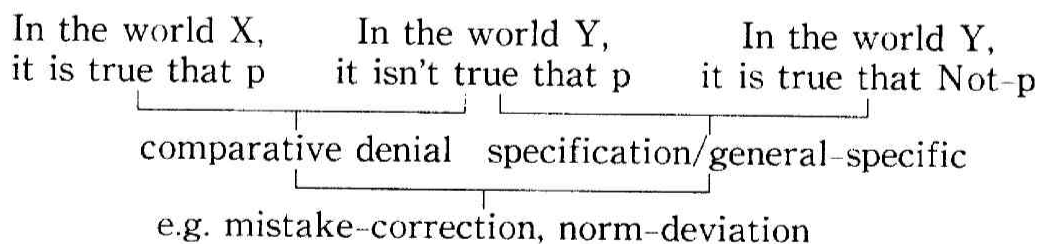
In this explanation of the pattern, what I find most interesting is the notion of two elements constituting one member, which is combined with another member, constituting a larger clause relation as a whole. I find it interesting since it suggests the possibility of explicating the hypothetical-real pattern as a hierarchical structure of clause relations. Though Winter states that each of its components might include various types of clause relations and that the real member of the pattern consists of the two elements, he does not seem to further expand on the notion of the hierarchical structure of clause relations found in this pattern. The pattern seems to have been explained as a simple structure shown in the following diagram :

Diagram 4-1



Based on what has been discussed so far in this paper, however, I maintain that the pattern might be better represented by the following diagram :

Diagram 4-2



This diagram differs from Diagram 4-1 in various points. First, the second formula, which corresponds to the denial in Diagram 4-1, changes its membership meaning according to which formula it establishes a clause relation with : in relation to the first clause, it is one of the two members constituting the comparative denial, while in

relation to the last clause, it is one of the two members of the specification relation.<sup>14</sup> It has already been discussed that we can understand the clause relation between the first two formulae as a type of comparative denial, and that *it is true that NOT-p* represents a specification of *it is true that not-p*, which is in turn a specification of *it isn't true that p*. To show the type of clause relation explicitly, a rhetorical question can be inserted such as *What do you mean specifically by saying it isn't true?* after the clause representing the second formula. It elicits the correction clause as its answer.

Secondly, the intermediary characteristics of the denial clause is better illustrated in Diagram 4-2. In Diagram 4-1, the denial looks more closely related to the correction with which it constitutes the real member than to the hypothetical which is by itself the first member of the hypothetical real pattern. In Diagram 4-2, on the other hand, it appears to be equally close to the preceding and succeeding clauses.

Thirdly, whereas Diagram 4-1 describes the pattern as a two-level structure, Diagram 4-2 describes it as a three-level structure.

Fourthly, whereas in Diagram 4-1, the hypothetical and the denial do not establish a member of a clause relation of a higher level, in Diagram 4-2, the relation between the first two clauses, or the comparative denial, functions, for instance, as the mistake member of the mistake-correction relation.

Finally, the dichotomy between the hypothetical and the real in Diagram 4-1 seems to correspond to the contrast between the world X and the world Y in Diagram 4-2. This means that the dichotomy between the hypothetical and the real is actually a classification of the clauses according to the particular quality of the world-defining element in which the propositions are asserted. On the other hand, we can talk about the comparative denial and the specification relation only in terms of the logical relation of the propositions and are not concerned with any particular quality of the worlds. Diagram 4-2

means that when the two worlds are specified, for instance, as the hypothetical and real worlds, or as two different encoders, the clause relation at the highest level will be the mistake-correction relation. Since the hypothetical and the real are only a possible pair of values for the variables X and Y, the type of the clause relation at the highest level can vary according to the change in the pair of values or worlds. For instance, when the worlds to be contrasted are characterized as general and particular as in Text 2-4 and Text 2-5, the clause relation at the highest level will be the norm-deviation relation.

An important point to be noted here is that the clause relation at the highest level of the hierarchy is actually the same concept as the one I tentatively referred to as the textual function in Section 2.4. The textual functions we discussed there were *correction* and *deviation*, which are here the second members of the mistake-correction relation and the norm-deviation relation respectively. The textual function was defined in Section 2.4 as follows:

When the linguistic realization of propositional relativization connects with other parts of text by virtue of its informational incompleteness and they, as a whole, play some textual role such as correction, this textual role is tentatively referred to as a textual function.

This definition was made before various notions of the clause-relational approach were introduced in Part 3. Now, in terms of these notions, the above definition should be reconsidered.

What was referred to as textual functions are the clause relations, such as the mistake-correction or norm-deviation relations. They are established at the highest level of the clause-relational hierarchy comprising a special type of comparative denial in which two worlds are compared with respect to the truth value of a proposition, and the general-specific relation of which the general member is simultaneously the second member of the comparative denial. The comparative

denial provides the clause relation at the highest level with its first member, such as mistake or norm, while the specification relation provides it with its second member, such as correction or deviation. If the first member of the relation at the top of the hierarchy is supplied in the text, then the second member is automatically anticipated just as in the case of other types of clause relations. For example, the lexical item *mistaken* in Text 2-1 lets the reader anticipate that the correction member will follow. In other words, only supplying the first member is in the informational sense incomplete. The type of clause relation at the top of the hierarchy varies according to the quality of the world-defining elements to be contrasted in the comparative denial.

#### 4.2 The interaction between two general types of clause relations

The hypothetical-real pattern presented by Winter is often explained as a larger clause relation that is predominantly based on the matching relation between two clauses upon which no logical sequence is imposed. When the pattern is realized as the hypothetical-denial-correction sequence, the comparative denial between the hypothetical and the denial is a particular type of matching relation. It could be most typically expressed as *a proposition asserted in an encoder's world is not true in the writer's world*. It might be argued that the general-specific relation between the denial and the correction might be explained in terms of the notion of entailment: the general logically follows the specific but not the other way round.<sup>15</sup> This logical sequence between them, however, does not seem to influence the matching orientation of the pattern since the correction clause is explained as a synonymous replacement of the denial clause and virtually regarded as its repetition. Besides, a contradictory replacement between the hypothetical clause and the correction clause, for example that of £45,000 with £28,000 in Text 2-1, is a characteristic feature of the matching relation. Indeed, we can

express the whole pattern as a repetition of the same proposition: *p*, not-*p*, NOT-*p*.

It is, then, mysterious that the mistake-correction relation established at the top of the clause-relational hierarchy seems to include a type of logical sequence between the two members: The correction member logically follows the mistake member, but not the other way round; There is no correction without a mistake. The mystery resolves when we notice that the two contrasting worlds are, actually, being presented in some type of sequence.

If the contrast of the worlds is simply specified as that between the hypothetical and real worlds, or two different sources of information, there is seemingly no time sequence between them: neither has to follow the other. In real texts, however, it is often the case that one world is presented as preceding the other in the time sequence. For instance, in (1) of Text 2-1, though both the main clause *Mary Kenny is mistaken* and its subordinate clause *when she writes* have the present tense, their difference in grammatical status implies some type of sequence between the two worlds represented by them: first Mary's world, and then the writer's world. The information in the subordinate clause shows that it has been taken for granted. In this case, the fact that Mary wrote about the salary for German teachers in an article in a previous paper has been taken for granted and is expressed in a subordinate clause. It is "in response to" this world of Mary's that the writer presents the information in his/her world. This sequence, which might be described as one world in response to the other, is the reason for the sequence between the two members of the clause relation at the top of the hierarchy.

Similarly, the norm-deviation relation exemplified in Text 2-4 and Text 2-5 implies the sequence between the two members: only if there is a norm, it is possible to deviate from it. This sequence is due to the fact that one of the two worlds, particular, is presented in response to the other, general. As long as emphasis is placed on the

comparative denial, however, we are only interested in different truth values assigned to a proposition repeated in two worlds and are not concerned with the particular quality of the proposition itself and of the worlds. Besides, there seems to be no sequence between the worlds since, logically speaking, what is true in general is not necessarily true in a particular situation and vice versa. In real texts, however, a proposition asserted in a general world is usually understood as a kind of norm or standard, and a proposition in a particular world is understood against this standard. In this sense, the particular world is presented in response to the general world. This is the reason for the time sequence between the norm member and the deviation member at the top of the hierarchy.

In some texts, the time sequence between two worlds is the essential factor for the distinction between them :

Text 4-1

For a time the police thought she might be guilty, but before long they eliminated her from their list of suspects. (LDELIC)

In this sentence, two world-defining elements are two different periods of time when the police had some thought. Between them, there is a time sequence which is specified by the two temporal expressions *for a time* and *before long*. The text might be rewritten in a form closer to our pattern by inserting a connective sentence and a sentence representing *In the world Y, it is true NOT-p* :

Text 4-1.a

For a time the police thought she might be guilty, but before long *they thought it was not true. They thought she was innocent* and eliminated her from their list of suspects.

The clause relation at the top of the hierarchy of this text might also be regarded as a type of mistake-correction relation. The contrast between the worlds in this case, however, should be regarded as that between two different periods of time rather than between two different encoders as in the case of Text 2-1. Because of the apparent



time sequence between the two worlds, the text seems to be more temporally oriented than Text 2-1.

It should be noted that though in many texts it is possible to identify some type of sequence between the two worlds to be contrasted, it is also possible that no such sequence is intended and the text as a whole is “purely” based on the matching relation. The text below was made up to illustrate this point in comparison to Text 2-1:

Text 4-2

Mary Kenny writes that high school teachers in Germany are paid £45,000 a year. On the other hand, John Smith writes that they are paid approximately £28,000 a year. Which is correct? In this text, another reporter’s world is not represented as a response to the world of Mary’s but as a world to be compared with it on equal terms. Since there is no sequence between them, the clause relation at the top of the hierarchy might remain a type of matching relation, **contrast**.

Based on these observations, we might be able to clarify some important characteristic of propositional relativization as a text-organizational factor. So far, it has been understood as a particular type of matching relation in which two worlds are compared with respect to the truth value of a proposition. It has been described also as matching between a pair of formulae comprising three elements which were shown in section 2.1. Such a mechanical description, however, does not show the whole picture of the process of propositional relativization functioning as a text organizational factor. In real texts, the pair of formulae are often presented with some sequential meaning established between the worlds to be contrasted. As a result, in many cases the function of the text as a whole is taken to be a clause relation such as the mistake-correction relation or the norm-deviation relation, which includes some sequential meaning between the two members. It might be said that this type of clause

relation is a composite of the two general types of clause relations : the matching relation and the logical sequence relation. It can be said that what we have been dealing with in this section is their interaction in the organization of text.

### 4.3 A Further expansion of the hierarchy

In the previous section, it was discussed that when two worlds were compared, they were often presented in some type of sequence which resulted in a clause-relational composite of two general types of clause relations. The clause relations, such as mistake-correction or norm-deviation established at the top of the hierarchy, were regarded as the function of the text as a whole.

It should be noted, however, that the hierarchical structure in question is a result of the "minimal" interaction between the two general types of clause relations. It means that a further expansion of the hierarchy is expectable. The clause relation at the "top" of the hierarchy only means that it is established as a result of merging a set of clause relations : the comparative denial, the specification relation and a type of logical sequence relation between the two worlds to be compared. It does not exclude the possibility for the resultant relation to function as a member of a clause relation of a higher level. Indeed, some types of resultant clause relations strongly anticipate a further development of the hierarchy. Text 4-3 is an article taken from a magazine to illustrate this point :

Text 4-3 Lie of the Land

(1) Most of us tend to be complacent about commons. (2) *Their very name suggests that in the century of the common man they enjoy enough protection to ensure their survival.* (3) *The truth is different.*

(4) The *problem* lies with the Commons Registration Act of 1965. It defines common land as, among other things, "land subject to rights of common"--the right, for example, to graze

livestock, to cut peat for burning, or to take bracken for animal bedding. (5) But due to a flaw in the drafting of the act, a landowner may buy out the rights and apply for deregistration of the land. (6) *That puts its protection at risk and it can be enclosed and used for purely private purposes.*

(7) A committee is currently advising the Government on what action to take, but the expectation of legislation must tempt some individuals to try to rush deregistration through while there is still time. (8) Would it not be possible for Parliament, as an emergency measure, to introduce interim legislation which would prevent deregistration until, say, January 1987? (my italics)

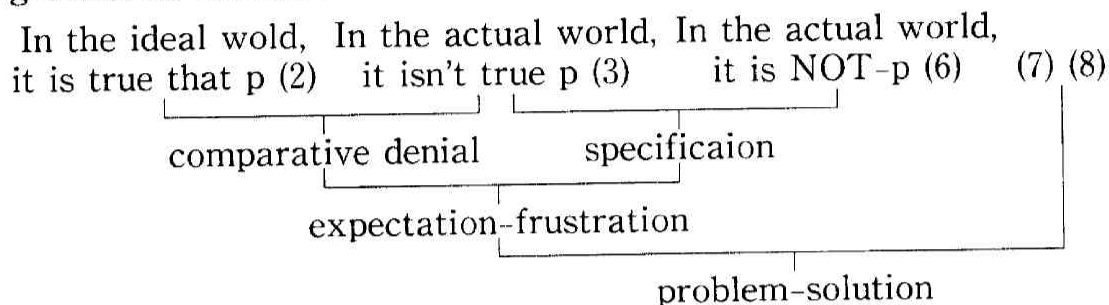
(Reader's Digest, March 1985)

In this text, the comparative denial is between (2) and (3) while the specification relation is between (3) and (6). There are at least two propositions with respect to which a comparison is made between two worlds: *Common land is protected* and *Common land survives*, which are both retrieved from (2). The worlds to be contrasted are the *ideal* and the *actual*. The ideal world means the hypothetical world which is positively evaluated as good. The hypothetical character is shown by the term *suggests* in (2) and the positive evaluation is shown by the term *enjoy*. (3) is regarded as corresponding to *In the actual world, it isn't true that p*. The two propositions which correspond to *NOT-p* can be inferred from (6): *Common land is at risk* and *Common land can be enclosed and used for purely private purpose*. The type of the resultant clause relation is **expectation-frustration**.

What is interesting about this type of clause relation is that it functions as the problem member of the problem-solution relation, which is one of the best-known larger clause relations studied by some advocates of the clause-relational approach. In this text, the term *problem* in (4) explicitly signals that the expectation-frustration relation functions as the problem member. The problem member anticipates that the solution member follows in the text. The solution

member is actually supplied in the last paragraph consisting of (7) and (8).

The expansion of the hierarchy discussed above might be diagrammed as follows :



This characteristic of the expectation-frustration relation implies that some types of clause relations we have been discussing can be further characterized as a member of a clause relation one level up in the hierarchy. For instance, a type of clause relation, contrast, exemplified in Text 4-2 is presumed to function as the alternative member of the alternative-selection relation.

#### 4.4 Complex quality of the worlds

So far, we have discussed four types of clause relations established at the top of the clause-relational hierarchy : the mistake-correction relation, the norm-deviation relation, the contrast relation, the expectation-frustration relation. In this section, they are compared in order to identify what makes each type unique.

What makes their comparison meaningful is the fact that they share the basic comparative structure which is described as a sequence of formulae : *In the world X, it is true p ; In the world Y, it isn't true that p ; In the world Y, it is true NOT-p*. Between the first two formulae, the comparative denial is established, and between the last two, the specification relation holds. The comparative denial functions as the first member of all the four types of clause relations, and the specification relation as the second member.

The unique character of each type is mainly due to the quality of

the two worlds and the sequential meaning between them. Except for the contrast relation, for which the sequential meaning between the worlds is not essential, there is a kind of logical sequence between the worlds X and Y, which is explained as the world Y in response to the world X. It might be said that the information focus is on the world Y which is presented on the basis of the world X. Sometimes, the information focus is indicated by the difference in the grammatical status of the clauses representing p and not-p or NOT-p. For instance, p is expressed in a subordinate clause whereas not-p or NOT-p is expressed in an independent clause as in Text 2-1. In the case of the contrast relation, no such sequential meaning between the two worlds is intended: they are on equal terms.

Another important factor which characterizes the worlds is their evaluation. It is an essential factor for the mistake-correction relation and the expectation-frustration relation. The most typical form of the mistake-correction relation is where one encoder functioning as a world is negatively evaluated as a source of wrong information, while another presented in response to it is positively evaluated as a source of correct information. It is basically a relation in which a valid world is presented in response to an invalid one. Conversely, the expectation-frustration relation is basically regarded as one in which a world negatively evaluated is presented in response to another positively evaluated. Most typically, the world positively evaluated is a hypothetical world which is, in this paper, referred to as an ideal world. The evaluation might be directly made of the world, or indirectly through the evaluation of the proposition asserted in it as in the case of (2) of Text 4-3. With regard to the contrast and norm-deviation relations, evaluation of the worlds is not an essential factor.

Thus described, distinctions between the four types of clause relations seem to be easily made by using as criteria the presence of a sequential meaning between two worlds, their evaluation, and the order in which the worlds positively and negatively evaluated are

presented. The distinction between them in real texts, however, is often very difficult to make and the way each type of relation is established is far from this simple description. One of the reasons for the difficulty is that each type is not mutually exclusive, or not in a complementary relation with each other. In the norm-deviation relation, for instance, the contrast is made between general and particular worlds, but it is often the case that the contrast can also be regarded as that between hypothetical and real worlds. In such a case, if the world which is simultaneously general and hypothetical is positively evaluated and the world which is simultaneously particular and real is negatively evaluated, the resultant relation might be regarded not only as a norm-deviation relation but also as an expectation-frustration relation.

Another reason for the difficulty in making distinctions between each type is that evaluation is a fairly subjective notion. Therefore, it is not necessarily easy to determine whether a world is positively or negatively evaluated. To make the matter more complicated, there are two types of evaluations: the evaluation made directly about the world-defining element, and the evaluation made about the propositional element.

For these reasons, it is difficult to define the type of clause relation unless it is explicitly indicated by such a signal as “mistaken” as in Text 2-1. Several texts below were made up for the purpose of illustrating such difficulties:

Text 4-4

Mary *mistakenly* writes that high school teachers in Germany are paid £45,000 a year. Tom reports that the annual salary of a 40-year-old teacher in a state grammar school is approximately £28,000.

In this text, the mistake-correction relation is explicitly signaled by the term *mistakenly*. The contrast can be explained as that between two different encoders which is a typical characteristic of the rela-

tion.<sup>16</sup> However, if the term *mistakenly* is omitted as is shown in Text 4-5, the resultant clause relation becomes ambiguous:

Text 4-5

Mary writes that high school teachers in Germany are paid £45,000 a year. Tom reports that the annual salary of a 40-year-old teacher in a state grammar school is approximately £28,000.

According to which aspect of the contrast is taken to be emphasized, this text can be interpreted as any of other texts: Text 4-4, 6, 7, 8, 9. For instance, the writer's intention could be simply to compare two contradictory pieces of information. In such a case, the contrast relation might be signaled in an unmistakable way as in the following text:

Text 4-6

Mary writes that high school teachers in Germany are paid £45,000 a year. *In contrast*, Tom reports that the annual salary of a 40-year-old teacher in a state grammar school is approximately £28,000.

In this text, the contrast between the two different encoders as worlds is emphasized, but no sequential meaning between them is implied unlike the case of the mistake-correction relation in Text 4-4. The contrast between the general and the particular which are respectively represented by the general expression *high school teachers in Germany* and the particular expression *a 40-year-old teacher in a state grammar school* does not seem to imply any sequential meaning either.

On the other hand, the contrast between the general and the particular might be emphasized with some sequential meaning between them as in the following text:

Text 4-7

Mary writes that, *generally*, high school teachers in Germany are paid £45,000 a year. *However, according to Tom's report, that is not always the case.* He reports the annual salary of a 40-year-

old teacher in a state grammar school is approximately £28,000. In this text, the particular is presented in response to the general. As a result, the norm-deviation relation seems to be established. The contrast between the two different encoders does not seem to play an important role as a world-defining factor here, though it is the essential factor for the correction relation.

It is also possible that some evaluations are added as in the following text :

Text 4-8

Mary writes that, generally, high school teachers in Germany are *reasonably* paid £45,000 a year. However, according to Tom, that is not always the case. He reports the annual salary of a 40-year-old teacher in a state grammar school is approximately *as little as* £28,000.

In this text, the general, or hypothetical, world is indirectly evaluated as good by the positive evaluation of a proposition asserted in it, which is expressed by the term *reasonably* while the particular world is indirectly evaluated as bad, which is indicated by the phrase *as little as*. In contrast to Text 4-4 in which a world positively evaluated is presented in response to a world negatively evaluated, here, a world negatively evaluated is presented in response to a world positively evaluated. The resultant clause relation, therefore, is an expectation-frustration relation. It can be said that the norm-deviation and expectation-frustration relations coexist in this text.

When a world is evaluated, the evaluation might be directly made about the world as in Text 4-4, in which the term *mistakenly* invalidates Mary's writing as a world. In this case, evaluation is about the world defining element. On the other hand, evaluation of the world might be indirectly made by way of evaluating the propositional element. In some texts, the two types of evaluation might be in conflict as in the following text :

Text 4-9



Mary writes that high school teachers in Germany are reasonably paid £45,000 a year. *Unfortunately*, it is a mistake according to Tom. He reports the annual salary of a 40-year-old teacher in a state grammar school is approximately *as little as* £28,000.

The term *unfortunately* means that the writer positively evaluates the content of the proposition *high school teachers in Germany are paid £45,000 a year*, though Mary's writing as a world is invalidated by the term *mistake*. In this text, therefore, we can identify not only the mistake-correction relation but also the expectation-frustration relation.

Thus, the same pair of propositions which are simply represented as  $p$  and  $\text{not-}p$ , or  $\text{NOT-}p$ , can play various functions depending on various types of contrasts made between the worlds in which they are asserted. The contrast is often not so simple as one between general and particular worlds. Instead, it is often as complex as one between a hypothetical, and general world positively evaluated, and a real, and particular world negatively evaluated. As a result, various types of clause relations can be established at the same time.

#### 4.5 Propositional relativization functioning as a world-defining factor

So far, the logically opposite propositions  $p$  and  $\text{not-}p$ , or  $\text{NOT-}p$ , have been regarded as the propositional elements of the pair of formulae consisting of the three elements. In other words, logical opposition has been explained as that between two propositional elements. In this section, however, we deal with some texts in which it is established between two world-defining elements or between one propositional element and one world-defining element. They are two of the basic ways in which propositional relativization contributes to a further development of text.

In the first case, the logically opposite propositions can be regarded as defining the worlds in which other propositions functioning as the

propositional elements are asserted. It would be better understood as a contrast between (a) and (b) or (a) and (b)' shown below :

Formulaic Description 3

(world-defining element)	(assertional)	(propositional)
(a) In the world where it is true p,	it is true	q
(b) In the world where it isn't true p,	it is true	r (not-q)
(b)' In the world where it is true not-p/NOT-p,	it is true	r (not-q)

It is often the case that the proposition r in the above formulae is also logically opposite to the proposition q and can be described as not-q or NOT-q. In such a case, we can observe a complex process of propositional relativization. The contrast between two worlds up to this point has been reduced to that between a pair of notions such as hypothetical and real, general and particular, etc. Here, it could be characterized as that between two opposite propositions. An example of texts of this type is shown below :

Text 4-10

(1) Diana was addicted to the camera. (2) She was happy when she was in the limelight and unhappy when she was not.

(Time, October 6, 1997)

In this text, we can see two pairs of opposite propositions, of which one pair of propositions can be seen as defining the contrasting worlds in which the other pair of propositions are asserted. The first pair is in the two subordinate clauses of (2) : *she was in the limelight*, and *she was not (in the limelight)*. (2) might be described as a contrast between two formulae as follows ;

In the world where it is true p	(When she was in the lime light)
it is true	(implicit)
g	(she was happy)
In the world where it isn't true p	(when she was not)
it is true	(implicit)
not-g/NOT-g	(unhappy)

It should be added that the comparative denial between two world-defining elements is also identified in Text 3-1, in which two subordinate clauses are regarded as expressing them: *when the cinema has the courage of its original conviction, and when it panders to the lowest common denominator.*

The other way in which propositional relativization contributes to the development of discourse is identified when logical opposition is established between the propositional element of one formula and the world-defining element of the other formula. It might be understood as following two contrasting formulae:

Formulaic Description 4

(world-defining)	(assertional)	(propositional)
In the world X,	it is true	p
In the world where it isn't true p,	it is true	q

Text 4-11 is an example of a text which includes this type of contrast:

Text 4-11

(1) Extra money must be spent on research in science and engineering, and this should be targeted to those areas of long-term relevance to industry. (2) If this is not done, new industry will not develop and Britain will decline to a Third World economy with massive unemployment. (Reader's digest, March 1985)

If we let the compound-proposition contained in (1), *extra money is spent on research in science and engineering, and this is targeted to those areas of long-term relevance to industry*, be simply represented as p, we might be able to say the proposition p is true in an ideal world which is signaled by the modal verbs *must* and *should*. In the subordinate clause of (2), which is considered to describe a hypothetical world signaled by the subordinator *if*, the proposition p is denied. Since the proposition asserted in an ideal world is denied, we might be able to posit a type of expectation-frustration relation here, though the world in which it is denied is not a real but hypothetical world. Between the subordinate clause and the main clause of (2),

there is a condition-consequence relation. The consequence member includes some items that signal a problem: *decline* and *unemployment*. As we have discussed, when a proposition asserted in an ideal world is denied, the problem member of a problem-solution pattern is often anticipated.

### Conclusion

Throughout the paper, an attempt has been made to describe how propositional relativization functions in the organization of texts. Propositional relativization has been regarded as a special type of matching relation in which two worlds are compared with respect to the truth value of a common proposition. Particularly, attention has been focused on a type of matching relation, the comparative denial, in which a proposition asserted in one world is denied in another. It has been described as a contrast between two formulae: *In the world X, it is true p*, and *In the world Y, it isn't true p*. It has been pointed out, however, that the comparative denial, by itself, is not informative enough and usually requires the information which functions as *In the world Y, it is true NOT-p*.

The chain of the three formulae has been compared with the hypothetical-denial-correction sequence which is one type of the hypothetical-real pattern described by Winter. Based on the comparison, it has been claimed that the two notions, *hypothetical* and *real*, can be regarded as one of the possible pairs of notions that characterize the two worlds, X and Y, in our formulae. The pair also can be *general* and *particular*, *two different sources of information*, *two different periods of time*, and so on.

Although such qualities of the worlds are considered to be an important factor for the description of the relationship between them, some other factors must also be included: the presence or absence of a sequential meaning between them, their evaluation, the order in which the world positively evaluated and the world negatively

evaluated are presented. The combination of these factors determines the relationship between them.

Different combinations of these factors are reflected in the different types of function of the text as a whole. They have been regarded as various types of clause relations which are established at the top of the clause-relational hierarchy consisting of the comparative denial between the first and second formulae, and the specification relation between the second and third formulae, with the second formula as the intermediary. In this paper, only four of them have been discussed: *the contrast, norm-deviation, mistake-correction and expectation-frustration relations*. It has been emphasized that these types of clause relations are established as a result of the interaction between two general types of clause relations, the matching relation and the logical sequence relation.

Admittedly, throughout the paper, the discussion has been sketchy and sometimes speculative. For example, only a few possible pairs of the worlds have been introduced and no comprehensive description of the linguistic devices which are used for expressing or implying the world-defining element have been attempted. Hypothetical quality of a world, for instance, is shown by various items related to epistemic modality (e.g. possible, likely, probably), deontic modality (e.g. should, must, necessary), or by other lexical items such as *suggestion, claims, thesis, allegation* and so on. The contrast between the worlds might also be characterized as that between *definite* and *indefinite*, and between *two different places*, to name a few.

Besides, the above-mentioned factors which characterize the relationship between the worlds are presented only to distinguish the four types of clause relations dealt with in this paper. It is obvious that other factors are necessary to define many other types of clause relations.

An excuse for these shortcomings is that my attention has mainly been drawn to the systematic description of the way in which the

comparative denial, or propositional relativization, interacts with the logical sequence relation established between the two worlds, resulting in a new type of clause relation which can be regarded as a hybrid between the two general types of clause relations.

In order to compensate for these shortcomings to any extent, in Appendix you will find some data which are part of some texts that could be regarded as including the three formulae. Hopefully, the data will represent some of the most typical cases of the phenomenon we have discussed.

### Appendix

(1)-(17) were extracted from texts in which the mistake-correction relation could be identified. The items in ( ) were only implied in the texts. (18)-(31) were taken from texts related to the expectation-frustration relation, which usually anticipates the problem member. The information in < > shows a problem. Only two examples each are shown for the norm-deviation relation and the contrast relation : They are respectively, (32)-(33) and (34)-(35). This is partly for lack of space, but mainly because in most cases some kind of evaluation is made of the two worlds or propositions. Then, the distinction between these types and the other types is not so clear.

- (1) She believes that  $p$ . There is an alternative explanation. She fails to discuss ... (*NOT-p*)
- (2) This ( $p$ ) sounds right. There seems to be evidence that  $p$ . To generalize too freely, however, is dangerous. (*NOT-p*)
- (3) It might appear that  $p$ . Appearance can, however, be deceptive. (*NOT-p*)
- (4) Everyone said  $p$ . But *NOT-p*.
- (5) It could lead to  $p$ . He cautions against such speculation. not- $p$ , he said.
- (6) It is possible that  $p$ . She does not accept the suggestion wholeheartedly. She proffered an alternative explanation. (*NOT-p*)

- (7) It may seem unlikely that  $p$ . But it is becoming increasingly common that *not- $p$* .
- (8) The idea that  $p$  is surely dangerous nonsense. *Not- $p$* .
- (9) One reads  $p$ . Anybody who believes that will believe anything.  
(*NOT- $p$* )
- (10) Writing off  $p$  is not acceptable. *Not- $p$* .
- (11)  $p$  is not the right way to ..., rather, should *NOT- $p$* .
- (12) It may be argued that  $p$ , though medical consensus is that *not- $p$* .
- (13) It is a mistake to consider that  $p$ . *NOT- $p$* .
- (14) Until the end of the last year, he got very suspicious of  $p$ .  
Recently, he made a fervent plea for *not- $p$* .
- (15) A recent article ... misleadingly ... gave the impression that  $p$ .  
The fact is that the situation is quite the contrary. *NOT- $p$* .
- (16) They don't think that  $p$ . Our evidence suggests the contrary.
- (17) He heard the stories  $p$ . However, laboratory analysis showed far from  $p$ , *NOT- $p$* .
- (18) The psychological evidence strongly suggests that  $p$ . So one might anticipate that  $p$ . In practice, however, *Not- $p$* . <It is a recipe for a penal psychological price ...>
- (19) The right course is  $p$ . In practice, ... are doing the opposite. <It will make the longer term adjustment far, far harsher.>
- (20) Despite the protest to the contrary, everyone knows that  $p$ . ... could have avoided ... by  $p$ . But they chose instead to *NOT- $p$* . <... in so doing, continue their dependency on notoriously changeable repressive regimes.>
- (21) A lot could be achieved if only  $p$ . Actually, *not- $p$* . <This causes frustration and loss of passengers ...>
- (22) ... but they do cry out for  $p$ . Yet, *not- $p$* . <The mismatch is nowhere more marked than among the ranks of the Labour Party leadership.>
- (23) My daughter said ... certainly  $p$ . But no, *not- $p$* . <What is the

matter with these shopkeeper? Don't they realize that ...>

- (24) I had hoped that *p*. But instead of *p*, all you do is *NOT-p*.
- (25) It is right that ... should *p*. But *not-p*. <This is one of the nastiest aspects of male privilege.>
- (26) The government is still pledged to *p* ..., but *NOT-p*. <... the financial consequences are threatening to blow up in the Treasury's face.>
- (27) What shocked me was how *p*. It was so contrary to my expectation.
- (28) The labour party ignores the evidence that *p*.
- (29) He pleaded that *p*. Distregarding him, *NOT-p*. (*p* is positively evaluated.)
- (30) The British suggested that *p*. That was rejected ... partly on the ground that *q*. (*q* is negatively evaluated.)
- (31) A three-judge Italian military tribunal ruled that *p*. As it turned out ... anything but *p*.
- (32) It is traditional in Britain to *p*. But this year, a new ritual will greet the changing of the season.
- (33) The conventional wisdom is that *p*. Dissenters, though, think that *NOT-p*.
- (34) Publicly, *p*, but internally they say the contrary.
- (35) Though allegations that *p* could possibly be true, the alternative explanations seemed at least as likely.

### Notes

1. It is specific in that it entails the original version but not the other way round. It is natural to presume that the preparatory condition II includes the specific situation where both the speaker and the hearer know that the act will not be done by the hearer unless the speaker performs the speech act.
2. In this paper, emphasis is placed on the first type of propositional relativization in which two worlds are considered to be in a contradictory relation.
3. The clause relational approach towards discourse analysis, which is



- introduced later in this paper, seems to be based on a similar cognitive model. In the approach, the semantic relation between two clauses is the basic unit for analysis, and each clause is referred to as a member of the binary relation, such as the cause-effect relation.
4. This process might be based on the general knowledge described as a logical sequence of two propositions: one is sitting for an important test → one works unusually hard.
  5. This interpretation depends on a view of time that each point on the time line can be regarded as a type of world. Such a view is implied in temporal logic presented by scholars such as Rescher and Urquhart (1971). For a concise explanation of their theory, see Miller, G.A. and Johnson-Laird, P.N. (1976: 114-21).
  6. The phenomenon of informational strengthening is known in syntax as Neg-Raising: the negative operator *not* moves from the subordinate clause up to the main clause, changing the domain of the negation. It could also be explained in terms of two different types of negation discussed in Horn (1989: 363): descriptive negation and metalinguistic negation. The former corresponds to *It is true that not-p*, and the latter *It isn't true that p*.
  7. Some possible sentences are: *She is mistaken*; *It is not correct*; *It isn't true*; *But they aren't*; *Nonsense*; *Anybody who believes that will believe anything*, etc.
  8. This pragmatic rule is often referred to as the principle of informativeness. See Horn (1989: 196, 390) or Levinson (1983: 146-147).
  9. In Chapter 4, textual functions are construed as a type of binary relation, such as mistake-correction.
  10. There are two ways of "naming" clause relations. In one way, two members are shown: the cause-effect relation, the means-purpose relation, etc. In the other way, the unique quality of the relation becomes its name: the comparison, the comparative denial, the concession relation, etc. It is important to remember that clause relations of the second type also consist of two members.
  11. This is referred to as the paraphrase criterion, which is actually one of the four criteria Winter presents for characterizing Vocabulary 3 as a closed-system. For brief definitions of the other three criteria, see Winter (1977: 27-28).
  12. For instance, the answer to the question might be: *X event is the cause for Y event*, or *X event is the means to achieve Y event*, etc.
  13. Winter refers to a significant amount of repetition like this as systematic repetition. It is a type of signal for matching relations.
  14. The specification relation might also be referred to as the general-specific relation in a binary manner. Then, the second formula is the

general member of this clause relation.

15. For instance, the logical relation of entailment between them might be explained in terms of two sentences: *It is not the Year of Cow in Thailand* and *It is the Year of Tiger in Thailand*. Whenever the second sentence is true, the first sentence is also true, but not the other way round.
16. In this case, not-p and NOT-p are asserted in Tom's world instead of the writer's. The term *mistakenly*, however, implies that the writer evaluates it positively whereas Mary's world is negatively evaluated.

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