

Thematic Structure and Subject Assignment in Japanese Narrative Discourse*

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日本語のナラティブにおけるテーマ構造と主語の選択について

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要 旨

本研究は日本語のナラティブ（一人語りの談話）において、その登場人物の中から話し手が誰をどのように選択し主語にするかを、実験を用いて検証したものである。実験は、日本語を母語とする大学生40人に12枚の連続した絵を見ながらそこで何が起きているのかを語ってもらったものである。その際、被験者を2つのグループに分け、それぞれある一人の登場人物の視点に近い立場をとって話しをしてくれるようタイトル (global theme) を定めた。実験におけるナラティブのテーマの構造は、話しの全体を通して流れるグローバルなテーマ (global theme)、1枚1枚の絵で表されている出来事を中心とするローカルなテーマ (local theme)、そして、語りの連続の中でまさに今語られている句の1句前のテーマ (previous theme)、の3つが有機的に関わり合っていると考えられる。そして、具体的にはこれらの3つのテーマが話者の語りの主語の選択にどのように関わっているかを、統計的処理を用いながら分析した。その結果、これらいずれのテーマとも話者の主語の選択に影響を与えていることがわかった。しかし、その中でも特に、ローカルなテーマが強い影響力を持っていることが明らかになった。このことにより、話し手は常に全体を流れるテーマを意識しながらも、一つ一つの出来事で何が起きているのかを描写すること、その結果、その出来事を中心人物を最も優先的に主語の位置に据えていくのだということが示された。

ABSTRACT

This paper investigates experimentally how global theme, local theme, and previous theme affect the speaker's selection of the referent of syntactic subject in Japanese narrative discourse. Forty Japanese native speakers were asked to produce a story while looking at a series of 12 drawings. The results show that all three factors significantly affect subject assignment in Japanese and that among the three themes local theme is the most powerful and consistent factor in explaining syntactic subject.

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1. INTRODUCTION

This study experimentally investigates subject assignment in ongoing Japanese narrative discourse. When a speaker tells a story, s/he assigns some referent in the discourse to the syntactic subject in each clause. What factors make the speaker select a referent as the syntactic subject in each clause during discourse production? Can the thematic structure affect the speaker's selection of a referent as the syntactic subject?

The issue of how a speaker selects a referent as the syntactic subject for a clause has been one of the most widely-discussed issues among linguists and psycholinguists. There have been mainly three explanations of this problem so far. One is that the most important or salient referent in the event ('local theme') will be selected as the syntactic subject of the clause associated with the event. A second explanation is that the most important referent of the whole discourse ('global theme') is more likely to be selected as the subject of the lower-level clauses. A third explanation is that the referent of the previous subject ('previous theme') will affect the selection of the current subject. Kim (1996, 1997) verifies that the above three factors all affect subject assignment in English and Korean. Among these three factors, moreover, 'local theme' is the most powerful candidate for subject assignment in these languages. Since English and Korean are totally unrelated languages, based on Kim's findings, we propose that the role of these thematic factors in the speaker's assignment of a referent to the syntactic subject is universal. In other words, assigning a referent to the syntactic subject may be viewed as a cognitive procedure of the speaker which is not a language-particular phenomena but a universal one. The purpose of this study is to test how local, global and previous themes affect subject assignment in Japanese narrative discourse, using an experimental procedure in which each informant¹ produced a narrative based on a series of 12 drawings.

* This study is a part of an cooperative research project with Myung-Hee Kim who initiated the study of subject assignment in English. This project is supported by a grant to Yoko Fujii from the University of the Air in 1997 and 1998 for which we would like to express our gratitude. Also, I am grateful to Yasuko Toyama, Yuka Shigemitsu and their students who kindly agreed to be the informants for this study. Lastly, I thank Hyun-Hoon Lee who helped with the statistical analysis. All shortcomings are the authors' responsibility.

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¹ In order to avoid any confusion, we use the term 'informant' for the experimental speaker and 'subject' for 'the syntactic subject.'

The organization of this paper is as follows: Section 2 briefly reviews syntactic subject in Japanese, Section 3 discusses thematic structure in discourse. Section 4 describes the experiment conducted for this study and discusses the results. Section 5 concludes the discussion and suggests implications for further studies.

2. SYNTACTIC SUBJECT IN JAPANESE

In order to keep track of thematic participants, languages utilize case marking, word order, verb agreement, or a combination of these strategies. For instance, the cognitive thematic structure is grammatically coded as the syntactic subject in some languages like English (Carroll 1958; Tannenbaum and Williams 1968; Turner and Rommetveit 1968; Forrest 1992; Kim 1996; among others). On the other hand, other means of coding thematization such as word order and morphological marking are employed in other languages.

Japanese is a so-called 'topic prominent' language like Korean in which pragmatic factors like thematization or focus of attention as well as grammatical relations of each referent is coded by case markers and word order.² The Japanese subject is marked by the case markers, *ga* and *wa* (so-called topic marker). Onoe (1998: 88) defines the Japanese subject as "the center/core referent of a state/event which is coded by *ga*-case nominatives." For a long time the Japanese subject as well as its case marking has been a central issue among linguists. However, as it can be seen in the above definition, many discussions and explanations regarding the definition of subject and the function of case markers have been made only by a sentence level.

On the other hand, in a discourse level, the concept of given/new information or the widely accepted concept of 'theme' has been the only device to account for the functions of case markers of *wa* and *ga*. Maynard (1987: 79) proposes "the staging strategy which is linguistically manipulated by use and non-use of *wa* plays an important role in the manifestation of the narrator's point of view," and explains that the use of *wa* and *ga* is manipulated by the narrator's viewing position.³ However, every instance of *wa* and *ga* can not be accounted for by the concept of given/new information and although the claim that *wa* marks what is widely called the 'theme' of the sentence, there is no precise description or explanation about what kind of theme - local, global, or

² Fujii (1995) verifies that pragmatic markedness factors in discourse such as questions, answers to questions, negations, etc. cause the reversed word order in Japanese.

³ For further details see Maynard (1987).

previous - in the hierarchical thematic structure of a discourse is likely to be marked by the case marker. Furthermore, although 'the staging strategy' seems to be an attractive account for the use of case markers, a more precise account of how comprehensively 'the staging strategy' can account for the functions of *wa* and *ga* should be pursued. In the next section, we will present the ways in which thematic factors of the hierarchical thematic structure of discourse affect assignment of the referent to the syntactic subject.⁴

3. THEMATIC STRUCTURE IN DISCOURSE

Thematization has to do with a speaker's perspective toward a series of events he or she is to convey. The speaker's perspective on what is being said is superimposed on the entire discourse and ultimately reflected in its surface structure. In particular, how the speaker keeps track of central participants in discourse has been of great interest among linguists⁵ and psychologists alike. In the linguistic literature, the most frequently evoked pragmatic notion relative to subject assignment is 'theme' (or 'topic'). According to the 'Functional Sentence Perspective' of the Prague School (Mathesius 1939; Firbas 1964; Danes 1974 among others), the theme of a clause is its point of departure, or what the speaker is talking about. It is usually the first constituent of the clause or the syntactic subject in English. This functional point of view is further developed by Halliday (1967), Chafe (1976), Jones (1977), Tomlin (1983), and many others.

A more cognitive-based study associates the notion of theme with that of 'attentional focus'. A recent experimental studies by Tomlin and his associates (Tomlin 1991; Forrest 1992) have claimed that the referent in the speaker's focus of attention is automatically selected as the syntactic subject of the given clause in English. The assignment of attentional focus to a referent basically has to do with the importance or salience of the referent. The more salient the referent is, the more likely it is that the referent falls within the speaker's focus of attention and shows up as the syntactic subject. Three competing referents have been suggested for the selection of syntactic subject at any moment during discourse production: (1) the locally salient referent at that particular moment ('local theme'), (2) the globally salient referent in the whole discourse ('global theme'), and (3) the previously salient referent ('previous theme').

⁴ The issue of the speaker's selection of case markers in discourse is not in the scope of this paper. It will be pursued in a future study.

⁵ Particularly see Chafe (1980) and Givón (1983).

3.1 Local theme

'Local theme' has been said to play a role in the assignment of a referent to the syntactic subject when that referent plays a salient role in the local event being reported. According to Bock and Warren (1985), the most conceptually accessible, or most imageable referent has a great tendency to be coded as the subject of the clause. Based on Sridhar's cross-linguistic experiments (1989) and other former studies (Bloom 1970; Greenfield 1978; Lempert 1984), the inherent properties of referents such as size, location, degree of movement, humanness, and so forth influence the word order or the subject selection of an utterance, and placing salient information first in an utterance is a very early development in child language acquisition. These studies suggest that there are two principle categories in which a referent may be perceived salient in a given event: 1) by its inherent physical properties, such as size, animacy, imageability, etc., or 2) by its discourse-situational properties, such as agentivity, activeness, location in the event, etc.⁶

3.2 Global theme

The function of 'global theme' could be claimed to assign a higher-level, or global, theme of the discourse to the syntactic subject of a clause. Givón (1983) has argued that the referent most closely associated with the higher-level theme is likely to be coded as the subject of the majority of the sequentially-ordered clauses of the thematic paragraph. It is plausible from a cognitive perspective that a higher-level theme will strongly influence the speaker's perspective on the referents in a discourse and thus affect the selection of the lower-level themes, which, in turn, will affect the selection of the syntactic subject.

3.3 Previous theme

'Previous theme' may affect the subject assignment of the following clause. Chafe (1976) has noted that speakers tend to preserve the same subject from one sentence to another. 'Ted saw Harry yesterday. He told him about the meeting.' The interpretation of the referents of 'he' and 'him' in the second sentence is not puzzling because the subject status is expected to be preserved across the sentences of a cohesive discourse.

⁶ In studies of ellipsis in Japanese, the most possible candidate for ellipsis in discourse is an animate with agentivity in the subject position (Fujii 1989, 1995).

4. EXPERIMENT

4.1 Hypothesis

Kim's former study (1996, 1997) of subject assignment in English and Korean verified that local theme, global theme and previous theme will all affect a speaker's choice of subject in English. It was also confirmed that among the three variables local theme is the most powerful and consistent variable in affecting the speaker's assignment of subject. What this means is that the speaker is always concerned about what is going on at the local level, what the global theme of the whole discourse conveys, and what has happened in the previous discourse. Furthermore, Kim (1996: 850) explicates that "the primary goal of the speaker telling a story is to report what is going on (or what has happened), yet all the time considering the thematic and local coherence of the discourse."

Based on Kim's findings, we propose the following hypothesis for Japanese:

[Hypothesis] 'Local theme,' 'global theme,' and 'previous theme' all affect the speaker's assignment of a referent to the syntactic subject. Among the three variables, 'local theme' is the variable that will most strongly affect the speaker's selection of the syntactic subject.

4.2 Methods

4.2.1 Materials

The experimental materials⁷ consist of a set of twelve simple line drawings depicting a man and a woman on a blind date.⁸ In each picture, one of the characters is represented more prominently, so that she or he could be perceived as the local theme of the picture. Half of the pictures have the male character as their local theme, whereas the other half have the female character as their local theme.⁹ Table 1 illustrates a rough outline of the pictures with the

⁷ The experimental materials are the same as those used in Kim (1996).

⁸ See Appendix for the 12 pictures used for the experimental materials.

⁹ The description of the experimental materials follows Kim's (1996) in order to keep precision.

According to Kim (1996), in order to maintain objectivity, she conducted a pilot study with 100 students of University of Oregon, where they were asked to look at the pictures and to determine which character could be the main character of the whole story. Kim (1996: 845) explained the result as follows:

intended local theme for each picture (*italics*).

Table 1. A rough outline of the 12 pictures

Picture	Event
1	A <i>woman</i> arrives while a man is waiting in a restaurant
2	The <i>man</i> waves to her
3	The <i>woman</i> walks toward the table
4	The <i>man</i> hands the flowers to the woman
5	The <i>man</i> accidentally spills water on her
6	The <i>woman</i> wipes up the water
7	The <i>man</i> talks to the woman while they eat dinner
8	The <i>man</i> shows his empty pockets after they finish dinner
9	The <i>woman</i> rises from her chair
10	The <i>woman</i> pays the bill
11	The <i>man</i> tries to stop her
12	The <i>woman</i> walks out

Two titles for the above story were given: 'Title 1' and 'Title 2'. The titles are identical except that each title reflects a different main character or global theme of the story. In Title 1, the female character, Hanako, is the global theme of the story, whereas in Title 2, the male character, Taro, is the global theme of the story. The illustration of the introduction of Title 1 is as follows:

TITLE 1: How Hanako's blind date ended in a total disaster

INTRODUCTION:

Imagine that you are a good friend of Hanako's. You knew that she went on a blind date with a man named Taro last night. Later, you heard all about it and could imagine it all happening.

4.2.2 Informants and procedure

Forty university students participated in the experiment. They are all native speakers of Japanese. Each informant was randomly assigned to one of the two Titles and asked to tell a spontaneous narrative while looking at the series of pictures. The experiment was conducted in a quiet room, where the atmosphere was kept as friendly as possible. Each experiment took about 10 minutes.

Most of the respondents were reluctant to choose one, but 58% of the respondents ended up choosing the female character as the main character of the story. This seemed to indicate that the story was fairly ambiguous in terms of the main character.

4.3 Results

4.3.1. General characteristics of the data

All the narratives that the informants produced were transcribed in Japanese. All the utterances were broken up into clauses. The syntactic subject of each clause and its referent were identified and recorded. Overall, 1415 clauses were produced by the 40 Japanese speakers. Each speaker produced an average of 35.4 clauses or 3.0 clauses per picture. Of the 1415 clauses, 1195 clauses were used for further analyses. The remaining 220 clauses (15.5%) were excluded because the syntactic subjects did not specifically refer to either of the characters.

For the total of 1195 clauses for the analysis, all subject referents were cross-classified by the variables of global theme and local theme. Table 2 illustrates the results:

Table 2. Total number of syntactic subjects produced under each condition

Syntactic Subject	Title 1 (GT=Hanako)		Title 2 (GT=Taro)	
	LT=Hanako	LT=Taro	LT=Hanako	LT=Taro
HANAKO	220 (38.7%)	87 (15.3%)	186 (29.7%)	79 (12.6%)
TARO	77 (13.6%)	184 (32.4%)	151 (24.1%)	211 (33.7%)

Notes: 1. GT stands for 'global theme', LT for 'local theme'. 2. The numbers in the parentheses are the percentage of the mention within the condition. 3. The total number of observation is 1195 (with 568 in Title 1 and 627 in Title 2 condition).

Table 2 shows that local and global themes affect the number of mentions of the characters as syntactic subject in Japanese. When the local theme is Hanako, the number of the syntactic subjects referring to Hanako is more than that to Taro under the both global theme conditions (38.7 vs 13.6% in Title 1 and 29.7 vs 24.1% in Title 2). If we compare those cases in the two conditions whose local theme is Hanako, there are more cases of subjects referring to Hanako when the global theme is Hanako than when it is Taro (38.7 vs 29.7%). This results mean that both global and local themes might be positively associated with subject assignment in Japanese just as in English and Korean.

Furthermore, the results suggest that although local and global themes both affect the subject assignment, local theme affects the subject assignment more than global theme. If we look into the cases where global theme and local theme are competing; for instance, in the case where the global theme is Title 1 (Hanako) but the local theme is Taro, the local theme, Taro is selected for the syntactic subject (32.4% for Taro vs 15.3% for Hanako in Title 1 and 29.7%

for Hanako vs 24.1% for Taro in Title 2). In order to confirm whether these results are statistically significant, the next section will illustrate their statistical significance using the logit analysis.

4.3.2 *Logit analysis*

Among the various statistical tools available, the present study employs the logit analysis, a kind of 'qualitative response model', since it has a non-linear categorical dependent variable (see Kim (1994) for further information). In this study, the dependent variable is the referent of the syntactic subject of each clause (SUBJECT) and the explanatory variables are the local theme of each picture (LOCAL), the global theme of the story (GLOBAL), and the referent of the previous subject (PREVIOUS). They are all categorical variables, that is, either Hanako or Taro. Zero (0) is assigned if they refer to Hanako, and one (1) if they refer to Taro.

The summary of the dependent and explanatory variables in this experiment is as follows:

Dependent Variable:

(SYNTACTIC) SUBJECT = 0, if the subject of the clause refers to Hanako
= 1, otherwise (i.e., if it refers to Taro)

Explanatory Variables:

LOCAL THEME = 0, if the local theme of the picture is Hanako
= 1, otherwise (i.e., if it is Taro)

GLOBAL THEME = 0, under Title 1 (Hanako-theme) condition
= 1, otherwise (under Title 2 (Taro-theme) condition)

PREVIOUS THEME = 0, if the previous subject refers to Hanako
= 1, otherwise (if it refers to Taro)

4.3.3 Results and discussion

The estimates resulting from the logit analysis are presented in Table 3.¹⁰

Table 3. Estimation of syntactic subject with all observations

Constant	LOCAL	GLOBAL	PREVIOUS	Obs	Cases correct
(1) All speakers					
-1.249**	1.386**	0.453**	0.880**	1195	830
(9.883)	(10.778)	(3.519)	(6.880)		
(2) Male speakers					
-1.084**	1.542**	0.342*	0.654**	572	390
(6.201)	(8.303)	(1.848)	(3.539)		
(3) Female speakers					
-1.387**	1.235**	0.541**	1.099**	623	438
(7.777)	(6.852)	(2.996)	(6.157)		

Notes: (1) Estimates are made by the logit analysis. (2) The first row of each equation presents the estimated coefficients of the explanatory variables and the numbers in the parentheses are the *t*-statistics. (3) ** and * denote coefficients that are significant at the 1 percent and at the 10 percent levels, respectively. (4) Obs represents the number of observations, and Cases correct represents the number of observations predicted correctly by the model.

Equation (1) indicates that for all speakers local theme (LOCAL), global theme (GLOBAL), and previous theme (PREVIOUS) predict positive coefficients which are all significant at the 1 percent level. Although all three explanatory variables have highly significant coefficients, LOCAL has an estimated coefficient which is much larger and stronger than the other two variables, which implies that subject assignment is most significantly affected by local theme.

Similarly, when we compare Equation (2) for male speakers and Equation (3) for female speakers, again LOCAL has larger estimated coefficients than GLOBAL and PREVIOUS in both equations. Among the male speakers, the coefficient of GLOBAL shows significance only at the 10 percent level. This results that female speakers show a little more significance in both GLOBAL and LOCAL than the male speakers suggest that the female speakers speak in a more coherent manner between global theme and local theme.

¹⁰ Since it was suspected that the gender of informants might affect their responses, estimates were made for male and female subject separately, and were then tested to see whether they were statistically different. In fact, most of the subjects who commented on the nature of the experiment asked if the experimenter was looking for gender differences.

5. CONCLUSION

This study empirically investigates what determinants of the thematic structure affect the speaker's selection of the syntactic subject in Japanese narrative discourse. Based on Kim's former studies on English and Korean, it is pursued how local, global and previous themes were examined for their influence on the selection of the subject in Japanese. Forty informants were asked to produce a narrative talk about a man and a woman on a blind date, based on a set of twelve simple line drawings.

It was statistically confirmed that local, global, and previous themes all affect the speaker's choice of the syntactic subject in Japanese narrative discourse. Among the three variables, local theme is the most powerful and influential factor as the determinant of the subject. This means that the speaker of the narrative is always conscious of what is going on at the local event level, what is the main concern in the global level, and what is focused on in the previous discourse. In particular, the speaker's subject assignment in a clause is strongly and directly influenced by the events happening in front of him/her (that is, in the experiment, events in the picture the speaker is viewing), although all the time the speaker is conscious of the thematic and local coherence of the discourse.

Furthermore, the outcome of this study has illustrated that Japanese speakers use almost the same strategy as English and Korean speakers for selecting a referent as the syntactic subject of a clause. Based on the fact that English and languages like Korean and Japanese are very different languages but show very similar results, it could be inferred that since the process of the speaker's selection of the syntactic subject in a clause is a cognitive process while producing narrative discourse, the effects of thematic factors on the speaker's subject assignment in a clause is not a language particular or typological phenomenon but rather a universal one, although the same investigation should be done for a greater variety of languages.

As noted in the beginning section, the Japanese language utilizes case marking and word order to mark both pragmatic factors in discourse and grammatical relations in a clause. The thematic structure and subject assignment which we have examined in this paper reveal a rather simple correlation. However, the issue of the relation between thematization and case marking seems more complicated. It would be desirable to explore how thematic structure of discourse affects the speaker's selection of the so-called topic marker *wa* and subject marker *ga* in Japanese.

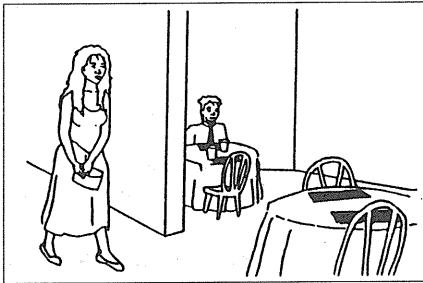
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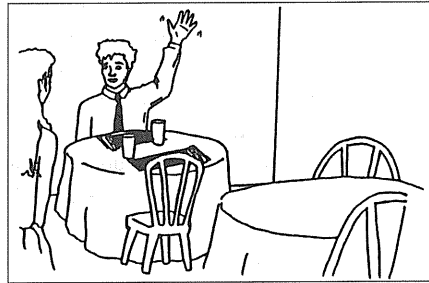
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(平成10年11月9日受理)

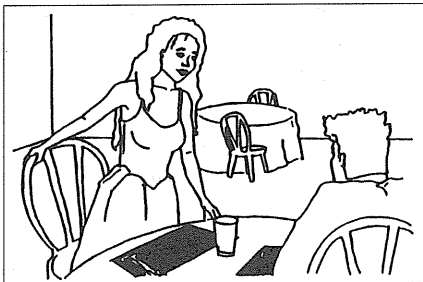
APPENDIX : Experimental pictures



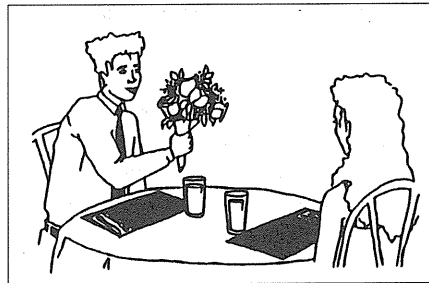
Picture 1



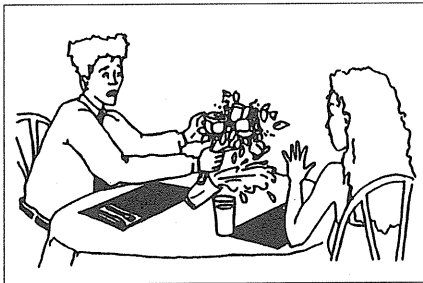
Picture 2



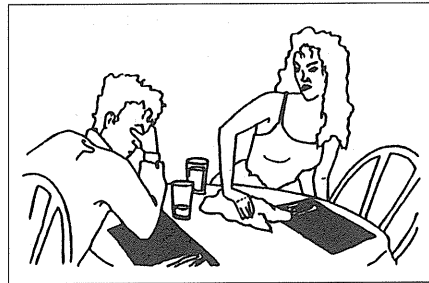
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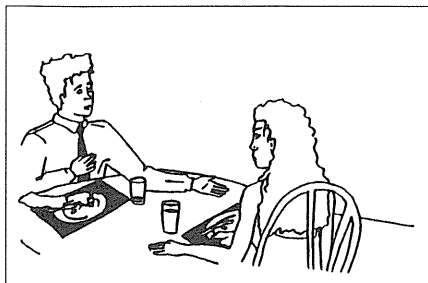
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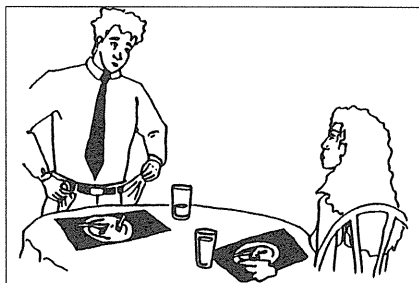
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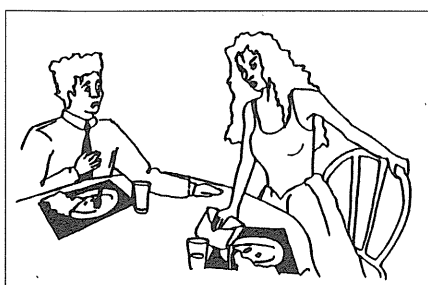
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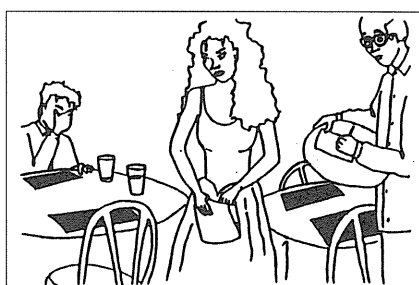
Picture 7



Picture 8



Picture 9



Picture 10



Picture 11



Picture 12