

INFORMATION STRUCTURE IN PERSIAN

Hamideh Marefat

M. H. Tahririan

University of Isfahan

Abstract

This research involves investigation of the organization of information in Persian. Results of such a study contribute to both theoretical and applied areas. In theory, it suggests verification of a proposed universal, i.e., old information precedes new information (Halliday, 1985; Haviland and Clark, 1974). It also contributes to our understanding of the nature of the second language learners' interlanguage and the extent to which it is affected by the L1 information structure. Such theoretical understanding can be expected to have practical consequences by providing insights into what aspects of an L2 should or should not be focussed in teaching.

Introduction

Following Grice's principle of cooperation in conversation, it is assumed that the speaker takes the trouble to structure his communication in such a way that it accords with the state of the hearer's knowledge. This takes the form of the speaker conveying as Given that information which has been mentioned before in the text; and as New that information which has not been mentioned before.

The first theories of New and Given information developed from the Prague school of linguistics. Given information is defined as representing what the sentence is about, the *theme*; and New information represents the *rheme*, the information

that pushes the conversation forward. This is called the Functional Sentence Perspective (FSP). Firbas (1992) speaks of New items as *irretrievable information* that contribute most to a dialogue or text, and Given items represent *retrievable information* that contribute least. Firbas also uses the terms *context-independent* and *context-dependent*, terms which emphasize New-Given being based on their actual presence, situationally or verbally, within a dialogue or text.

Halliday (1967) first presented the ideas of New-Given in a major western linguistic journal. His original definition was that Given information was a concept that was either previously mentioned,

i.e., contextually given, or physically present at the time of the discourse. New information is conceivably everything else. Halliday considered New-Given in English to be functioning at the level of the clause. Halliday also developed a system of markedness to apply to New-Given that outlines what is the normal method of presentation of New and Given items. For example, in this system, the appearance of a Given item as the subject, as a wh-item, or as a finite verbal element is unmarked, but when presented as any other element in the sentence, the usage is considered marked. Halliday also asserts that Given items always precede New items in a clause.

As with functional views of language, it is assumed that grammar and intonation convey the arrangement of the two (Given and New) elements of information. As far as intonation is concerned, it has been suggested that there seems to be a distinction made in language between new information and given information manifested in both listeners' perceptions of intonation and the way they process it, and in speakers' use of intonation. In a study in this regard, Most and Saltz (1979) had subjects listen to active and passive sentences with different nouns receiving stress and then asked the subjects to write a likely question that the sentences could be a response to. They found evidence that speakers are more likely to interpret a stressed word in the answer as being the information asked for in the questions they created; i.e., the stressed element was interpreted as the new information. As far as grammar and word order are concerned, there is a widespread agreement (Halliday, 1970 and 1985; Haviland and Clark, 1974 and Lambrecht, 1994) that there is a kind of fundamental order for the distribution of information in the English assertive sentences: when co-textual or contextual reasons do not dictate otherwise, the Given information precedes the New information. The Given tends to appear at the beginning of the sentence, with the New coming at the end, if there are no special prosodic or grammatical circumstances. So there is an interaction between information

order and syntactic order.

As far as SLA is concerned, any research dealing with the acquisition of the syntactic alternation needs to take into account discourse factors. And since in the acquisition of an L2, there is always the possibility of the existence of an interlanguage which can be traced back to the learners' L1, researchers need to know facts about the discourse of the learners' L1, including the organization of information in that language. In other words, the investigation of the role of L1 in a given L2 discourse-syntactic domain depends crucially on an analysis of the learners' L1 in that domain.

The present research is an attempt to find the information structure in Persian and the way discourse factors affect the organization of information with a focus on verbs which alternate between prepositional dative and double object dative in English. The results of this study can provide insights for SLA researchers dealing with Persian learners of English as a second language working in the domain of syntax acquisition.

This study is based on the assumption that Persian does not have a dative alternation. A sentence like *I gave a book to Mary* can be expressed in two ways in Persian:

ai ɔ buk tɔ meri geiv
ai tɔ meri ɔ buk geiv

But the change in the order of the objects does not produce a double object form. The preposition is there in the two forms above. Depending on the context, a person may produce either the first sentence above or the second one. The rare cases of the double object form in Persian include the last one the following sentences which are the different forms of saying the sentence: *The mother gave food to the child*.

madær be kudæk qæza dæd (Prepositional)
madær qæza be kudæk dæd (Prepositional)
madær kudæk ra qæza dæd (Double object)

Most people do not accept the double object dative structure in Persian. Though some researchers argue that Persian permits a small number of dative alternations with certain verbs,

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ince the double object dative is very rare, this structure is considered marked in Persian.

The study

This study aims at examining the organization of discourse in Persian. The discourse factor selected for this study is the information structure of the sentence as determined by the preceding question. Dative verbs have been selected for this study because they have two objects and the order of the two NPs can be revealing in this regard. One of the NPs is recoverable from the preceding question (Given), and the other one, not mentioned prior to that point, is non-recoverable from the preceding question (New). The test used in this study included interrogative sentences which appeared in four different constructions: either accusative or dative (the 1 and 2 sentences below); and the question word substituting either the first NP or the second NP (the A and B sentences below). The responses to the questions could be classified in two ways: Information order, i.e., they either had a Given-New or a New-Given order (this was based on the order of the internal arguments of the verbs; the internal argument mentioned in the stem was considered as Given); and Echoicity, i.e., the responses either echoed the structure of the question or they did not (the i and ii sentences below).

Accusative (substituting NP1)

1. A. æli wɒt tɔ mæɾjæm geiv
- i. æli ɔ buk tɔ mæɾjæm geiv (echoed--NG)
- ii. æli tɔ mæɾjæm ɔ buk geiv (non-echoed--GN)

Accusative (substituting NP2)

1. B. æli tɔ mæɾjæm wɒt geiv
- i. æli ɔ buk tɔ mæɾjæm geiv (non-echoed--NG)
- ii. æli tɔ mæɾjæm ɔ buk geiv (echoed--GN)

Dative (substituting NP1)

2. A. æli fɔɾ hum ɔ haus bilt
- i. æli fɔɾ mæɾjæm ɔ haus bilt (echoed--NG)
- ii. æli ɔ haus fɔɾ mæɾjæm bilt (non-echoed--GN)

Dative (substituting NP2)

2. B. æli ɔ haus fɔɾ hum bilt
- i. æli ɔ haus fɔɾ mæɾjæm bilt (echoed--GN)
- ii. æli fɔɾ mæɾjæm ɔ haus bilt (non-echoed--NG)

Research question

The question addressed in this study was: Do the native speakers of Persian produce sentences with a Given-New or a New-Given information order?

Method

Participants

The participants were 56 Persian native speakers studying at the last grade of high school. The subjects were naive with respect to the purposes of the study and their mean age was 18.

Materials

The materials consisted of a prerecorded audiotape and an answer sheet. The tape included the questions. The important point about the material in the tape was that the questions were read with normal intonation so that accentuation would play no role in marking an item as Old or New information. These questions appeared in four different constructions produced from a 2 (Accusative vs. Dative) by 2 (the question word substituting the first NP or the second NP) matrix. Eight verbs were chosen, so $8 \times 2 \times 2 = 32$ interrogative sentences were produced. Samples of each type of question are shown in Table 1.

Table 1. Classified representation of the questions and possible responses

Questions		Responses	
Prompt	Prompt	Information order	Echoicity
Accusative	Substituting NP1	GN	NE
		NG	E
	Substituting NP2	GN	E
		NG	NE
Dative	Substituting NP1	GN	NE
		NG	E
	Substituting NP2	GN	E
		NG	NE

Procedure

The test was administered to different intact classes. Prior to the initiation of the test, students were given examples of how to complete the test. The administration was timed with a prerecorded audiotape. The subjects had 12 seconds (this decision was based on the results of a pilot study) to write the answer to the question and then the next question was presented through the tape.

Scoring

Each response produced by the participants was coded in two ways: information order, whether the response had a Given-New or a New-Given information order; and echoicity, whether the response echoed the construction in the question or not (Table 1). Then the frequency of each type of response was counted.

As can be seen from Table 1, there was a balance between information order and echoicity, i.e., in echoed responses, half of them had a Given-New order and the other half a New-Given order. This was also true about non-echoed responses, i.e., half of them had a Given-New order and the other half a New-Given order.

Analysis

In this study, the dependent variable was the frequency of each type of response. The independent variables included information order, echoicity, and prompt type. Frequency counts were computed. α was set at .05 level.

Results

Table 2 provides the frequency counts of the subjects' various types of responses for each category of questions.

Table 2. Frequency counts for the subjects' various types of responses to the questions

Prompt type	Response type			
	Given-New		New-Given	
	E	NE	E	NE
What	406	286	168	50
Whom	406	118	314	44

First, the information order was brought into consideration. Table 3 presents the frequencies of the subjects' responses based on their information order.

Table 3. Frequency counts for the subjects' responses based on their information order

	Given-New	New-Given
Responses	1216	576

Results of a chi-square analysis revealed a significant difference in the extent of the subjects' production of the two information orders ($\chi^2=228.575$).

Second, echoicity was brought into consideration. Table 4 provides the frequencies of the echoed and non-echoed structures produced by the subjects.

Table 4. Frequency counts for the subjects' responses based on their echoicity status

	Echoed	Non-echoed
Responses	1294	498

The chi-square results showed that the subjects consistently echoed the structure of the question in their responses ($\chi^2=353.580$).

In a further analysis, attempt was made to examine the non-echoed responses. In this type of responses, the subjects did not echo the construction in the question. As can be inferred from Table 2, when it comes to non-echoed responses, the frequencies are 286+118 for Given-New information order and 50+44 for the New-Given information order. This is represented in Table 5 below.

Table 5. Frequency counts for the subjects' echoed and non-echoed responses based on their information order

	Given-New	New-Given
Non-echoed responses	286+118=404	50+44=94
Echoed responses	406+406=812	168+314=482

The χ^2 results showed that there was a significant difference between the subjects' echoed ($\chi^2=192.972$)

and non-echoed ($\chi^2=84.157$) responses based on their information order. This means that though the subjects echoed the structure of the question in a significant number of cases, they did not echo it when this prevented a Given-New information order.

In a last analysis, the effect of prompt type was examined. Table 6 shows frequencies of the Given-New and New-Given structures for the two prompt types.

Table 6. Frequency counts for the subjects' responses to prompt types *what* and *whom* based on their information order

Prompt type	Given-New	New-Given
what	692	218
whom	524	358

The χ^2 results showed a significant difference between responses to both prompt types *what* ($\chi^2=246.897$) and *whom* ($\chi^2=31.243$), based on their information order. This means that regardless of the prompt type, a significant number of responses have a Given-New order.

Discussion

The results of statistical analyses of the data obtained in this study showed that native speakers of Persian consistently produce sentences with a Given-New information order. The results also showed that these subjects echo the structure in the question when they are asked to produce a response; in other words, their responses take the same structure as the questions preceding them. This echoicity effect was so strong that one would wonder why the results of statistical analysis showed a significant effect for information order. If the subjects echoed the structure in the question, one would not expect Given-New information order to be produced more than the New-Given information order because there was a balance between the Given-New and the New-Given information order responses in the echoed and the non-echoed types of responses (Table 1). In other words, in echoed structures, half of them had a Given-New information

order and the other half a New-Given information order. This was also the case with the non-echoed ones. The question which raised here was why was it that although subjects had echoed the structure in the question in a significant number of cases, the frequency of Given-New sentences was higher than the New-Given sentences.

Answer to this question was found by further examination of the non-echoed responses. Although very few responses had non-echoed structures, a significantly high number of them had a Given-New information order. And this has caused the balance mentioned above to be distorted. Thus, the most determining factor in producing a response was the information order rather than echoicity.

What is inferable from all these results is that native speakers of Persian are sensitive to information order. They feel that a sentence with a Given-New information order is more natural than one with a New-Given order.

General Discussion

This study aimed at finding the organization of information in Persian. The discourse-syntactic domain selected was dative constructions under discourse influence. In Persian, the arguments of dative verbs can be realized in two ways as exemplified below:

æli ə buk tə mæɾjæm geiv

æli to mæɾjæm ə buk geiv

This study investigated whether native speakers of Persian considered these two uses of the grammatically permitted alternatives as equally felicitous in discourse. A clear-cut answer to this question is vital for any research dealing with the acquisition of the syntactic alternations; because these studies need to consider the role of L1. The results showed that native speakers of Persian produce Given-New order structures regardless of the prompt type and echoicity effect. These results provide support for the proposition made in the literature: "that old information precedes new information is a universal" (Givon, 1979 and 1984), though it may still be weak without further research about other languages.

Suggestions for Further Research

It is suggested to see if the same results will be obtained if another method is adopted. For example, one can run a text analysis of materials written in Persian and see if they also follow the pattern found in this study. Moreover, the task in this study was a production one. What about tasks requiring recognition? Will Persian subjects prefer sentences with a Given-New information order structure to those with a New-Given information order in a recognition task? One can also study other languages and see if the proposition made in the literature "that old information precedes new information is a universal" will be supported or refuted.

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