# Theme Markedness in Persian and English Medical Texts: A Systemic-functional Approach

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*Abstract*—In this paper an attempt was made to compare the clause theme and its markedness in Persian and English medical texts. The study was conducted according to SFG and is concerned with the thematic structure of this approach. The data gathered were from medical texts in Persian and English languages, and the unit of analysis, according to Halliday's approach, was clause. This study indicated that in Persian medical texts, many circumstantial adjuncts in the subject position sound unmarked to Persian native speakers and Persian language does not completely conform to the concept of Halliday's theory Regarding markedness. This research maintained that the properties of being pro-drop and having non-fixed word order distinguish Persian from English regarding the notion of markedness. In fact, Theme markedness is closely related to some factors such as specific genre, authors'/writers' style differences, emphasis, contrast, and language differences.

*Index Terms*—thematic structure, theme, theme markedness, medical texts, systemic-functional approach

## I. INTRODUCTION

The Theme-Rheme notions pose an interesting challenge to linguists in their attempts to pin them down more specifically. The purpose of this article was to study the clause theme and its markedness in Persian and English, comparatively. It aimed to determine the frequency and percentage of marked themes in these languages. Another objective of the article was to make a comparison between Persian and English in terms of marked themes. The study has been done based on Halliday's Systemic Functional Grammar (2004), and was concerned with the textual metafunction of this approach (as cited in Kazemi & Afrashi, 2012). In this article, only declarative clauses were taken into account, because the corpus (some medical books and articles) contained only declarative ones. Besides, there was no consideration of intonation in the study. This research is beneficial to the comprehension of scientific texts, improving cohesion in medical text writing, and promoting language teaching in Persian and English. Its findings can also be helpful for discourse analysis and translation studies.

## II. REVIEW OF THE RELEVANT STUDIES

Ghadessy (1995) believes that the choice of clause themes play a fundamental part in the way discourse is organized, it is this, in fact, which constitutes what has been called "the method of development" of the text (as cited in Halliday and Matthiessen, 2004, p. 99). Fries (1981) emphasizes the importance of clause theme in the overall development of a text. Fries (1995 b) believes that The theme selection patterns in the text are closely related to writing style. Such patterns are not chosen randomly; they are in fact influenced by text style. Hassan and Fries (1995) believe that, unlike subject selection, theme selection is affected by text organization. Hassan (1989) is one of the most important studies in text analysis. Hassan claims that the results of such studies help teachers to get enough information about the language they are teaching, which will lead to an improvement in the quality and method of education. Furthermore, the findings will be beneficial to the students, so that they can have a better understanding of the language they are learning.

Wang (2007) studies the relationship between theme and Rheme derived from theory of systemic functional grammar, with the aim to improve cohesion in academic texts. She shows that by analyzing theme and Rheme in a text, the students can learn to perform the same analysis in their own writings and thus improve cohesion in their own work. This research indicates that teachers need to look beyond the traditional grammar of the clause when teaching writing. Indeed theme and Rheme patterning can be effectively applied in classrooms to diagnose students' weaknesses. According to Bloor and Bloor (1995) the first constituent of each clause is a process, and the participant or a circumstantial factor of that process is considered as a theme. Such a theme functions as a subject, an object, a complement, or an adjunct. They indicate that the subject in declarative, subject plus finite operator in interrogative, the predicator (verb) in imperative, and the -wh element in exclamative clauses are unmarked themes.

According to Tuckita (2012), a research titled "Applying Systemic Functional Linguistics to Bahasa Clauses", the clause as message (Theme-Rheme structure) can be applied to Bahasa Indonesian Clauses. Lock (1996) believes that in clauses with marked themes, topicalization has occurred and this occurrence depends on the relationship between the clause and the text. Mohammadi (1995) emphasizes the significance of the theme, its types, and its importance in translation, and believes that recognition of marked or unmarked themes in translation is important because they play

different roles and thus convey different meanings. He indicates that a marked theme of a clause makes the text more difficult to understand.

## III. METHODOLOGY

### A. Text Selection

What this text-based study hopes to achieve is to attempt a functional characterization and classification of marked/unmarked themes. The corpus used in this study was limited to sample academic texts (as cited in Khedri & Ebrahimi, 2012). They were selected from the first ten pages of the first chapters of two books in the field of medical science (one in English and one in Persian) and also four medical articles (two in English and two in Persian). Thus, The data were gathered in both English and Persian (and these resources are cited in the references section). The corpus was divided into two subcorpora: sample medical texts in English and sample medical texts in Persian. the obtained corpus contained 1000 clauses (250 from the English book, 250 from the English articles, 250 from the Persian book and 250 from the Persian articles). There were some reasons behind this selection. The first reason was that no previous attempt has been made so far specially in Persian medical genre. The second reason was to maintain the consistency of thematic progression among paragraphs in each text and avoid judgment of thematicity. The third reason was that the text chosen represented a variety of authors (authors of books and articles in order to compare marked/unmarked themes in writing types). The final reason was, it appeared that this quantity was enough to allow the researcher to arrive at valid generalizations (as cited in Khedri & Ebrahimi, 2012). The study concentrated on the written language. In this article, only declarative clauses were taken into account, because the corpus contained only declarative ones.

### B. Unit of Analysis

Different researchers have selected different grammatical units to study theme, according to researchers' purposes. For Halliday, however, the basic unit for thematic analysis is the clause (as cited in Khedri & Ebrahimi, 2012). Therefore, the unit of analysis in this study is clause.

### C. Instrument

In order to achieve a well-organized study a comprehensive model is required for analyzing the data. The theoretical and analytical framework for this study in terms of thematic organization was the one suggested by Halliday (2004). It is a practical, reliable and up-to-date model. Most of the studies that have been done in terms of thematic analysis have resorted to this model (as cited in Khedri & Ebrahimi, 2012).

### D. Procedure

The procedure applied in this study was firstly the selection of sample texts from the first ten pages of the first chapters of two books and the whole four articles in the field of medical sciences in English and Persian. Secondly, the texts were compared and contrasted according to the above mentioned model to determine their marked/unmarked theme. Thirdly, the data were analyzed to scrutinize the similarities and differences that would exist in English and Persian languages concerning the above mentioned theme types. Finally, to analyze the text in the present study quantitatively, the frequency of different theme types (marked/unmarked) was calculated and the significant differences were determined.

## IV. LITERATURE REVIEW

### A. Systemic Functional Grammar (SFG)

Chapman and Routledge believe that Systemic-functional grammar (SFG) originated with M. A. K. Halliday, building especially on the ideas of his tutor J. R. Firth, in publications from the 1960s on, with major contributions by other scholars such as Ruqaiya Hasan and, in more recent years, Jim Martin and Christian Matthiessen among many others. From early in its development, SFG has had two main distinguishing features, which are reflected in the name. First, whereas many approaches focus on the syntagmatic, 'horizontal' dimension of how constituents may be combined with other constituents in a well-formed structure, SFG prioritises the choices that are open to the speaker at any particular point in an utterance–the paradigmatic, 'vertical' dimension. The grammatical structures are then seen as the outcome of choices from those available (as cited in Chapman and Routledge, 2009, p. 225). According to Eggins (2004) Halliday's Functional Grammar present a functional grammatical description of the simultaneous metafunctional organization of the clause (its Mood, Transitivity, Theme, and Clause Complex Systems) and introduces the basic techniques for analyzing cohesive patterns in text: reference, lexical cohesion and conjunction (Eggins, 2004, p. xiv).

Halliday believes this is an approach to linguistic description which aims to provide a comprehensive account of how language is used in context for communication. The approach views language as a resource that is fundamentally shaped by the uses that people make of it; it therefore aims to explain the forms of language in terms of the meanings that they express, and to develop a grammar which is designed to 'make it possible to say sensible and useful things about any text, spoken or written' (Halliday, 1994, p. xv). It is a corpus–based and also a corpus–driven grammar since

it has been widely used in the analysis of discourse and it has been applied in systemic and exhaustive analysis of large volumes of text (Halliday and Matthiessen, 2004, p. 35).

*B. Textual Metafunction*

Textual metafunction is the third mode of meaning (alongside experiential and interpersonal metafunction) which relates to the construction of text. In a sense this can be regarded as an enabling or facilitating function organizing the discursive flow and creating cohesion and continuity as it moves along. This too appears as a clearly delineated motif within the grammar. It is composed of two functions called theme and Rheme (Halliday and Matthiessen, 2004, p. 30). Textual metafunction is the part of the grammar which is concerned with how the meanings in the clause are organized to fit in with the co-text of the surrounding messages and with the wider context of the utterance (Chapman and Routledge, 2009, p. 230).

*C. Theme and Rheme*

Halliday and Matthiessen (2004, p. 64) believe that in all languages the clause has the character of a message: it has some form of organization whereby it fits in with, and contributes to the flow of discourse. But there are different ways in which this may be achieved. In English, as in many other languages, the clause is organized as a message by having a distinct status assigned to one part of it. One part of the clause is as the theme; this then combines with the remainder so that the two parts together constitute a message. In some languages which have a pattern of a similar kind, the theme is announced by means of a particle: in Japanese, for example, there is a special postposition -wa, which signifies that whatever immediately precedes it is thematic. In other languages of which English is one, the theme is indicated by position in the clause.

In speaking or writing English we signal that an item has thematic status by putting it first. No other signal is necessary, although it is not unusual in spoken English for the theme to be marked off also by the intonation pattern. Following the terminology of the Prague school of linguistics, we shall use the term **Theme** as the label for this function. The theme is the element which serves as the point of departure of the message; it is that which locates and orients the clause within its context. The remainder of the message, The part in which the theme is developed, is called in Prague school terminology the **Rheme**. As a message structure, therefore, a clause consists of a theme accompanied by a Rheme and the structure is expressed by the order – whatever is chosen as the theme is put first (Halliday and Matthiessen, 2004, p. 64).

The clause in its representational function construes a quantum of human experience: some process some change or in the limiting case lack of change in the external or our own internal environment. Processes are construed as a configuration of components of three types: (i) the process itself (ii) the participants in that process and (iii) any circumstantial factors such as time, manner or cause. The guiding principle of thematic structure is this: The theme contains one and only one of these experiential elements. This means that the theme of a clause ends with the first constituent that is either participant, circumstance or process. We refer to this constituent in its textual function as the topical theme (Halliday and Matthiessen 2004, p. 79). The textual system that has been most fully explored is that of theme: the theme of a clause is the initial experiential constituent, which has a special role in signaling how the current clause relates to clauses around it (Chapman and Routledge, 2009, p. 230). Theme is a textual notion, related to global text-organization strategies; e.g. dates/places in biographies, places in geographical descriptions (Fries, 1981).

Leong (2004, p. 28) says Halliday's concept of theme as an initial element in English is shared by many linguists such as Danes (1974), Downing (1991), Eggins (1994), Butt, Fahey, Feez, Spinks, and Yallop (2000), Bloor and Bloor (1995), Hassan and Fries (1995), Martin (1992 , 1995).

Here are examples illustrating theme and Rheme:

TABLE 1:
THEME-RHEME STRUCTURE

| the  duke | has given my aunt that teapot |
|---|---|
| from house to house | I wend my way |
| Theme | Rheme |

*D. Theme in Declarative Clauses*

(Halliday and Matthiessen, 2004) believe that in a declarative clause, the typical pattern is one in which theme is conflated with subject; for example, little Bo-peep has lost her sheep, where little BO-peep is both subject and theme. We shall refer to the mapping of Theme on to Subject as the **unmarked theme** of a declarative clause. The subject is the element that is chosen as theme unless there is good reason for choosing something else. Not that this adds a further explanation for the use of a thematic equative in clauses such as *you're the one that I blame for this, that's what they don't tell us*: here, the Theme is Subject, and therefore unmarked, whereas in the non-equative variants *you I blame for this, that they don't tell us, you* and *that–not being* Subject–are now marked Theme. The effect of this is to add a feature of contrastiveness which the speaker may not require (Halliday and Matthiessen, 2004, p. 73).

In everyday conversation, the item most often functioning as unmarked Theme (Subject/Theme) in a declarative clause is the first person pronoun *I*. Much of our talk consists of messages concerned with ourselves and specially with

what we think and feel. Next after that come the other personal pronouns *you, we, he, she, it, they* and the impersonal pronouns *it* and *there*. Then come other nominal group–those with a common noun or proper noun as Head–*a*nd nominalizations. Providing these are functioning as Subject, then having them as Theme is still the unmarked choice (Halliday and Matthiessen, 2004, p. 73).

A theme that is something other than the Subject in a declarative clause we shall refer to as a **marked theme**. The most usual form of marked Theme is an adverbial group, for example, *today, suddenly, somewhat distractedly* or prepositional phrase for example, *at night, in the corner, without any warning* functioning as Adjunct in the clause. Least likely to be thematic is a Complement which is a nominal group that is not functioning as Subject–something that could have been a Subject but is not as in the examples *you I blame for this, that they don*'*t tell us.* The "most marked" type of Theme in a declarative clause is thus a Complement: for example, *this responsibility* in *this responsibility we accept wholly*. This is a nominal element which being nominal has the potentiality of being Subject; and which has not been selected as Subject and which nevertheless has been made thematic (Halliday and Matthiessen, 2004, p. 73). Very broadly, there is a choice between unmarked themes (where theme and subject are the same), which typically signal continuity of some kind in the topic, and marked themes (where something other than subject, such as an adverbial adjunct, is theme), which signal that there is some kind of specific contextual pressure at work, often associated with a change of textual frame (Chapman and Routledge, 2009, p. 230).

Examples of Theme in declarative clause are shown in Table 2(as cited in Halliday and Matthiessen 2004, p.74):

TABLE 2:
EXAMPLES OF THEME IN DECLARATIVE CLAUSE

| | Function | Class | Clause example |
|---|---|---|---|
| Unmarked Theme | Subject | nominal group: pronoun as Head | I # had a little nut-tree |
| | | | she # went to the baker's |
| | | nominal group: common or proper noun as Head | a wise old owl # lived in an oak |
| | | | Marry # had a little lamb |
| Marked Theme | Adjunct | Adverbial group | Merrily # we roll along |
| | | Prepositional phrase | on Saturday night # I lost my wife |
| | Complement | Nominal group: common or proper noun as Head | Eliot # you're particularly fond of |

There is one sub-category of declarative clause that has a special thematic structure, namely the exclamative. These typically have an exclamatory WH-element as Theme as in Table 3(as cited in Halliday and Matthiessen 2004, p.74):

TABLE 3:
THEME IN EXCLAMATIVE CLAUSES

| what a self-opinioned egomaniac | that  guy is |
|---|---|
| how  dreadful | she sounds |
| Theme | Rheme |

*E. Theme in Interrogative Clauses*

The typical function of an interrogative clause is to ask a question and from the speaker's point of view asking a question is an indication that he wants to be told something. There are two main types of question: one where what the speaker wants to know is the POLARITY yes or no? e. g, *Can you keep a secret? Is anyone at home?* The other where what the speaker wants to know is the identity of some element in the content, e. g. *Who will you take as your partner? Where has my little dog gone?* In both types, the word indicating what the speaker wants to know comes first. In a yes/no interrogative, which is a question about polarity, the element that functions as Theme is the element that embodies the expression of polarity, namely the **Finite verbal operator**. It is the Finite operator in English that expresses positive or negative: *is, isn't, do, don't, can, can't, etc.* So in a yes/no interrogative, the Finite operator is put first, before the Subject. The meaning is "I want you to tell me whether or not (Halliday and Matthiessen 2004, p. 75).

In a WH-interrogative, which is a search for missing piece of information, the element that functions as Theme is the element that request this information, namely the WH-element. It is the WH-element that expresses the nature of missing piece: *who, what, who, how,* etc. So in a WH-interrogative the WH-element is put first no matter what other function it has in the mood structure of the clause, whether Subject, Adjunct, or Complement. The meaning is I want you to tell me the person, thing, time, manner, etc. Interrogative clauses, therefore embody the thematic principle in their structural make up. It is characteristics of an interrogative clause in English that one particular element comes first and the reason for this is that that element owing to the very nature of a question, has the status of a Theme. The speaker is not making an instantial choice to put this element first its occurrence in the first position is the regular pattern by which the interrogative is expressed. It has become part of the system of the language, and the explanation for this lies in the thematic significance that is attached to first position in the English clause. Interrogatives express questions the natural theme of a question is I want to be told something the answer required is either a piece of information or an indication of polarity. So the realization of interrogative mood involves selecting an element that indicates the kind of answer required and putting it at the beginning of the clause. In a WH- interrogative the Theme is constituted solely by

the WH-element: that is the group or phrase in which the WH-word occurs (Halliday and Matthiessen 2004, p. 75). Examples in Table 4(as cited in Halliday and Matthiessen 2004, p.74):

TABLE 4:
THEME IN WH-INTERROGATIVE

| who | wants a glass of cold water? |
|---|---|
| where | did you get that from? |
| how many hours | did you want? |
| Theme | Rheme |

If the WH-word is, or is part of a nominal group functioning as Complement in a prepositional phrase this nominal group may function as Theme on its own e.g. *what* in *what shall I mend it with? which house* in *which house do they live in?* In a yes/no interrogative, the picture is slightly different. Here the Theme includes the Finite operator, but since that is not an element in the experiential structure of the clause the Theme extends over the following Subject as well (Halliday and Matthiessen 2004, p. 76). Examples are given in Table 5(as cited in Halliday and Matthiessen 2004, p.76):

TABLE 5:
THEME IN YES/NO INTERROGATIVE

| has | he | got the car back by the way? |
|---|---|---|
| did | you | sleep okey? |
| shall | I | make some toast? |
| Theme (1) | Theme (2) | Rheme |

In both kinds of interrogative clause the choice of a typical unmarked thematic pattern is clearly motivated since this pattern has evolved as the means of carrying the basic message of the clause. Hence there is a strong tendency for the speaker to choose the unmarked form and not to override it by introducing a marked Theme out in front (Halliday and Matthiessen 2004, p. 76). But marked Themes do sometimes occur in interrogatives as illustrated in Table 6 (as cited in Halliday and Matthiessen 2004, p.77):

TABLE 6:
MARKED THEME IN INTERROGATIVE CLAUSES

| on the right | is it? |
|---|---|
| now about The Love Song of Alfred J. Prufrock, | what is that poem about? |
| Theme | Rheme |

*F. Theme in Imperative Clauses*

The basic message of an imperative Clause is either I want you to do something or I want us (you and me) to do something. The second type usually begin with *let's* as in *let's go home now, here, let's* is clearly the unmarked choice of Theme. But with the first type, although the *you* can be made explicit as a Theme (e. g. *you keep quiet* meaning as for you…) this is clearly a marked choice, the more typical form is simply *keep quiet* with the verb in thematic position (Halliday and Matthiessen 2004, p. 77).

In negative imperatives, such as *don't argue with me, don't let's quarrel about it,* the principle is the same as with yes/no interrogatives: the unmarked Theme is *don't* plus the following element either Subject or Predicator. Again there is a marked form with *you,* for example *don't you argue with me,* where the Theme is *don't you.* There is also a marked contrastive form of the positive such as *do take care,* where the Theme is *do* plus the predicator *take.* Examples are given in Table 7(as cited in Halliday and Matthiessen 2004, p.77):

TABLE 7:
THEME IN IMPERATIVE CLAUSES

| turn | it down |
|---|---|
| just place | a blank CD in the drive, |
| let me | send Lesley a photocopy |
| Theme | Rheme |

The imperative is the only type of clause in which the predicator (the verb) is regularly found as Theme. This is not impossible in other moods where the verb may be put in first position precisely to give it thematic status for example *forget* in *forget it I never shall* but in such clauses it is the most highly marked choice of all (Halliday and Matthiessen 2004, p. 77).

V. DATA ANALYSIS, RESULTS AND DISCUSSION

Here there are some analyzed examples from collected data in English and Persian (Theme-Rheme boundary is shown #.

TABLE 8:
THEME AND RHRME IN MEDICAL TEXTS

| | |
|---|---|
| Chronic essential hypertension | is still the most common and major risk factor for developing cardiovascular disease. |
| BP at rest | was measured three times with one-minute pause in between. |
| Theme | Rheme |

Table 9 illustrates unmarked theme in English declarative clause. The data are collected from Eivazi Ziaei, Fakhrgoo and Estakhri, (2011).

TABLE 9:
UNMARKED THEME IN ENGLISH DECLARATIVE CLAUSE

| | Function | Class | Clause example |
|---|---|---|---|
| unmarked Theme | subject | nominal group: pronoun as Head | This # includes the vasculature, the nerves, the bones, the muscles. |
| | | | It # also protects vital organs such as the heart, lungs and pelvic organs. |
| | | | It # usually spreads to lungs, bone and lymph nodes. |
| | | nominal group: common or proper noun as Head | Veins # are more abundant than arteries. |
| | | | Muller–mattheis # described the case of a 47-year-old woman with RCC and an intraoral soft tissue metastatic lesion. |

Table 10 illustrates marked theme in English declarative clause. The data are collected from Kargarfard, Ruzbehani, and Basati, (2010).

TABLE 10:
MARKED THEME IN ENGLISH DECLARATIVE CLAUSE

| | Function | Class | Clause example |
|---|---|---|---|
| marked Theme | Adjunct | adverbial group | Nowadays # several studies have indicated the positive effects of physical training in some of the physical, physiological , psychological parameters and quality of life of the patients. |
| | | prepositional phrase | For some patients # it is necessary to inject contrast agents directly into arteries or veins. |
| | | | In patients with blood pressure (BP) more than 180/100 mm Hg # the risk of developing coronary heart disease is about 5 folds higher than those with BP less than 120/80 mmHg. |

TABLE 11:
UNMARKED THEME IN PERSIAN DECLARATIVE CLAUSE

| | Function | Class | Clause example |
|---|---|---|---|
| unmarked Theme | subject | nominal group: | bimârihâye qalbiʔoruqi # ʔellate ʔasliye marg-o-mir dar sarâsare donyâ mibâšad |
| | | | Cardiovascular diseases # are the main cause of mortality all over the world. |
| | | | homorus # dârâye yek tane va do ʔentehâye barǰ esteye peroksimâl va distâl mibâšad |
| | | common or proper noun as Head | Humerus # has a trunk and two Proximal and distal protuberant ends. |
| | | | mekânisme daqiqe taʔsirâte metâbolike selulhâye Čarbiye hitrofi šode # mošaxxas našode ʔast |
| | | | The exact mechanism of the effects of hypertrophy of fat cells # has not been determined. |
| | | | tarašohe fâktorhâye ʔeltehâbiye leptin va ʔdiponectin ʔaz selulhâye Čarbiye bozorgtar # mitavânad bar metâbolisme ʔansolin va lipid moʔaser bâšad |
| | | | The secretion of inflammatory factors of leptin and adiponectin from the larger fat cells # can be effective on insulin and lipid metabolism. |

The 4 clauses in above table, describe the types of unmarked theme. All of the subjects are nominal groups: *homorus* is a proper noun and 3 other subjects are common nouns.

TABLE 12:
MARKED THEME IN PERSIAN DECLARATIVE CLAUSE (SUBJECTS ARE WRITTEN IN BOLD)

| | Function | Class | Clause example |
|---|---|---|---|
| marked Theme | Adjunct | adverbial group | baʔdhâ # **motâleʔâte ziyâdi** dar bimârâne lopusi ʔanǰ âm šod |
| | | | Later # many studies were done in patients with lupus. |
| | | prepositional phrase | bâ darmân-hâye ǰ adid # **boruze nefropâti** dar bimârân kâheš yâfte ʔast |
| | | | With new treatments # the incidence of diabetic nephropathy in patients has fallen. |
| | | | ʔaz nazare senni # bar ʔasâse ʔâzmune ti **ʔextelâfi** dar do goruh voǰ ud nadâšt |
| | | | In terms of age # there is no difference between the two groups based on the T test |
| | | | dar bâlâye qesmate qodâmiye terokeleʔa # **hofreye koronoʔid** dide mišavad |
| | | | At the top of the anterior part of trochlea # coronoid fossa is seen. |
| | Complement | nominal group: common or proper noun as Head | goruhe kontorol râ # **teʔdâde Čehel zane sâlem** bâ tašâbohe senni taškil midâd |
| | | | The control group # 40 healthy women with the same age is composed of. |

The 5 clauses in table 12, describe the types of marked themes in Persian. The first 4 themes are adjunct and the last theme is complement.

In this part, the frequency and percentage of marked and unmarked themes are presented in four tables as follows:

TABLE 13:
FREQUENCY AND PERCENTAGE OF MARKED/UN MARKED THEME IN PERSIAN AND ENGLISH

| Medical texts | | | | |
|---|---|---|---|---|
| Theme selection | Persian | | English | |
| | frequency | percentage | frequency | percentage |
| Marked theme | 88 | 17.6% | 54 | 10.8% |
| Unmarked theme | 412 | 82.4% | 446 | 89.2% |
| total | 500 | 100% | 500 | 100% |

Below is a single table illustrating the frequency and percentage of marked and unmarked themes in Persian and English from books and articles studied:

TABLE 14:
FREQUENCY AND PERCENTAGE OF MARKED/UN MARKED THEME IN BOOKS AND ARTICLES STUDIED IN PERSIAN AND ENGLISH

| Medical texts | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Theme selection | Persian | | | | English | | | |
| | *Anatomy of Bones and Joints With Anatomical Terms* book | | articles | | *Gray's Anatomy For Students* book | | articles | |
| | Fre. | Per. | Fre. | Per. | Fre. | Per. | Fre. | Per. |
| Marked theme | 41 | 16.4% | 47 | 18.8% | 19 | 7.6% | 35 | 14% |
| Unmarked theme | 209 | 83.6% | 203 | 81.2% | 231 | 92.4% | 215 | 86% |
| total | 250 | 100% | 250 | 100% | 250 | 100% | 250 | 100% |

The above presented tables yield the following results:

1. The information presented in Table 13 indicates that 17.6% of the themes are marked and 82.4% are unmarked in Persian.

2. 10.8% of the themes are marked and 89.2% are unmarked in English. Results1 and 2 illustrate that marked themes have occurred less than unmarked ones in each language by itself.

3. 17.6% of the themes in Persian are marked, while 10.8% in English are marked (see Table 13). This means that in Persian marked themes are used more than in English.

4. Table 14 reveals that16.4% of the themes are marked in the Persian book (*Anatomy of Bones and Joints with Anatomical Terms* book), while only 7.6% of themes are marked in the English book *(Gray's Anatomy For Students)*.

5. 18.8% of the themes are marked in the Persian articles, while 14% are marked in the English articles.

6. 16.4% of the themes are marked in the Persian book studied, while 18.8% are marked in the Persian articles.

7. 7.6% of themes are marked in the English book studied, while 14% are marked in the English articles. Results 3 and 4 illustrate that marked theme occurrence in the articles is much more than that in the books in each language (see Table14).

As can be observed, there is regularity among the results in both languages (Persian and English), that is to say, marked themes are used less than unmarked themes. In addition, marked themes in the books studied are used less than those in the articles. Regarding the above results, it would be possible to argue as follows:

As mentioned earlier, Halliday and Matthiessen (2004) believe that the answer to the question "which element of the clause is typically chosen as the theme" depends on the choice of mood (as cited in Halliday and Matthiessen 2004, p. 78). For instance, in a declarative clause, the nominal group functioning as subject is an unmarked theme. When some other element comes first, it constitutes a marked choice of theme. This is while Lock (1996) believes that the replacement of constituents is not the only reason to constitute a marked clause.

As a matter of fact, the replacement of clause elements does not always constitute a marked clause. In other words, the replacement in the constituent order in a clause does not necessarily lead to constructing marked clauses in Persian. Furthermore, looking at earlier studies, one will find some contradictions. Earlier investigations have revealed many counter-examples. It seems that such contradictions in results are due to different factors as follows:

a) Writing form types

Different writing forms influence this issue. One can see that in this study there are fewer marked themes in the books compared to the articles studied.

b) Authors'/writers' style differences

As Fries (1995 b) believes, theme selection patterns are closely related to style of writing. This means that writing style affects the selection of the clause theme in a text. So, different writing types (book or article writing) are due to different writing styles, even within one type of writing, such as "book writing."

In this study, the different results related to both Persian and English books show each writer has his/her own style of writing, whereas the articles have a simpler and rather the same structure.

c) Text-clause relationship

Each clause, as a unit of text, is affected by the whole text.

d) Emphasis

If we pay attention to the clauses analyzed in the present study, it is clear that some elements have been replaced because of emphasis on a certain feature; for example, in Persian (anatomy) books, in order to describe or define a part of the body, its position is the focus of attention, so the position comes first. Therefore, it may be that the feature of specialized science (here: anatomy) and as mentioned (medical) genre influence themes.

e) Contrast

Another reason may be contrast. As Lock (1996) believes, topicalization occurs sometimes in order to express contrast. In this study, in the example "for some patients, it is necessary to inject contrast agents directly into arteries or veins" the theme [for some patients] vs. [for all patients] shows contrast (see Table 10).

f) Limited corpora

One of the reasons of different results having been obtained in earlier studies is the selection of small or limited corpuses. If the corpus is limited, the results are not so valid and accurate. For the same reason, in this study 1000 clauses were examined and analyzed.

g) Language differences

Language difference is one of the important factors that affect theme markedness and it is the issue which is the focus of attention in this study. As different languages, Persian and English are compared in terms of theme markedness. Of the two, Persian exhibits a higher frequency of marked themes than English. This difference is due to the following issues:

On the one hand, Persian is a pro-drop language. Pro-droppedness is common in Persian, especially in the spoken form (and is different from scrambling and topicalization in Persian). So, such an omission and replacement of clause elements never constitutes a marked clause. On the other hand, Persian is not a language of fixed word order, but English is. The English language is believed to possess a fixed word order, since the positions of subject, verb, and object are relatively fixed (Quirk et al., 1985). English does indeed place strict limitations on the ordering of clause elements, while the replacement of the constituents in Persian is more possible and relatively free. The free word order enables the speaker to choose the order he/she prefers for communicative purposes. This implies a wider range of elements available for the first position (as cited in Quirk et al., 1985).

Although, according to Halliday's functional theory, the replacement of elements within the clause in English constitutes a marked theme, and the results of the present study have been obtained according to SFG, in languages such as Persian, which do not have fixed/rigid word order, the movements of the elements are more common than in those of fixed/rigid word order. Therefore, such a usual replacement does not necessarily constitute marked themes. The word order in Persian is SOV (subject, object, verb) and in English it is SVO (subject, verb, object). They are the same with respect to the subject position and both constitute unmarked themes in this position. But constituents such as PP (prepositional phrase) and AP (adverbial phrase) with functions of adjunct that are proposed in Persian have a relatively smaller degree of markedness compared to those in English.

The results of comparison based on SFG indicate that marked themes are more numerous in Persian than in English. The fact is that most of the clauses specified as marked based on SFG had circumstantial adjuncts in the subject position. These adjuncts in the subject position are common and sound unmarked to Persian speakers, since the intuition of a native speaker simply confirms them as unmarked. Such clauses are those that have the following conditions:

1. The clause has a long subject;

2. The circumstantial adjunct is lengthened by a relative clause in the subject position;

and

3. There is semantic/syntactic integration between the subject and its relevant constituent.

Many examples within the corpus of this research, which have been determined as marked, seem unmarked with circumstantial adjuncts: themes as follows (subjects are written in bold).

TABLE 15:
THEME AS ADJUNCT WITH A LONG SUBJECT IN THE CLAUSE IN PERSIAN

| Dar ʔiǰ âde nefropâtiye diyabeti | **naqse Ženetiki sen porfešâriye xun kontorole nâkâfiye qand neŽâd Čâqi va kešidane sigâr** naqše mohemmi ʔifa mikonad. |
|---|---|
| In creating diabetic nephropathy | **genetic defect, age, hypertension, inadequate blood sugar control, race, obesity and smoking** plays an important role. |
| Class: prepositional phrase Function: adjunct | Rheme |
| Theme | |

TABLE 16:
THEME AS A LONG ADJUNCT WITH A RELATIVE CLAUSE IN PERSIAN

| dar motâle ʔeyi ke dar tâyvân bar ruye bimârâne bâ diâbete tipe do ʔanǰ âm šod | **sathe ʔasid ʔurike serom** ʔrtebâte mostaqim bâ mizâne dafʔe ʔâlbomine ʔdrâr dâšt |
|---|---|
| In a study done in Taiwan on patients with diabetes type II | **serum uric acid level** was directly related to the amount of urinary albumin excretion |
| Class: prepositional phrase Function: adjunct | Rheme |
| Theme | |

TABLE 17:
THEME AS ADJUNCT WITH SEMANTIC/SYNTACTIC INTEGRATION BETWEEN THE SUBJECT AND ITS REELEVANT
CONSTITUENT IN PERSIAN

| dar motâle ʔeye ʔânâtomi | **badan** be se baxše sar-o-gardan tane va ʔndâmhâ taqsim mišavad |
|---|---|
| In the study of anatomy | **body** is divided into head and neck, trunk and limbs. |
| Class: prepositional phrase Function: adjunct | Rheme |
| Theme | |

In the above clauses, if subjects come first, they will sound marked. This study thus indicates that the unmarked theme in Persian declarative clauses is not restricted just to the subject in subject position. This can be shown by the following figure:
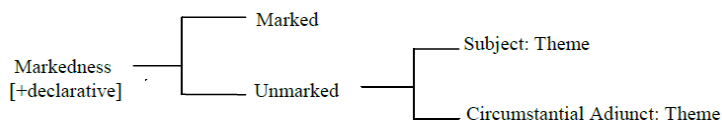


Figure 1:Unmarked Theme Selection in Relation to Mood (Declarative) in Persian

Therefore, it is better to regard such clauses and themes as unmarked from now on.

Downing believe 'Circumstantial adjuncts are easily moved to first position in the sentence because they are not semantically or syntactically integrated into the clause structure, they are not topics' (as cited in Downing, 1992).

## VI. CONCLUSION

The purpose of the present article was to make a comparative study of theme markedness in Persian and English medical texts. It aimed to determine the similarities and differences of Persian and English with regard to markedness. The corpus contained Persian and English written texts. This study revealed that the properties of being pro-drop and having non-fixed word order distinguish Persian from English regarding the notion of theme markedness, in medical texts. It also indicated that Persian does not completely conform to the concept of Halliday's theory with regard to markedness. In Persian medical texts, many circumstantial adjuncts in the subject position sound unmarked to Persian native speakers. Clauses which have such adjuncts are those that have the following conditions: the clause has a long subject; the circumstantial adjunct is lengthened by a relative clause in the subject position; and there is semantic/syntactic integration between the subject and its relevant constituent. We can now claim that theme markedness is a relative notion (not absolute) and is affected by language differences. In other words, it is language-specific. In addition to language differences, theme markedness is closely related to some factors such as specific genre, authors'/writers' style differences, writing form types, text-clause relationship, emphasis, and contrast. Since the above mentioned factors in Persian and English effect theme markedness, they are regarded as their similarities while language structure refers to their differences (as cited in Kazemi & Afrashi, 2012). Finally, it is necessary to say that theme markedness still needs further studies in the future.

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