



**International
Journal of Society, Culture & Language
IJSCL**

Journal homepage: www.ij scl.net
ISSN 2323-2210 (online)

An Investigation of the Linguistic, Paralinguistic and Sociocultural Effects of Input on the Perception and Translation of Gerunds by Persian Speakers of English

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ARTICLE HISTORY:

Received October 2013
Received in revised form January 2014
Accepted January 2014
Available online January 2014

KEY WORDS:

Gerund
Perception
Linguistic manipulation
Paralinguistic manipulation
Worldwide

Abstract

In this study, it was intended to investigate the Persian native speakers' perception of gerunds by three different elicitation techniques i.e., written, audio, and pictorial through translation. Eighty intermediate learners of English were asked to select Persian translation of the gerund forms in these elicitation techniques. They were asked to choose one option from a pair of written first language renditions, where one option represented the gerunds as a noun-like entity and the other was a verb-like rendition of the gerunds for each elicitation technique, namely, a pictorial, audio, and written input. Regarding the general tendency in the perception of gerunds, the results demonstrated that Iranian learners generally perceive it as a form that still enjoys its verb-bearing (i.e., dynamic nature). It can be concluded that not only does worldview have impact on conceptualization, but also effects can be traced in linguistic realizations of concepts.

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1. Introduction

The ample research on linguistic relativity has been primarily targeting at impacts of particular languages on nonlinguistic cognition. This represents a long tradition in which anthropologists, psychologists, and linguists have sought to relate grammatical and semantic systems of a language to the worldview or epistemology or culture of the community of speakers of the language (Slobin, 2003). A rather different approach to “cognition” is provided by investigators who concern themselves with language use and cultural practice (Gumperz & Levinson, 1996).

Slobin (2003) highlights the effect of situation and language use on the cognition in online communication by considering the speakers’ continuous involvement in preparing, producing, and interpreting verbal messages. Accordingly, any research on linguistic relativity, he believes, is deficient without attention to the cognitive processes that are brought to bear, online, in the course of communication. Modularizing these cognitive processes, Levelt (1989, as cited in Carrol, 2008) in his production model, for instance, maintains that the “Conceptualizer” sends a “preverbal message” to the “Formulator.”, and the reverse takes place in the comprehension phase. Looking at the cognitive processes in the interlanguage rather than intralanguage communication, Levelt (1989, as cited in Carrol, 2008) considers semantic differences between languages in this model as follows:

A final issue to be raised is whether messages must, to some degree, be tuned to the target language. Will a message for an English Formulator have to differ from one that is fed into a Dutch Formulator, merely because of language-specific requirements? The answer ... is positive: Using a particular language requires the speaker to think of particular conceptual features (Levelt, 1989, p. 71).

In other words, both production and comprehension processes contain two distinct phases: lexical choice and syntactic realization, or mapping. Almost any content can be formulated in a number of different ways. These variants of saying the same thing in other words may differ lexically,

syntactically, stylistically, or, to a certain degree, even semantically (e.g., by a slight change of focus that may be irrelevant in most contexts). Sometimes, there are pragmatic reasons for repeating certain content in other words, i.e., paraphrasing it. Since the syntactic part of generation largely depends on the syntactic properties of the words involved, it is the phase of lexical choice that carries most of the responsibility for the resulting text.

Slobin (2003) has proposed that thinking-for-speaking research, and with an extension, thinking-for-translation should have the following characteristics:

1. a *selection of languages* and a *semantic domain* that is encoded with some frequency in all of the languages;
2. the semantic domain is encoded by *special grammatical constructions or obligatory lexical selections* in at least some of the languages under comparison;
3. the domain is relatively *more codable* in some of the languages to be compared;
4. a selection of *discourse situations* in which the semantic domain is regularly accessed (emphasis is ours).

What is intended in this study is not to challenge the views stated above, but rather to highlight their applicability with regard to the learners’ perception of syntactic forms of the target language and their realization in the source language. To this end, we chose to analyze the Persian native speakers’ perception of English gerunds by three elicitation techniques, that is, written, audio, and pictorial input sources. Following Slobin’s (2003) characterizations of thinking-for-speaking, we propose that point 2 narrows down the scope of the present study in that the *gerund form* was chosen as the locus of the study. In addition, the semantic domain was restricted by the contention that the –ing form can variably have either verb-like or noun-like connotation in different languages. Furthermore, the obligatory situations stated in point 2 were controlled by the different elicitation techniques, and different combinations (or frames) in which the gerund form appears; namely, the existence or lack of complements, types of verbs in terms of transitivity or intransitivity. The codability of the domain (point 3) was accomplished by

means of the options provided by the authors in the tests, and the instructions dictating what to do and how to choose the translation alternatives learners deemed more natural in their native language.

The decision to study this form is based on several reasons. First, studies of gerunds in second language acquisition (SLA) research are few and far between. Rather, most research tends to focus on the definite/indefinite articles, third person-singular subject-verb agreement, tense shift, and modality (Schwartz & Causarano, 2007). Additionally, we want to look specifically at native Iranian speakers' perception of gerunds in English because, as it has been pointed out by seven reputed university professors of Persian language and literature, their perception of the gerunds is exceptionally inclined toward dynamic status (verb-like) rather than stative status (noun-like). It has also been documented that speakers of certain languages show a tendency for noun-like translation for gerunds, whereas others opt for verb-like rendition (White 2003; Wood 1961). For example, native speakers of English perceive gerunds as a noun (Dirven, 1989; Langacker, 1991, 1998). Last but not least, pedagogically speaking, teaching gerunds is often cited as one of the most difficult constructions for language teachers and as a result can often be very difficult for learners to sort out (Petrovitz, 2001).

Since the access to the mental state and processes has not yet been possible, albeit plausible, the observable data such as translation, grammatical judgment, and think-aloud techniques, among other methods, are the available means that can guide us to figure out what goes on in the mind. Experimentally, the literature indicates that input perceived through different sources has different effects on a variety of aspects like the speakers' identification differences, recognition of items, and language production (Doughty, 2002; Eimer et al., 1996; Krashen, 1985). Therefore, putting the idea of syntactic perception, specifically gerunds perception, to the test of different input sources, that is, visual, audio, and written, can be quite appealing to investigate. Accordingly, a number of hypotheses are put forward for this phenomenon:

H₁: The type and the length of complements following the gerund form do not affect the way learners translate it into their first language (L1).

H₂: Different positions of gerunds in the sentence, i.e., subject, object of verb, and object of preposition, do not impose different perceptual configurations.

H₃: Different input sources (visual, audio, and written words) do not influence the learners' perception of gerunds differently.

The aim of this study, therefore, is to see how nonnative speakers perceive L2 gerund form and in this way fulfills the descriptive adequacy. In addition, another motivation is to see why this difference exists in an attempt to provide evidence for the explanatory adequacy.

2. Theoretical Framework

Little is known about the language-thought interaction (Fulga, 2012). Some theories of language and cognition have suggested that the human mind incorporates universals that constitute the realm from which languages select what will be encoded into their lexical and grammatical inventory. From that perspective, a language learner has to map the sounds in the language onto the pre-linguistic concepts present in the mind. This approach is known as the "universalist" view of language. The interface between meaning and form has been the hub of attention in the Chomskyan tradition in the past decades. Chomsky (1993) proposed a 'computational system' which acts as a mediatory pond where it turns forms received from input into meanings, or say concepts, and, on the other hand, meanings in the shape of concepts in the mind into linguistic forms realized as output. Though this system can be claimed to be universal to human languages, what Chomsky has always been trying to establish since the 1980s, by no means precludes the possible variations across languages (again what Chomsky has termed parameters). In fact, the way in which a linguistic form is subliminally conceptualized can be different from one language to another, regardless of the fact that the results yielded can be the same or different (Lucy, 1997; Reuland, 1983).

Earlier, an opposing view was expressed by Whorf (1956). Drawing on Jung and Gustav's

(1979) taxonomy of psychic functions (sensation, feeling, thinking, and intuition), Brown (2006) asserts that Whorf viewed thinking as a function which is to a large extent linguistic, and called this “the linguistic relativity principle”. The principle suggests that the grammars of different languages refer their speakers to different kinds of linguistic observations, which will in turn lead to different views of the world. In Whorf’s view, language does not determine thought, but mediates it. Thinking itself represents only one of the psychic functions, so it does not influence perception in general, but only the part of it that is mediated by language. A moderate view was expressed by Slobin (1991, 1996) who proposed that language may influence thought during “thinking for speaking”. In other words, it is possible that language-specific grammatical, syntactic, and semantic requirements determine the online distribution of attention (Papafragou, Hulbert, & Trueswell, 2008). That would imply that there are differences in the early allocation of attention across speakers of different languages just before they prepare to describe events. This latter view was also upheld by Landau, Dessalegn, and Goldberg (2009), who suggested that language regulates non-linguistic representations during a specific task, but does not operate permanent changes in cognitive representations. Although views on the language-thought interaction are divided, there seems to be a general agreement among researchers that language influences thought, though it is not clear whether this influence is temporary, as in “thinking for speaking,” or permanent (Fulga, 2012). It may also be that language has an effect on our understanding of only some concepts. L1 affects the speakers’ perception and conceptualization of motion, space, and time for instance (Ungerer & Schmid, 2006).

Motivated by these parametrical variations at the level of conceptualization, unlike Chomskyan pursuit of linguistic parametrical variations, it is observed that nonnative speakers realize certain concepts, stated in the L2, through different forms in their own mother tongue. One such concept reformulation that might distinguish languages and by which the possible thought-interaction can be explored is the concept of the

dynamicity expressed through a typical form, i.e., the *gerund form*.

The gerund is a form which is made up of verbs assuming -ing, but which in English functions as a noun and mostly occupies the noun positions in the sentence. It is generally believed that native speakers of English perceive this form as a noun entity which loses its verbal nature. This is evident in German (Lyons, 1981). It should be noted that in the literature on perception, the -ing form is interpreted as having a participial and a gerundial interpretation with physical and cognitive perception respectively (Castejon, 2003). In *I see my father diving into the sea*, the speaker places the emphasis only on part of the diving process, so it could be claimed that it is quite concrete. In *I remember my father diving* the main clause subject conceptualizes only the internal configuration of the complement event, which occurs at the moment of remembering (Hamawand, 2002). However, gerunds are not appreciated as nouns per se by speakers of other languages. For example, the Spanish learners of English perceive gerunds as forms that still enjoy their verbal features (Schwartz & Causarano, 2007). On the other hand, learners settle on the nature of gerunds on the bases of the verbs that have turned into gerunds, i.e., the type of verbs. From this perspective, verbs have traditionally been categorized into dynamic verbs and stative verbs (Crystal, 2008). Dynamic verbs are those that by nature denote some sense of motion and movement, while stative verbs do not imply any motion but refer to mental processes on the part of the doer or the agent. Therefore, with regard to gerunds, depending on which verb type is chosen, the speakers might conceptualize different meanings in their minds. Sometimes, deciding which extreme a verb falls in is quite perplexing. The verb ‘watch’, for instance, although has no motion or movement, is a dynamic verb. Thus the criterion should not be only the stative nature of the verbs which characterizes them as either dynamic or stative. We propose that the distinction between these two categories be best understood as the degree of abstractness of the verbs. The more abstract the verb is, the more inclination to include it in the stative scale, and the more tangible the verb, the more the preference to attribute it a token of dynamic verb. In what follows, a number of

studies dealing with the use gerunds form are represented.

Investigating the forms following the perception verbs (e.g., see, hear, find, etc.), Castejon (2003) maintains that English physical perception verbs can appear followed by an NP (Noun Phrase) and an -ing form. In the literature, these two constituents are generally assumed to represent two separate elements. However, based on semantic, syntactic, and thematic evidence, and analyzing the following four parameters: i) the semantics of the "NP + -ing form"; ii) its function with respect to the main verb; iii) the argument structure of perception verbs; and iv) the relationship between verbs of physical and cognitive perception, Castejon claims that an alternative interpretation is also possible: The "NP + -ing form" can be considered as a single constituent (2007, p. 43). What is seemingly unstated in this study is that whether the -ing form per se is an independent element or only attains its meaning because of the preceding NP constituent. Another consideration is weak insinuation to determine whether it is the effect of the perception verb or the NP preceding the -ing form that assigns the dynamicity of the gerund, as the following examples illustrate:

Example (1): I saw Peter talking on his cell phone.

Example (2): I found the faucet dripping.

In example 1, it is the duration of the action (seeing) that leads to the choice of a gerund form after the NP, while the speaker could have said the same sentence as "I saw Peter talk on his cell phone", when he/she has only spotted Peter on the phone. On the contrary, the determinant factor in choosing a gerund form in example 2 is not the verb (find) but the faucet itself that obliges the speaker to formulate the sentence as it is.

In a study by Farrokh and Mahmoodzadeh (2012), the correlation between Iranian English learners' receptive and productive knowledge of English grammatical collocations of gerunds at two different proficiency levels (high and low) was investigated based on Benson, Benson, and Ilson's (1986) category of grammatical collocations. It was shown that there was a significant correlation between students'

receptive and productive knowledge of English grammatical collocations of gerunds.

A number of criticisms can be leveled at this study. First, it looks rather a simplistic conception to equate production and perception in cognitive tradition (Carrol, 2008; Steinberg & Sciarini, 2006). In addition, correlational studies, though quite convincing on the surface, should be supported by hard evidence and generalization based on these studies should be done with paramount caution. The authors have endeavored to make claims that different learners have various capabilities in production and perception of gerunds that are correlated with their proficiency level without expounding the issue or demonstration. One more thing is the small number of subjects (two groups, 35 subjects each) participating the study, which is possibly a crucial factor in such studies. Finally, Cobb (2000) and Lewis (2000) claim that all collocations are of an arbitrary nature and there is no logic underlying them. They maintain that this arbitrariness, which is more noticeable in the case of grammatical collocations, certainly creates problem for those who are not native speakers of English. Learners who are not aware of these conventions may produce unacceptable combinations. This position lends support to the idea that not knowing a convention might impede production but it is by no means an obstacle to perception.

In another study of English grammatical collocations of gerunds and their translations in Azeri (a Turkish sister language spoken mainly in the Republic of Azerbaijan and northwest of Iran), Farrokh (2013) asserted that grammatical collocations pose problems in translation between the very different languages like English and Azeri which belong to different language families and their grammatical structures are quite different. In her corpus-based study to find out the closest equivalent of English grammatical collocations of gerunds in Azeri, based on Benson et al.'s (1986) classification of grammatical collocations of gerunds: verb + verb-ing; verb (transitive) + object + verb-ing; and verb (transitive) + possessive + gerunds, she found that gerunds were mainly translated as infinitive in Azeri. Moreover, verb + v-ing, translated as "infinitive + verb", verb

(transitive) + object + verb-ing used as “object + infinitive + verb (transitive)” and the closest equivalent for grammatical collocation of verb (transitive) + possessive + gerunds, is “possessive+ infinitive+ verb(transitive)”.

Corpus-based studies are increasingly gaining momentum in the field of language studies; however, this trend is more in line with language in use studies, but not with cognitive tradition where normally obligatory situations elicit definite structures under controlled conditions. Besides, in Farrokh (2013), the study is based on corpus of Azeri translation of 70 sentences involving this grammatical collocation. A corpus of this size is far from being a powerful foothold to make claims.

Regarding the translation of gerunds from English into Persian, possible variations, similar to those in Azeri translations of English gerunds mentioned in the reviewed studies, might be ascribed to a number of reasons ranging from the learners’ worldview, to the L1 acquisitional influences, to the type and position of the gerunds, the kind of the verb calling for a gerunds complement, and to the length and relationship of the complements following the gerunds, to name but a few.

3. Methodology

3.1. Participants

Eighty learners studying English as a foreign language (61 females and 19 males) majoring English translation at southern universities of Khorramshahr and Abadan Payame-Noor Universities in Iran, with the age range of 20 to 38 years old, took part in this study. All these learners had already passed 60 credit-hour English courses such as reading, listening/speaking, grammar, writing, general reading skills, etc. in their field. They were sophomore students in their fourth academic term. To secure homogeneity, the researchers practiced enough caution to randomly select from among those learners whose annual average score ranged from 17 upward (the maximum is 20) before the final number was selected. This was carried out as an additional measure to control other obtrusive factors; heterogeneity among learners due to their proficiency level. Carrol (2008) states that in cognitive studies general proficiency level is not as critical as age and attentiveness factors

as far as the learners all have been exposed and familiarized with the target form. The learners were primarily motivated to partake in this study because they had a course of translation of simple prose 1 as their first academic course in translation in their current term. This means that they were in their initial steps to advanced translation. This would seemingly account for their complete involvement in the course of the study as well.

3.2. Instruments

As stated in Section 2, one of the best means to access the learners’ linguistic perception is translation (Baker, 1992; Farrokh, 2013). In this study, the learners were asked to choose one option from a pair of written first language ones where one option represented the gerunds as a noun-like entity and the other was a verb-like rendition of the gerunds for each situation through three elicitation techniques; namely, translation following a pictorial, audio, and written input. It is noteworthy to mention that both options are acceptable in Persian (this was substantiated by oral confirmations of seven Persian language and literature university professors), but the main aim was to see to which option the learners would show more inclination. Three different sets of fifteen situations for each elicitation technique were utilized at an interval of six days in-between. The rationale behind applying these techniques of elicitation was that each type of elicitation technique would construe different cognitive process, thus different perceptual requirements on the part of the learners (Steinberg & Sciarini, 2006). The situations contained gerunds in different positions (subject, object of verb, or object of preposition), with various complements (noun phrase, preposition phrase adverbial phrase, verb phrase, or adjective phrase) and at various lengths of complement following the gerunds.

3.3. Procedures

From among the 102 learners volunteering for this study, eighty learners whose annual average score ranged from 17 to 20 (as for Iranian universities 20 is the highest score) were chosen for the purpose of the study. The learners enjoyed the qualifications set forth by the researchers, i.e., passing at least 60 credit hours out of the 140 required academic credit hours. The learners were in two classes held at

two Iranian southern universities. All the 102 learners participated in the study but only the eighty qualified learners' answers were taken into account. Obviously, these learners had already been exposed to the intended form in their high school as well as their earlier university semesters. The study took place in the 'Translation of Simple Prose 1' class where the learners experienced their first course in translation. The two classes met once a week. The researchers administered the three elicitation techniques as class activities in three class sessions during three weeks. This was to ensure that the learners would not know the researchers' intention, thus, alleviating the effect of the presence of the researchers as instructors on the learners' choices on the tests.

In the first session, the learners were given a set of fifteen written English sentences, each followed by two Persian translations where they were asked to choose one option. We should note that some learners inquired whether they could choose both options as correct answers, but they were instructed that they had to choose the option they favored more, and that is different from being a correct option. It is also important to note that the options were not sequenced alike for all the questions. The verb-like translation of the gerunds was placed in option (a) and sometimes occurred in option (b) to avoid straight easily-guessed-at answers from the alternatives. In the second class session, the learners were shown fifteen pictures, each accompanied by a gerund written below the picture as a prompt and followed by two written Persian sentences containing a gerunds translation (one noun-like and the other verb-like). The learners were asked again to choose the option they deemed more appropriate. In the final phase of the study, the learners were asked to choose options after listening to fifteen sentences each containing the intended form. The audios contained sentences read out with enunciation by one of the researchers. To avoid the practice effect, the situations eliciting learners' responses were different but

equivalent, and time interval was also taken into account. Finally, the answers were tallied and the percentage of the learners' performance on each elicitation technique was calculated. As Ellis (2008) states, think-aloud, introspective, and retrospective reports are the suitable methods to delve into the process of the learners' mind. In our study, ten participants were interviewed through unstructured interviews after the elicitation phases as retrospective measure to detect reasons why learners performed as they did in this study. Finally, the general tendency of the Iranian learners to the translation of gerunds was illustrated and discussed within a broader perspective. To investigate the possible effect of different positions of gerunds in the sentence, i.e., subject, object of verb, and object of preposition on the participants' perceptual configurations, the researchers placed the gerund form in the written and audio tests in these positions.

4. Results

4.1. Data Analysis

This study set out to examine whether the Iranian EFL learners perceive gerunds forms as dynamic (verb-like) or stative (noun-like). This was done through three elicitation techniques (written, audio, and pictorial) accompanied by Persian translations. As Table 1 shows, in terms of the first elicitation technique, i.e., written sentences, the participants' tendency for verb-like (dynamic) translation of gerund forms was considerably higher than their tendency for the noun-like (stative) translation. With regard to the second technique, the audio elicitation, it was found that most of the participants were more inclined to translate the gerunds into Persian verb-like renditions, while there were some participants who tended to translate the intended form into noun-like. In the third elicitation technique, the pictorial elicitation, again most of the participants translated the gerunds as verb-like and only a very small number of participants translated gerunds as noun-like entities.

Table 1*The Percentage of Persian Translation of Gerunds through Three Elicitation Techniques*

Elicitation Techniques					
Written		Audio		Pictorial	
verb-like	noun-like	verb-like	noun-like	verb-like	noun-like
91%	9%	78%	22%	96%	4%

Regarding the general tendency in the perception of gerunds, these results demonstrated that Iranian learners *generally* perceive it as form that still enjoys its *verb-bearing* (i.e., dynamic nature). These results are compatible with the results of previous studies (White, 2003; Wood, 1961) where it was found that speakers of other languages perceive gerunds as verb-like entity, too.

Although this study shares common grounds with the existing literature in that these differences or similarities make no exceptions concerning the interplay between thought and language, what makes this study distinguished from similar studies is that it tries to see, in detail, whether certain linguistic and paralinguistic manipulations on the input (stated in the hypotheses) have any impact on the perception of gerunds, thus the worldview, and whether it lends any support to the claim made under the moderate version of linguistic relativism.

4.2. Linguistic and Non-Linguistic Considerations

4.2.1. The Effect of Linguistic Manipulation on the Perception of Gerunds

There were a number of linguistic observations made in the present study. First, the analyses showed that different positions of gerunds in the sentence would probably affect the learners' perception of gerunds and thus its translation into their L1. In this study, gerunds in the subject and object of verb positions were perceived more as verb-like, whereas in the position of object of preposition it was most often taken as a noun-like entity. Second, it was found that the length of the gerundial phrase has also an effect on the learners' perception. That is, the (in)transitivity of the verb used as gerunds plays a key role in this regard; when the gerund is an intransitive one, where it calls for no accusative element, the learners tended to translate it as noun-like, and

the transitive gerunds form, that is followed by complements, was mostly translated as verb-like. It can be claimed that the lengthier the gerunds phrase, the more inclination the learners showed to translate it as verb-like.

Furthermore, the types of the complements following the gerunds can influence the learners' translation. In other words, when the gerund is followed by a noun phrase, adverbial phrase, preposition phrase, or a combination of phrases, learners would translate the gerunds differently. Precisely, in cases where the complement was a noun phrase or adverbial phrase, the learners would translate the gerunds into verb-like rendition, and a gerund with a prepositional phrase complement would more often be translated as a noun-like entity. Therefore, the null hypotheses 1 and 2 are rejected.

4.2.2. The Effect of Paralinguistic Manipulation on the Perception of Gerunds

As the results indicate, different techniques of elicitation also had an integral influence on the learners' perception. In this way hypothesis 3 was rejected, too. Presenting the audio situations to learners was particularly of interest in this study. Most occurrences of noun-like translations pertained to this technique. One possible explanation for this would be that depriving learners of visual stimuli and relying on mere audio stimuli has an indispensable effect on human beings' perception. The possible justification here is that since learners are nonnative to the target language, they need more processing time to first check whether they have heard the audio stimuli correctly and then embark on the perceptive aspect of the input. This does not take place when learners view the written or pictorial input. Foreign language learners normally experience a sense of anxiety when asked to answer listening questions of any kind (Ferris, 1998; Jordan, 2002; Mulligan & Kirkpatrick, 2000). In the retrospective reports

(interviews carried out after the elicitation phases), learners maintained that due to the inherent anxiety attached to listening skill, they were obliged to concentrate more on the content than form, and thus making quick haunches on the perceived element. To endorse the learners' claim regarding this fact, a number of equivalent situations to those audio situations were devised and the learners were asked to translate them using the other two elicitation techniques. The results obtained at this stage showed that the learners' inclination was toward the verb-like translation. This verified the fact that learners tended to translate the audio situations more into noun-like entities because of the anxiety they experienced in the audio technique. Our technical elucidation is that the low time-constraint and the low processing burden would decrease the level of anxiety on the part of the learners, and consequently giving them the chance to reflect on both content and form simultaneously.

5. Discussion

The results obtained in this study are not intended to find solutions or complicate one of the most controversial issues in linguistics and cognitive studies. They need to be considered either in support of or opposition to the flow of the current traditions already debating it. Our findings are compatible with Fulga's (2012), who contends that differences between native and nonnative speakers operate not only at structural, but also at conceptual levels, at least in the case of abstract and metaphorical thought. The relationship between language and thought, including the possibility either that the relationship might be mediated by culture or that the relationship itself might mediate the relationship of either language or thought to culture, has provided a rich topic for anthropological, linguistic, and psychological investigation. Our results also concur with Papafragou et al. (2008) claim that language-specific grammatical, syntactic and semantic requirements determine the online distribution of attention. As it was seen in this study, different positions and modalities in which the gerund form appeared clearly affected the perception and translation of this form into Persian.

The result, one might think, is that language and thought are just different things, with little direct interaction. But in fact many aspects of the question remain open. First, there are attempts to defend a weakened version of the Sapir-Whorf hypothesis; their goal is to show that speakers of different languages think in different ways *in a particular domain*, and that furthermore this difference in thought is *caused* by a difference in language. For instance, individuals that speak different languages may use different frames of reference to situate objects in tasks of spatial reasoning. Second, there are also attempts to show that some *universal* property of language determines some universal property of thought. For instance, as D'Andrade (1995) and Greenberg (1968) believe, children manage to represent false beliefs only when (and only *because*) they have mastered the linguistic form of the embedded proposition (a proposition is *embedded* if it is contained in another proposition. Thus, in the bare sentence 'It is raining', *it is raining* is not embedded; but in 'John thinks that it is raining', *it is raining* is embedded).

It is helpful to distinguish the following terms at this stage. According to Steinberg and Sciarini (2006), "thought" refers in a general way to human mental activity and to the conceptual products of that activity; thought can be organized in systems that are shared, but the activity itself is individual. "Cognition" refers to particular systems of thought, where language can be seen as one such system. The relationship one sees between language and thought depends on whether one sees language as a special, autonomous mental system vs. as a particular product of general cognitive functioning (or as some mix of the two). In the former case the issue becomes the degree to which language directly shapes nonlinguistic thought. In the latter case language forms only a subset of thought. Important issues concern the degree to which language is seen as innate vs. learned, the manner of its learning, the role of social construction and pragmatic experience in its learning. The scholars most responsible for our questions concerning the language/thought relationship are Whorf and Sapir; much research has flowed from the "Whorfian Hypothesis" that language shapes thought including our perceptions of "reality". Important research issues include the social

nature of language, the degree to which language is understood as deeply embedded in the individual psyche vs. a more surface tool available for use as knowledge allows and the situation suggests, and what exactly can we deduce about the thought (including cultural or collective thought) of others from language. What was seen in this study strongly supported the linguistic 'worldview' perspective.

An understanding of language as 'open, dynamic, energetic, constantly evolving, and personal' (Shohamy, 2007) encompasses the rich complexities of communication. This understanding of language sees a language not simply as a body of knowledge to be learnt but as a social practice in which to participate (Kramsch, 2004). Language is something that people do in their daily lives and something they use to express, create, and interpret meanings and to establish and maintain social and interpersonal relationships. What is evident is that Iranians perceive gerund as verb-like entity rather than noun-like and the elicitation methods applied did not have any significant effect on this perception. This perception is something that is embedded in their inner understanding of their first language and the cognitive basis it has defined for them. The thing we define and know as worldview, not important how it would be defined, is the most influential factor specifying the existent variations in the syntactic, semantic and the sociolinguistic aspects of language. What we call as cultural, social, and totally cognitive differences draws a lot on the specific and unique interaction between languages and thought evolved and flourished as a specific worldview for native speakers of specific language.

All in all, the implication is that in translating a second language form cognitive frames are only apparent through the interplay between worldview and actual language use. In other words, when one wants to translate a specific linguistic form, one indispensably has to bear in mind the cultural subtleties and connotations of that form that are interwoven with the language categories and systems a speaker carries over. Otherwise, the outcome of the translation would be devoid of the authenticity and naturalness. Studies of mental processes of this ilk in conjunction with sociocultural tints are not without

limitations. For one thing, the mere reliance on translational techniques to explore a complicated philosophical question can marginalize the generalizability of the findings of the study. Another pitfall relates to the fact that the equivalence of the situations in the three modalities of the data elicitation was a matter of consensus among the authors; therefore, practically, this would constitute a degree of impreciseness at the data analysis phase.

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