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Investigating Covert and Overt Errors Using Machine Translation according to House's (2015) TQA Model within Academic Context

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Abstract

The current study investigated Persian-English translations conducted by a human translator and a machine translator. The researchers employed House's Translation Quality Assessment (TQA) model to evaluate the differences between the two translated works. Accordingly, they had the Persian texts translated by a human translator and Google Machine Translator (GMT). The translation quality, error recognition, and mismatches of the two translations were subsequently analyzed. The results showed a one-to-one match between the source and target texts regarding the human translator's work. Furthermore, the results revealed both overt and covert errors when comparing the human and machine translators. The error analysis results also suggested that the quality of the output provided by the GMT can cause misunderstanding in the meaning. Academic texts could mean different in various contexts. Hence, it is necessary to consider human interferences when dealing with the genre of the academic text.

Keywords: Errors; Google Machine Translate (GMT); Text; Translation Quality Assessment (TQA)

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INTRODUCTION

Through the influence of technology over science enhancement, the application of online resources in various fields and knowledge generation is turned into the primary goal of education and training activities. This might lead the learners of the fields to become experts who could suitably handle the related professions. Various fields of study may enjoy online resources differently according to their needs and objectives. In this respect, an academic field that enjoys the benefits of such resources is translation studies. The reason for such a claim could be the high potential of translation studies in applying online resources both in its academic and professional perspectives.

On the other hand, the availability of online resources that act as aiding instruments to the translators makes the researchers consider the efficiency of such tools in academic contexts. Currently, Google Machine Translate (GMT), available through the Web, is the most reputable provider of such resources to translation. According to the experts of GMT, the machine is basically based on Machine Translation algorithm (MT) aiming at integrating statistical MT into sub-systems via correlating existing translations and enhancement of self-learning via the vast databases of words from various text types to compute the needed probabilities of translations. The machine is fundamentally based on the law of probability which serves as the GMT working procedure (Schulz, 2013). Accordingly, Target Texts (TTs) delivered to the addressees by Google translate is solely the result of 'probabilities of translation' with the significant numbers of overt and covert errors in translation. In this respect, the quality of translation produced in TTs by the machine might not be exploitable in many languages compared to translations provided bv professional (human) translators (Helft, 2010). The issue becomes even more prominent when the discussion is concentrated on the quality of translation in translating from Persian into English as the two different languages in terms of linguistic and cultural aspects. Thus, such a TT from a machine needs to be assessed in terms of quality for which a specific Translation Quality Model (TQA) is needed, specifically when the research is dealing with artificial intelligence without the presence of human translation. As a result, it is essential to consider the quality of produced translations via such machines by analysing the errors in the Target Texts (TTs). Since the concept of errors is basically relied on Translation Quality Assessment (TQA), the quality of produced translation by GMT through error analysis becomes the research topic.

Thus, the study's significance is revealed through the ever-increasing demands and interests of the students and translators to use GMT as an online instrument for translation activities. Also, due to the limited number of studies on the assessment of Persian-English translations produced by GMT, the current study seeks to consider the efficiency of GMT's output and understand more about the types of errors resulting from such a kind MT. Accordingly, the researchers of the current



study attempt to shed light on the quality of translations produced by Google translate through the error analysis of the output. In other words, the overwhelming nature of MT over academic and professional activities of both students and learners in translation studies made the researchers go through the current study to consider the possible inefficiencies of translations made by GMT, specifically when the two languages of the field are from different families, as this is the case in Persian and English. Accordingly, the current study's findings are fundamentally in the same line with the needs of translators and learners who are seeking the ideal translations with the aid of translation tools concerning various contexts of translation and the related qualitative perspectives in them.

Considering the importance of quality in the translations produced by the machine, the concept of TQA should be analyzed based on a specific model. Thus, it is essential for the researchers of the study to investigate further the TQA fundamentals. In doing so, the current study's researchers focused on the most reputable model of TQA in translation studies proposed by Julian House in 1997-revised in 2015. According to House (1997), the model was proposed further to the Hallidayan systemic-functional theory, based on Prague school ideas, speech act theory, pragmatics, discourse analysis, and corpus-based differences between spoken and written language. The model concerns three different perspectives in the analysis of the Source Text (ST) and the assessment of translation quality as follows:

- Language/ Text;
- Register (field, tenor, and mode);
- ✤ Genre (House, 2001).

According to Munday, the field covers the subject matter and social action. Tenor involves the social attitude (formal or informal style) between the author and the audience. Mode describes the 'channel' (spoken/written), and the amount of participation between the addressee and addresser (monologue, dialogue, etc.) (2016). In addition, genre allows one to refer each textual exemplar to the type of texts with which it shares a general objective (House, 2001). It is also noteworthy to consider the types of meaning connected to the model to provide a qualified analysis of the translation quality in the current research. Halliday classified three types of meanings in this view, including textual, ideational, and interpersonal meanings. In his definitions, textual meanings denote the mode and refer to cohesion (solidarity) analysis. Ideational meanings adapt to the field and describe the participants, processes, and circumstances. Interpersonal meanings reveal the tenor and infer ways to communicate with others (1994). In a broader sense, as integrated into the current study, based on the two principal classifications of literal (word-for-word) and free (sense-for-sense) translations, House (1997) proposed 'overt' and 'covert' translations. The overt translation represents the features of the translated text vividly via being faithful to the ST. On the other hand, the covert translation enjoys the status of ST in the target culture and context in an attempt to represent the implicit information of ST in the Target Language (TL) in an explicit



manner (House, 2001). As a result of such a classification, any form of mismatch between the ST and the TT reveals the error in translation that could be classified into 'covertly erroneous errors' (any dimensional mismatch, e.g. neglecting the features such as field, mode, and tenor during translating), and 'overtly erroneous errors' (the mismatches of denotative meanings of ST and TT and breaches of target language scheme) (House, 1997).

Although the quality of translation is upgrading permanently by the experts and providers of the GMT, various qualitative aspects of translations are still under question, specifically when the machine is requested to process the translations in two different languages such as Persian and English. In this study, the researchers attempted to apply House's (1997) model to analyze the quality of English translations produced by GMT, via the analysis of the errors. In doing so, a comprehensive model of TQA such House TQA Model was adopted to find out more about the concept of quality, via the error analysis, in the ever-increasing applied machine translation provided by Google.

To achieve the purpose of the study, the researchers proposed a question as follows:

"What are the common errors in Persian-English translations provided by Google Machine Translate within academic context?"

METHODS



Due to the importance of translating texts from Persian to English within academic context, some typical texts from the universities' information books along with their translations were selected as the corpus of this study. The reason behind selecting such a corpus is the importance of academic texts in the ranking of universities within global perspectives and to make the universities visible for international students. The texts are produced initially in Persian by a team of experts at universities and translated by the translation team so that the content of the book can be useful for English speakers across the globe.

Research Design

The study is qualitative research relying on descriptive and comparative methods based on House's (2015) TQA model.

Theoretical Framework

House's (2015) TQA model was adopted to find out more about the ST, translational choices, and corpus errors. Generally, it can be said that TQA concerns evaluative perspectives as the determination of competency level, value, or criteria for a text (Scriven, 2007). Accordingly, evaluation contains asking questions about how well or bad is something (Williams, 2009)? Thus, further to the objective of the current study, exploring the quality of translation is the essence of evaluation that should follow an identical framework or model, for which House TQA model (2015) was concerned. House started her model of TQA by mentioning the essence of translation, in which meaning should be preserved across the two languages under investigation. The meaning has three essential elements including semantic, pragmatic and textual aspects.

According to House (1977), the semantic aspect has different priorities among evaluators in dealing with meanings of words and sentences. The pragmatic aspect is formed on the particular use of an expression on specific contexts of use or the language in use. The textual aspect is also crucial due to its role in transferring the references such as substitutions, anaphora, and ellipses, by which various textual functions stand for meanings in keeping the translation safe. In this view, equivalence is considered within functional aspects in which ST and TT should reveal the same function, in which the "text's function can only be made explicit through a detailed analysis of the text itself" (House, 1977).

On the other hand, the core assumption in the TQA model revised by House in 2015 is the ST analysis and its comparison with the TT. Thus, the model is based on text types and formed based on several theories in languages referred to in the model in 1977. According to House (2015), the model provides TQA analysis and Translation Criticism (TC) via some linguistic, scientific principles. The first principle is based on pragmatic theories of language use that analyse the linguisticsituational peculiarities of the ST and its translated text within certain situational dimensions and by comparing the relative matches or mismatches based on text-context analysis. Second, the model discusses the notion of "Cultural Filter", and the distinction between translation and non-translation via proposing overt-covert translations. Finally, according to House (2015), since translation is concerned with the text replacement in the source language by a semantically and pragmatically equivalent one in the target language, the newly developed model for TQA is also based on the classic Hallidayan register elements- field, tenor, and mode- to scrutinize the text and context relationships

The field involves the subject matter and social action-the nature of the social action that is taking place.

Tenor refers to a social attitude and describes the nature of the participants, the addressers and the addressees, and the relationship between them in terms of social power and social distance and the degree of emotional charge. The concept also considers the text provider's temporal, geographical and social provenance and his/her intellectual, emotional or affective stance along with the content which is portrayed and the communicative task in which the translator is involved.

Mode, on the other hand, refers to both spoken and written channels. The two channels can be simple, i.e., written to be read or complex, i.e., written to be spoken as if not written.

The House's (2015) model considered another parameter in the assessment of translation quality called genre. The category of genre is applied in the related analysis and evaluation processes of TQA since it is not limited to capturing individual peculiarities on the linguistic surface. The parameter enables the translation assessors to refer any single textual exemplar to the class of texts with common objectives or functions. According to House through considering genre, it is possible to characterize deeper textual structures and patterns. Compared with the register categories that consider the relationship between text and micro-context, genre concerns the text and its macro-contexts within linguistic and cultural community scopes.

Procedure

To achieve the purpose of this study some typical texts from the universities' information books along with their translations were extracted randomly. Then, the texts, which had noteworthy parameters according to the theoretical framework of the study, were selected as the criteria for the comparison and error analysis. Thus, based on the House's (2015) TQA model, concerning the elements incorporated in the model, the researchers selected Persian texts, which were formerly translated by a human translator and were varied in length and type, as the data to be fed into the GMT. The Persian texts (as the STs), the translations of STs by a human translator (as the TTs provided by a human translator), and the translations of the STs by the GMT (as the TTs provided by a machine) were provided in the separated tables. Through this step the source and target texts profiles were provided; Hence the comparison and recognition of the translation errors and mismatches were conducted. In the final step, the English



translations (by a human translator and a machine translation) of the STs were assessed to identify overt and covert errors according to the House's (2015) TQA model.

Data collection and analysis

Regarding the data collection of the current study, the selected paragraphs, both in source and target texts, were ordered, compared, and evaluated to produce the selected paragraphs profile concerning the parameters of the TQA model, including tenor, mode, genre, and its function via parallel translation procedures. The texts were used to measure the accuracy and validity of the English translations produced by GMT. The English translations produced by GMT were then compared with the House's (2015) TQA model parameters via the same procedures. The researchers then conducted the translation error analysis to list the errors of the English translations produced by GMT and the categories of overt and covert errors mentioned in the model. Afterwards, the descriptive table containing the errors and their types was presented to help the researchers identify the errors made by GMT and categorise the errors into different items.

On the analysis of the data section of the study, the items for field, tenor, mode, genre, and functions of the STs, as well as the overt erroneous errors which were found in the translations were presented. In doing so, the researchers considered the original texts and their human translations in TTs. Besides, the items were compared with their translations produced by GMT as a result of which the following profile, based on the definitions of the study's TQA model, was provided:

- Field: The original subject matter of the text is academic and informative with a specific social action.
- ***** Tenor: The author's and human translator's and the addresses' provenance and stance are all academics in which the relationship between the addresser and the addressees in terms of social power and social distance and personal viewpoints are concerned. The social role relationship between addresser and addressees is symmetrical (marked by solidarity or equality). In considering the addresser's social role vis-à-vis the addressee(s), the account is further taken of his/her relatively permanent position role, and the more

Source and Target Texts Profiles:

Table 1

Field

Source TextTarget TextSubject MatterSocial ActionSubject MatterSocial ActionAcademic TextSpecificAcademic TextSpecific

Table 2

Tenor

	Source Text			Target Text	
Author's	Social Role	Social	Author's	Social Role	Social
Provenanc	Relationship	Attitude	Provenance	Relationship	Attitude
e and			and Stance		
Stance					
Academics	Symmetrical	Formal	Academics	Symmetrical	Formal

transient situational role, which is both could be a university professor or an administrator. Besides, the social attitude of the two sides due to their context of activity and concerning degrees of social distance or proximity is formal.

- Mode: The medium that refers to both the channels of spoken or written and the degree to which potential or real participation is allowed between the interlocutors which are both simple in the texts.
- Genre and Function: The original text, as the annual reports/statistics, is considered as an informative text in terms of genre, and the function of the text is textual.

In this view, the ST and TT profiles are represented in the following tables;

Table 3

Mode

Source Text				Target Text			
M	edium	Parti	cipation	M	edium	Parti	cipation
Simple	Complex	Simple	Complex	Simple	Complex	Simple	Complex
Simple	(Written)	Cor	nplex	Simple	(Written)	Si	mple

Table 4

Genre and Function

Sourc	e Text	Target Text			
Genre	Function	Genre	Function		
Annual	Textual Function	Annual	Textual Function		
Report/Statistics		Report/Statistics			

As it is shown in the above tables, the STs and TTs are the same in terms of register elements, genre and function when considering human translators. In this respect, the researchers considered the two types of overt and covert translation strategies and the related errors resulting via applying the machine translation by GMT to compare human and machine translation qualities. This is to note that according to House TQA model (2015), the overtly erroneous errors (caused by the mismatches of denotative meanings of the source text and target text and breaches of target language system) and covertly erroneous errors (caused by the dimensional mismatches, i.e. the failure to take parameters such as field, mode

and tenor into consideration when translating were also analyzed and provided for the existing items/categories in the TT (English text) provide by the machine) based on the following items (items 5 and 6 were not found in the texts) and tables:

- 1. Transliteration;
- 2. Literal translation;
- 3. Mistranslation (Distortion of meaning);
- 4. Untranslation (Not translated term);
- 5. Slight change in meaning;
- 6. Significant change in meaning;
- 7. Breaches of Target Language System.



Overt Errors

Table 5

Some Examples of Overtly Erroneous Errors by Google Machine Translate

Errors	Source Text	Target Text by	Target Text by	
		Human Translator	Machine	
			Translation	
Transliteration which means	نانو تكنولوژي،	Nanotechnology,	nanotechnology,	
representing an alphabet with	بيوتكنولوژي،	Biotechnology,	biotechnology,	
another one. In the collected	مکاترونیک، فیزیک	Mechatronics,	mechatronics,	
data there are some cases in	پلاسما	Plasma Physics	plasma physics	
which specific abbreviated	کامپیوتر و اینترنت	Computer and	computer and	
Persian words are represented		Interconnected	internet	
in English alphabets (without		Network (Internet)		
using uppercase letter) and this				
is considered a subcategory of	ارتباطات راديويي و	Wireless	radio connections	
overtly erroneous errors,	بی سیم	Connections		
although the specific words	آموزش و یادگیری	Virtual Education	Electronic	
might originally come from,	الكترونيك	and Learning	learning	
another languages.				
Literal Translation: Literal	در سال های نخستین	The early years	In the first years	
translation or as it is termed by	پس از	following	after	
Newmark (1988), "translations"				
is a word- for- word translation	در حال تجربه تحولي	was experiencing a	was experiencing	
of a text which "does not	بنيادين بود	big challenge	a fundamental	
produce the appropriate			change	
sense."(p.285).	صرفا" فاتحان اين	Only the winners of	Only the winners	
	رقابت به تحصيلات	which could enjoy	of this	
	عاليه وارد مي شدند.	the privilege of	competition	
		studying at higher	entered higher	
		education.	education.	
Mistranslation: Due to	جهان، حركتي شتابان	The world was to	The world was	
polysemic nature of English	در مسیر تولید دانش	experience a rapid	moving rapidly in	
language, most English words	در پیش داشت و	pace of knowledge	the direction of	
have more than one meaning.	دولت ها براي ارتقاي	generation, for the	knowledge	

Translations surveyed show that	این امر برنامه ریزی	promotion of which	production, and
there are many cases in which	مي كردند. اوايل دهه	the government had	governments
the inadequate English	هشتاد میلادی	developed the	were planning to
equivalences have been selected	مصادف با تسخیر	required plans. The	improve this. The
for Persian words and are	جهان توسط ر ايانه ها	early 80s was	early 1980s
considered a kind of overtly	و تحول زندگی بشری	concurrent with the	coincided with
erroneous error due to distortion	به واسطه تغییرات	dominance of	the conquest of
of meaning.	حاصل از فناوري	computer over the	the world by
	های نوین بود.	world as well as the	computers and
		ever-increasing	the evolution of
		radical changes in	human life due to
		human life because	changes in new
		of new technologies.	technologies.
	به طوری که فارغ	that high school	that high school
	التحصيلان دبيرستان	graduates had to	graduates had to
	ها می بایست در	enter a very tense	compete in a tight
	رقابتی دانشگاهی	academic	competition
	فشرده حضور	competition	
	فشرده حضور یافته	competition	
	فشرده حضور یافته که می بایست تبدیل به	competition Which needed to be	That should
· · · · · · · · · · · · · · · · · · ·	فشرده حضور یافته که می بایست تبدیل به فرصتی برای توسعه	competition Which needed to be changed into an	Thatshouldbecomean
	فشرده حضور یافته که می بایست تبدیل به فرصتی برای توسعه گردد.	competition Which needed to be changed into an opportunity for the	Thatshouldbecomeanopportunityfor
· · · · · · · · · · · · · · · · · · ·	فشرده حضور یافته که می بایست تبدیل به فرصتی برای توسعه گردد.	competition Which needed to be changed into an opportunity for the development of	Thatshouldbecomeanopportunityforthedevelopment
	فشرده حضور یافته که می بایست تبدیل به فرصتی برای توسعه گردد.	competition Which needed to be changed into an opportunity for the development of	That should become an opportunity for the development of
	فشرده حضور یافته که می بایست تبدیل به فرصتی برای توسعه گردد. رشته هایی چون	competition Which needed to be changed into an opportunity for the development of fields such as Karate,	That should become an opportunity for the development of in sports such as
	فشرده حضور یافته که می بایست تبدیل به فرصتی برای توسعه گردد. رشته هایی چون کاراته،	competition Which needed to be changed into an opportunity for the development of fields such as Karte, Taekwondo,	That should become an opportunity for the development of in sports such as karate,
	فشرده حضور یافته که می بایست تبدیل به فرصتی برای توسعه گردد. رشته هایی چون کاراته، تکواندو،کشتی،	competition Which needed to be changed into an opportunity for the development of fields such as Karate, Taekwondo, Wrestling,	That should become an opportunity for the development of in sports such as karate, taekwondo,
	فشرده حضور یافته که می بایست تبدیل به فرصتی برای توسعه گردد. رشته هایی چون کاراته، تکواندو،کشتی، والیبال، دوچرخه	competition Which needed to be changed into an opportunity for the development of fields such as Karate, Taekwondo, Wrestling, Volleyball, Cycling,	That should become an opportunity for the development of in sports such as karate, taekwondo, wrestling,
	فشرده حضور یافته که می بایست تبدیل به فرصتی برای توسعه گردد. رشته هایی چون کاراته، تکواندو ،کشتی، والیبال، دوچرخه سواری، بسکتبال و	competition Which needed to be changed into an opportunity for the development of fields such as Karate, Taekwondo, Wrestling, Volleyball, Cycling, Basketball, etc.	That should become an opportunity for the development of in sports such as karate, taekwondo, wrestling, volleyball,
	فشرده حضور یافته که می بایست تبدیل به فرصتی برای توسعه گردد. کاراته، کاراته، تکواندو،کشتی، والیبال، دوچرخه فیره	competition Which needed to be changed into an opportunity for the development of fields such as Karate, Taekwondo, Wrestling, Volleyball, Cycling, Basketball, etc.	That should become an opportunity for the development of in sports such as karate, taekwondo, wrestling, volleyball, cycling,
	فشرده حضور یافته که می بایست تبدیل به فرصتی برای توسعه گردد. کاراته، کاراته، تکواندو،کشتی، والیبال، دوچرخه فیره	competition Which needed to be changed into an opportunity for the development of fields such as Karate, Taekwondo, Wrestling, Volleyball, Cycling, Basketball, etc.	That should become an opportunity for the development of
Untranslation: This error type	فشرده حضور یافته که می بایست تبدیل به فرصتی برای توسعه گردد. رشته هایی چون کاراته، کاراته، والیبال، دوچرخه فیره نیره بسکتبال و	competition Which needed to be changed into an opportunity for the development of fields such as Karter, Taekwondo, Wrestling, Volleyball, Cycling, Basketball, etc.	That should become an opportunity for the development of
Untranslation: This error type occurs when translators omits	فشرده حضور یافته که می بایست تبدیل به فرصتی برای توسعه گردد. رشته هایی چون کاراته، کاراته، والیبال، دوچرخه فیره بدین منظور، این	competition Which needed to be changed into an opportunity for the development of fields such as Karter, Taekwondo, Wrestling, Volleyball, Cycling, Basketball, etc. To this end, the university has been	That should become an opportunity for the development of
Untranslation: This error type occurs when translators omits some words of the source text or	فشرده حضور یافته که می بایست تبدیل به فرصتی برای توسعه گردد. رشته هایی چون رشته، مایی چون والیبال، دوچرخه فوالیبال، دوچرخه غیره بدین منظور، این	competition Which needed to be changed into an opportunity for the development of fields such as Karate, Taekwondo, Wrestling, Volleyball, Cycling, Basketball, etc. To this end, the university has been successful in	That should become an opportunity for the development of

است

accomplishments

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intentionally	or unint	entionally.
Here again	due to	meaning
distortion th	is is co	nsidered a
subcategory	of	overtly
erroneous err	or.	

Breaches of Target Language System: House (1977) indicated that overtly erroneous errors mean the non-dimensional which mismatches include "both mismatches of the denotative meanings of the source text and target text elements and breaches of the target language system" (p.245). Having covered the mismatches of the denotative meanings of the surveyed texts, it is time to move on to the breaches of the target (English) language system. Included in this error category is wrong usage of combined English prepositional phrases and sentences as well as the usage of verbs and complex sentences structures. Besides, breaches of the target language system are due to either ungrammaticality, that is, clear breaches of the target language system, or dubious acceptability, that is, breaches of the norm of usage. Thus the cases found for ungrammaticality are represented.

با هدف تربیت نسل	Aiming to train a	with the aim of
متخصص و أموزش	post-revolutionary	educating the
دیدہ پس از انقلاب، در	generation of	specialized and
جهت برداشتن گامی	specialized and well-	educated
بسوی توسعه کشور،	trained human	generation after
شکل گرفت.	resources and	the revolution, in
	experts, the	order to take a
	university tried to	step towards the
	make a great stride in	development of
	the country's	the country.
	development.	

اين	نظور،	بدین م	То	this	end,	the	То	this	end,	the
طريق	از ا	دانشگاه	univ	versity	has	been	uni	versit	ty	has
به			suce	cessful		in	mai	ny		
هاي	هاي	دستاورد	reac	hing		many	ach	iever	nents	
يافته	دست	متعددى	acco	omplis	hmen	ts via	by.	H	las foi	und.
		است.								

the university's sport	the sports teams
teams have won	of this university
many medals	They have
	won several
	medals.
The experience gives	Brings the
birth to wisdom.	experience of
	wisdom.
	the university's sport teams have won many medals The experience gives birth to wisdom.

The frequency of occurrences of each type of

overt errors is shown in below Table 6.

Table 6

Types of Errors	Frequency	Percentage
Transliteration	5	5%
Literal translation	30	30%
Mistranslation (Distortion of	20	20%
meaning)		
Untranslation (Not translated	5	5%
term)		
Breaches of Target Language	40	40%
System		
Total	100	100%

The Frequency of Occurrences of Overt Errors

As it is shown in the Table 6, the dominant types of the error in the corpus of the study refer back to the categories of breaches of target language system with 40% and literal translation with 30%. Regarding the category of mistranslation, there exists 20% of the total percentage of overt errors in the corpus. The smallest portion of the overt errors by machine translation is devoted to transliteration and untranslation categories with only 5% of total errors.

Covert Errors

Covertly erroneous errors are occurred by the dimensional mismatches in the parameters of register such as field, mode and tenor, and genre and function of the texts into consideration when translating. In this respect,

since the study attempts to provide a comparison between human and machine translation in the corpus of the study, the researcher has fed the ST into the machine for the overall translation outcome resulted in the TT and applied as the corpus for the comparison of the mentioned elements of the House TQA model (2015). Also, via the application of the cultural filter to some parts of translation indicated changes at the levels of register, the researchers attempt to provide a more explicit analysis of elements required in covert type of translation out of ST (provided by s human) and TT (provide by a machine) with the basic notion that a machine due to the lack of human features in its nature might fail to have an equal status when the comparison between human and machine translations are taken into account.



Table 7

Field Mismatches

Source	Fext (Human)	Target Text (Machine)			
Subject Matter	Social Action	Subject Matter Social Act			
Academic Text	Specific	A simple Translated Text	General		

This error type is seen in the mismatch between the ST's subject matter and social action and that of the translation by a machine in terms of ideational meaning explaining the participants, processes, and circumstances. Thus, through a simple comparison, it is revealed that the machine translation fails to provide the dimensional matches between ST and TT, since just a human may have the right and focal perspectives out of the participant, processes, and circumstances of translations.

Table 8

Tenor Mismatches

Source Text (Human)			Target Text (Machine)					
Author's	Social Role	Social	Author's		Social Role	Social		
Provenance	Relationship	Attitude	Provenance and		Provenance and		Relationship	Attitude
and Stance			Stance	е				
Academics	Symmetrical	Formal	Machine	with	Symmetrical	Formal		
			Artificial					
			Intelligence					

This error type is seen in the mismatch between the author's provenance and that of the translator, which is a machine in terms of interpersonal meaning indicating ways to communicate with others. There is a mismatch in the author's provenance and stance of ST and TT when dealing with machine translation.

Table 9

Mode Mismatches

Source Text (Human)				Target Text (Machine)			
Medium		Participation		Medium		Participation	
Simple	Complex	Simple	Complex	Simple	Complex	Simple	Complex
Simple (Written)		Complex		Simple (Written)		Simple	

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This error type is seen in the mismatch between the ST's medium and participation and that of the translation which is provided by a machine in terms of textual meanings signifying the mode and referring to cohesion analysis. As it is shown in the above table, there exists a mismatch in the amount of participation in comparing the ST authored by a human and a TT provide by a machine as translation. The reason for such mismatched is due to the inefficiency of a machine to provide a complex participation and cohesive analysis of the produced TT.

Genre and Function

Table 10

Source and Target Texts Genres and Functions

Source Tex	xt (Human)	Target Text (Machine)			
Genre	Function	Genre	Function		
Annual	Textual Function	Annual	Textual Function		
Report/Statistics		Report/Statistics			

As it is shown in Table 10, also the structures and algorithms of a machine translation program might not be provided in a way that the machine becomes aware of different genres and functions of a text, but the two items are the same in terms of a comparison between ST (provided by a human author) and TT (provided by a Machine).

DISCUSSIONS AND CONCLUSION

The House's TQA (2015) model was applied to assess the quality of English translations of some of the sentences of IAU Statistics Book 2020 provided by a human translator. At the same time, the model was also applied to compare the quality of translation when dealing with a machine translate to provide the TT, out



of the ST provided by a human author that a human translator translated. Undoubtedly, it can be mentioned that in the genre of academic text translations, there exists some translation errors and problems. Therefore, it was essential to assess the quality of translation in such works with a comprehensive global application benefited by universities and academics. The current study results were fundamentally formed and discussed in light of the application of the House TQA Model (2015) and the related literature of the field. Thus, via applying the model for translation quality assessment, the researchers provided a deep understanding of the application of machine translation's abilities in the specific context of academic texts. Besides, according to the review of the related literature, most of the previous studies

were merely focused on the possible contributions of machine translations in translation studies without the interference of humans and this fact made the researchers focus on the machine translation outcomes via the simultaneous comparison of the machine and the human within the quality assessment perspectives.

Basically, according to the assessment model, there exists a one to one match between the source and target texts concerning overt and covert errors when dealing with human authors and translators. However, when the discussion goes to the comparison of human and machine translations, there seems to be found some sorts of both overt and covert errors concerning the mismatches in the field (subject matter), tenor (author's provenance and stance), and mode (participation) as well as untranslation, mistranslation, literal translation, transliteration, and breaches of target language system were recognized. The covert types of error are primarily because machine translating, as the artificial intelligence, might not thoroughly bear humanistic characteristics as a human. The reason behind the existence of overt errors might be the same, since the qualified translation procedures are not expected from a machine without the interference of human resources. However, concerning the genre and function of the machine's target text, it should be asserted that the two items are the same in terms of a comparison between ST (provided by a human author) and TT (provided by a machine).

Google Machine Translate (GMT) may not be very reliable for translation purposes from Persian into English as it cannot always find the correct lexical word or expression suitable for a given context. Not to mention the syntactic errors which result from the literal translation this tool seems to adopt. Such lexical and syntactic errors are bound to surface in this translation because Persian and English belong to two different families with entirely different linguistic and cultural systems. This means that machine translation cannot replace man-made translation, mainly when translation is carried out in different languages such as Persian and English.

Concerning the study's findings, the researchers suggest that a more large-scale qualitative study on assessing the quality of translation by machine translation (Persian-English) be conducted to support another aspect of the House TQA model within the scope of cultural elements and cultural filter. Moreover, further studies could be implemented to assess the quality of translation by other machine translate tools or applications to consider if similar or different findings can be arrived at. Finally, the researchers suggest other language pairs or different language pairs be used in various genres of text to find out more about the quality of translation, whether via applying the same TQA model or a different one.

References

- Halliday, M. A. K. (1994). An Introduction to Functional Grammar (Second Ed.). London: Edward Arnold.
- Helft, M. (2010). Google's computing power refines translation tool. *The New York*

Times. Retrieved from http://www.nytimes.com/2010/03/09/t echnology/09tr anslate.html.

- House, J. (1997). Translation Quality Assessment: A Model Re-visited. Tübingen: Narr.
- House, J. (2001). Translation Quality
 Assessment: Linguistic Description
 versus Social Evaluation. *Meta: Translators' Journal*, 46(2), 243-257.
- House, J. (2006). Text and context in translation. *Journal of Pragmatics*, 38(3), 338-358.
- House, J. (2015). Translation Quality Assessment: Past and Present. New York: Routledge.
- House, J. (2016). Translation as Communication across Language and Cultures. New York. Routledge.
- Schulz, T. (2013). Translate this: Google's quest to end the language barrier. *Der Spiegel.* Retrieved from

http://www.spiegel.de/international/eu rope/google- translate-hasambitiousgoals-for-machine-translation-a-921646.html.

- Munday, J. (2001). Introducing translation studies: theories and applications. London, Routledge.
- Munday, J. (2008). Introducing Translation Studies, Theories and Applications. London & New York: Routledge Tylor and Francis group.
- Munday, Jeremy. (2009). Introducing Translation Studies. Abingdon, Oxon: Routledge.
- Munday, J. (2016). *Introducing Translation Studies: Theories and Applications* (4th ed). London & New York: Routledge.
- Scriven, M. (2007). Key Evaluation Checklists. Retrieved from www.wmich.edu/ evalctr/checklists/

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