In the Name of God

Translation and Interpreting Research

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Aim and Scope

The aim of this journal is to provide a platform for scholars, researchers, and practitioners to explore and exchange cutting-edge knowledge, insights, and innovations in the dynamic fields of translation and interpreting. The journal fosters a comprehensive understanding of translation and interpreting, covering a broad range of topics, including but not limited to translation theory, translation practice, methodology, intercultural communication, translation technologies, and professional ethics. Contributions are welcomed that delve into the challenges, trends, and advancements in translation and interpreting, facilitating interdisciplinary discussions and promoting excellence in the field. By encouraging rigorous research, critical analysis, and practical implications, the journal serves as a catalyst for advancing scholarly discourse and professional development within the realm of translation and interpreting.

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The Relation Between Age and Subject Field of Women Translators in Post-Islamic Revolution Iran

Afsaneh Mohammadi Shahrokhabadi* iD | Assistant Professor, Department of English Language, Faculty of Literature, Humanities, and Social Sciences, Islamic Azad University Science and Research Branch, Tehran, Iran

Mina Taheri iD | MA, Translation Studies, Department of English Language, Faculty of Literature, Humanities, and Social Sciences, Islamic Azad University Science and Research Branch, Tehran, Iran

Abstract

This study investigates the age of female translators in Iran from the Islamic Revolution (1979) to the year 2022, aiming to determine at which age women were most prolific in translation. The research analyzed 1,273 books translated by women during this period, categorizing the data into ten-year age intervals. The findings reveal that women aged thirty to forty were the most active in translation. Additionally, the study examined the subject of books translated by women in each age group, using the classification framework proposed by Farahzad, Mohammadi Shahrokh, and Ehteshami (2015). The results of the study revealed distinct patterns in the interests of female translators across different age ranges. Specifically, fiction emerged as the primary area of interest for women aged 31-40, with humanities being the second most translated genre for this group. In contrast, women aged 41-50 predominantly focused on translating works categorized under the general group. These findings illuminate the evolving preferences and concerns of female translators over time, reflecting broader shifts in their professional focus and interests.

Keywords: Age Range, Topics of Interest, Translation History, Woman Translators

Introduction

Translation has a long history in Iran; however, research on the role played by women as translators does not have a long tradition. For decades, the role of female translators has been ignored, the root of which might be their insignificant contribution before the Pahlavi era. However, even after the Pahlavi era, the lack of attention to female translators' role continued. As such, there are few researches available on this topic. In recent decades, women have shown a greater awareness and stronger presence in the field of translation, leading to their coming under the spotlight.

Generally speaking, historical research has been a marginal area of research. One of the primary problems that make researchers reluctant to do historical researches is that this type of research is time-consuming. The problem is doubled when there are not much previous data on a topic. Gender has indeed been an interesting topic in translation studies for a long time; however, most of the researches on the topic of gender focused on the differences between men's and women's translations. Therefore, historical studies on the gender of translators are not more than a handful. There have been few studies on the topics translated by women, their tone, their role in translation, and books that have been of interest to them. As such, there is not much research on the age of female translators and their topics of interest based on their age after the Islamic Revolution of Iran.

The aim here is to collect statistical data about the age of female translators and their topics of interest. Moreover, attempts have been made to speculate about the reasons, i.e. why women translators have been more prolific in certain ages and why they have chosen certain topics at certain ages. This study can help illuminate the way ahead for future historical researches. The most important contribution of this study is that the golden age in which women have been and are more prolific is identified which may, in turn, motivate talented female translators and provide interesting social data about the reasons behind it.

Literature Review

When it comes to the history of translation, we encounter two concepts: history and histography. Lambert (1993) believes that history means the narration of historical events and histography means the discourse of the historian. However, research on the history of translation is a rather recent topic. "The history of translation has received less attention than other types of research studies (Bandia & Bastin, 2006, p. 4). Ignoring the past and the weakness of the theoretical foundations on which historical research is based has caused a kind of delay in the field of translation studies compared to related fields which translation studies are now trying to get rid of (D'hulst, 2001).

Pym (1992), one of the leading thinkers in the field of translation studies, considers history and histography as a single concept. Translation history or histography includes a set of discourses that reflect the changes that have taken place in the field of translation or their occurrence has been prevented (Pym, 1992).

Regarding translation history in Iran, some researches have been carried out so far. Azarang (2015) provides a general history of translation in Iran from the early days to the contemporary times. He believes that writing the translation history of each country is not an easy task: it is a national project which is time-consuming and needs great interest. The translation history of Iran has experienced some movements, like movements in the Sassanid era, Samanid era, Qajar era, and decades 1320-1340 SH and after the Islamic Revolution of Iran. Intellectual movements are triggered by social, political, cultural, and other factors or developmental movements that emphasize scientific, technical, economic, and managerial ideas and concepts; these factors strengthen and accelerate the translation process.

Amini (2013) focuses attention on the motives of translation in different historical periods. Regarding the Sassanid era, he concludes that translation in pre-Islamic times served to express government orders and religious teaching as well as communicating with other nations, transferring scientific achievements and meeting the needs of society. However, in the Pahlavi era, translations were carried out to spread political thoughts and ideologies. Amini (2013) believed that after the victory of the Islamic Revolution, attention to translation and publication of religious texts expanded the scope of translation in various fields.

As for the history of women translators, few studies exist. One of them is carried out by Saeidian and Hosseini (2013) who believe that in the past two decades, women have had an outstanding growth in translating fictional literature. This unprecedented increase in the number of women translating literary works is a result of the general conditions prevailing in society, and the transition from traditional to modern society (Saeidian & Hosseini, 2013). They believe that women were largely absent from classical literature and much of contemporary literature, appearing mainly as fictional and passive characters. Only in a few works do we see women portrayed with independent and strong presence.

The most relevant study to the present one is they study of Farahzad, Mohammadi Shahrokhabadi, and Ehteshami (2015) who claim that the contemporary history of women as translators can be divided into three periods. First, the hidden presence between 1900 and 1930 which coincides with the end of the Qajar dynasty. The first female translator, i.e. Taj Mah Afagh Al-Dawlah lived in this period. She was the first lady who started translating in Iran during the Qajar period and translated Nader Shah's play by Nariman Narimanov from Turkish into Persian (Saeidi, 2019). During the hidden presence period, the number of literate women was few because there were no schools (Mirza & Tehrani, 2019). The second period called the contested presence started in the 1940s and lasted until the Islamic Revolution of Iran (Farahzad et al., 2015). During this period, Mohammad Reza Pahlavi became the king of Iran. More girls had the chance to go to school and the girls from the upper class went to bilingual schools (Mirza & Tehrani, 2019). In this period, most translators had a high social class or belonged to an aristocratic family. The third period, namely the professional presence period, began in 1979 and has lasted up to the present. In the third period, the Islamic Republic of Iran was formed.

The translation of books is not that significant in the 1280s, 1290s,1300, and 1310, and the presence of one or two translators who belonged to a particular social class does not indicate the social presence of women, because the majority of society was not even literate and the number of translators was very few, regardless of gender. Findings of Farhzad et al. (2015) show that from 1981 to 2011, books which were translated by female translators reached 16648. By comparing these three decades with previous decades, Farahzad et al. (2015) showed that the number of women translators has increased significantly.

In the 1360s Hijri (1981), children's books had the highest frequency compared to other fields, and in the 1370s Hijri (1991), fiction was the most common field of translation (Farahzad et al., 2015). After that, natural and applied sciences with 450 books were among the areas of interest to women, and in the 1380s Hijri, women translators started translating in various fields. This diversity is a sign of the increase in the level of women's education.

This study tries to complement Farahzad et al.'s (2015) article by focusing on the third period. In the professional presence period, the number of literate women as well as the number of translated books increased significantly. In this article, attempts have been made to discover the age ranges of women translators, as well as the relation between age range and topics of the books.

Method

This study is based on library research and considered to be a historiography, based on Pym (1992) categorization of historical research on translation. Pym (1992) divides translation history into three areas:

1. Historical cataloging of translation: In this section, information is provided in the form of a list or catalog. In addition to preparing a list of translations and bibliographies, it includes gathering information about the lives of translators, publishers, publishing history, etc.

2. Historical criticism: Evaluates the role of translated texts in creating change or inhibition. In historical criticism, the position and role of translation should always be examined with regard to its time and the imposition of current beliefs on historical phenomena should be avoided.

3. Explanation: In this part, the translator tries to find the answer to the question, why translation occurred in a particular place and time? Explanation is one of the most important aspects of historical studies. Explanation requires paying attention to historical causality.

Pym (1998) believes that these three aspects are separate, but interrelated. In other words, although the preparation of lists is a separate process, it is always influenced by a certain amount of historical criticism and explanation, and in the same way, historical criticism always includes a level of explanation. According to Pym (1998), the weight of historical explanation and interpretation should be heavier than the other two, but unfortunately, most translation histories have not gone beyond the level of cataloging and historical criticism.

Translation history in Iran is no exception. The researches carried out so far mostly include cataloging and criticism, and rarely pay attention to explanation. As such, the present study sought to delve deeper in the history, and besides collecting data about the age range and topics, it tried to see why women translators had acted as they had.

Data Collection

The present study is a developmental research that deals with historical analysis and content analysis. The data has been gathered by referring to two databases: Book House and National Library and Archives of Iran, searching by the keyword 'translated'.

The search came up with 21000 books translated from 1978 to 2022, among which works translated by women were singled out. For more detailed information, the National Library and Archives of Iran was used. At first, ISBN was used to find accurate information, but when any problem was faced, the exact name of the book or the name of the publisher or the author was consulted.

In the first step, according to the purpose of the research, the year of publication of each book and the year of the birth of the translator were recorded. By using the collected data, the exact age of the translator was calculated. The collected data were plotted using Excel sheets; however, some works did not include the translators' date of birth. In the second step, topics which were interesting for female translators in each age group were extracted and categorized based on Farahzad et al. (2015) categorization.

Results and Discussion

After collecting the data, the age ranges were classified at 10-year intervals, i.e. from 1-10, 11-20, 21-30, 31-40, 41-50, 51-60, 61-70, 71-80, 81-90, 91-100 and 101-110. Initially, the first (i.e. 1-10) and the last (i.e. 91-100, 101-110) intervals were not considered; however, after collecting the data, it became

clear that these ranges were also needed. The results of this study are provided in three parts: the frequency of translated works by age ranges, the topics chosen by female translators, and the relation between the two.

1. Frequency of Translated Works by Age Ranges

The frequency of translated works by female translators was calculated based on the gathered data. The chart below shows the Frequency of female translators in different age groups.
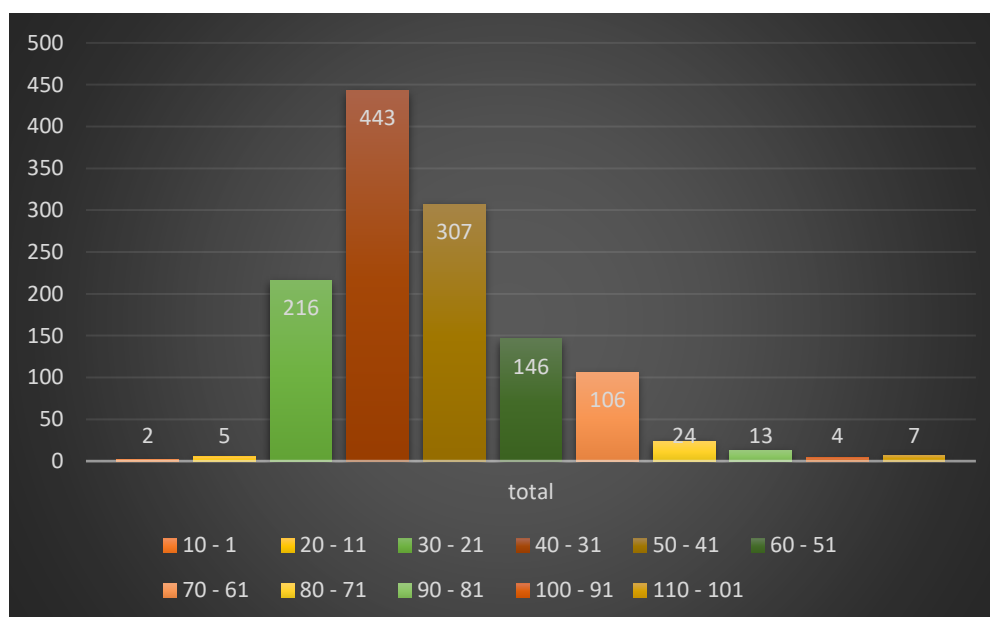
Figure 1. Age ranges of female translators and the number of books translated by them

As you can see in Figure 1, there are only two female translators who were less than 10 years, and only 5 translators who were between 11 and 20. There were 216 female translators in the age range of 21 to 30. The age range of 31 to 40 seems to be the busiest years of female translators' careers, with 443 female translators in this age range. The number of female translators in the 41-50 age range is the second-highest record in the chart with 307 female translators. From 51 to 60, there were 146 female translators, which is still a considerable number. It seems that many female translators cease working after the age of 61, as we have only 106 female translators in the age range of 61 to 70. This number keeps shrinking as female translators get older, with only 24 female translators between 71 to 80. As for the last three age ranges, there were only 13 female translators between 81-90, 4 translators between 91 to 100, and 7 translators who were older than 101 years, which can be indicative of their resolution to remain active in the social sphere.

It should be noted that in 98 books the translators' dates of birth were not mentioned, so it was impossible to find the translator's date of birth. Therefore, these 98 books were left out of the data and this group is not shown in the chart. Another point to note is that some works have more than one translator and this is why the number of books is not equal to the number of translators. As a final point, it must be mentioned that some names did not identify the gender of the translator; in these cases, attempts were made to find other information leading the researchers to the correct gender. If such information was unavailable, the translator was excluded.

2. Topics Chosen by Female Translators

The second step was investigating the topics of interest for women translators in different age groups. As mentioned above, the categorization of topics follows that of Farahzad et al. (2015) which divides topics into eight groups, i.e. 1. Women's literature; 2. Children's literature; 3. Fiction; 4. Humanities; 5. Applied sciences; 6. History;7. Sports and arts; and 8. General group.
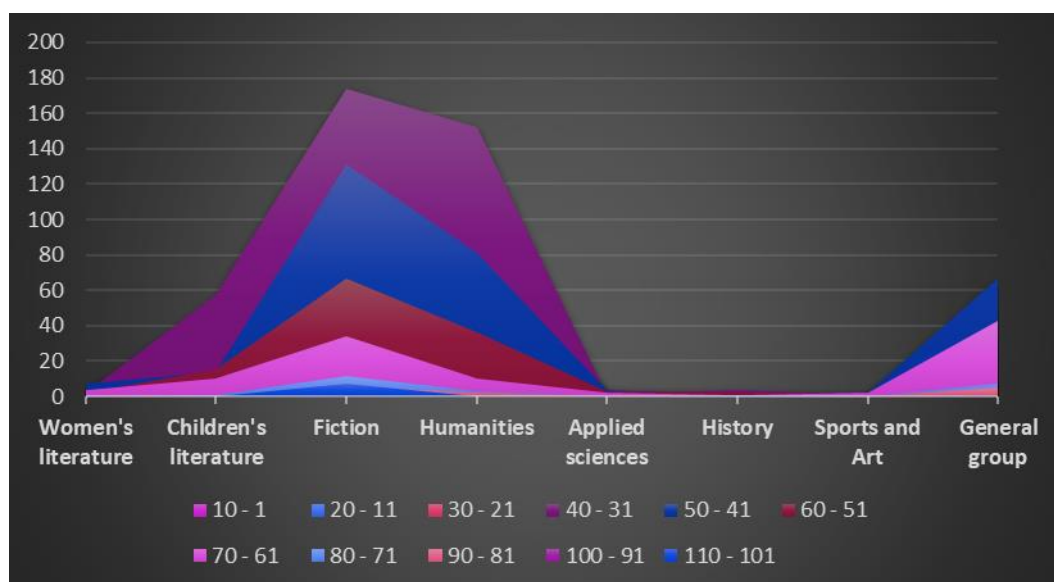
Figure 2. The Relation between age ranges and topics chosen by female translators

According to Figure 2, translated books in the field of fiction had the first place with 507 books. The second place belonged to humanities with 369 books. The general group with 233 books got the third place. The fourth place was assigned to children's literature with 116 books. Women's literature stood in the fifth place with 20 books. The last three places belonged to applied science, history, and art with 12, 10, and 6 translated books respectively.

In the field of fiction which is the most translated field, there was no female translator younger than 10 years, and there were only 4 translators who were between 11 to 20. There were 69 female translators in the age range of 21 to 30 in the fiction category. The age range of 31 to 40 seems to witness the female translators' high interest in translating fiction, with 174 female translators in this age range. The number of female translators in the 41-50 age range was the second-highest record in the chart with 131 female translators. From 51 to 60, there were 67 female translators translating fiction. We had only 34 female translators in the age range of 61 to 70 and only 12 female translators between 71 to 80. There were only 6 female translators between 81-90, 3 translators between 91 to 100, and all 7 translators active at the ages older than 101 years translated fiction, and we don't see any translator in this age range translating other fields.

Humanity is the second most translated topic. There was only one female translator who had less than 10 years, and no translator between 11 to 20. There were 84 female translators in the age range of 21 to 30. The age range of 31 to 40 seems to be the most active years of female translators' careers in the field of humanities, with 152 female translators in this age range. The number of female translators in the 41-50 age range was 81 female translators. From 51 to 60, there were 36 female translators. It seems that most female translators cease to work after the age of 61, as we had only 10 female translators in the age range of 61 to 70. This number decreased in later ranges, with only 3 female translators between 71 to 80 and no female translators in the last two age ranges.

In the general group, as the above chart shows, there was only one female translator who had less than 10 years and one female translator between 11 to 20. There were 36 female translators in the age range of 21 to 30. The age range of 31 to 40 took the second place with 52 female translators. The number of female translators in the 41-50 age range was the first high record in the chart with 67 female translators. From 51 to 60, there were 20 female translators. Surprisingly the number went up as we had 43 female translators in the age range of 61 to 70, almost double in number in comparison to the previous age range. This number went down as female translators aged, with only 7 female translators between 71 and 80, 5 female translators between 81-90, and only 1 between 91 and 100, and no female translator in the last age range.

To avoid repetition, it must be noted that there is no female translator under the age of 20 in the remaining topics, that is to say, there was no female translator in the first two age ranges in the fields of children's literature, women's literature, applied sciences, history, and sports and arts. This is quite surprising, as younger ages are expected to translate children's literature more than other topics.

In the field of children's literature, there were 19 female translators in the age range of 21 to 30. The age range of 31 to 40 had the first place, with 57 female translators in this age range. The number of female translators in the age range of 41-50 was 14. The age range 51 to 60 had 15 female translators. We had only 10 female translators in the age range of 61 to 70. There was only 1 female translator between 71-80. No books were translated by translators in the last three age ranges.

In the age range of 21-30, only 5 female translators chose women's literature. There were only 2 female translators in the age range of 31 to 40. The age range of 41 to 50 had 7 female translators. The number of female translators in the 51-60 age range was only 2. 4 female translators worked in this field in the age range of 61-70. There weren't any books translated by women in the last four age ranges in women's literature's field.

Only 2 female translators were active in translating applied sciences in the age range of 21-30. There was only 1 female translator in the age range of 31 to 40 and 4 female translators in the age range of 41 to 50. The number of female translators in the 51-60 age range was only 3. Two female translators worked in the age range of 61-70. There weren't any books translated by women in the last four age ranges.

We see only 1 female translator choosing history for translation in the third age range, i.e. 21-30. There were 4 female translators in the age range of 31 to 40 and 1 female translator in the age range of 41 to 50. The number of female translators in the 51-60 age range was 2 and there was only 1 female translator in the age range of 61-70. Like the previous age range, only 1 female translator worked in the age range of 71-80. There weren't any books translated by women in the last three age ranges.

The chart indicates that in the field of sports and art, no book was translated in the first three age ranges. In the age range of 31-40, we had only 1 female translator. There were 2 female translators in the age range of 41 to 50 and 1 female translator in the age range of 51 to 60. The number of female translators in the 51-60 age range was 2. There weren't any translated books in the last four age ranges.

3. The Relation Between Topic Preference and Age Range

The topic priority for translation in different age groups by women was different, and for this reason, different topics of interest to women in ten-year age ranges have been investigated to obtain the level of interest of women in translating a specific topic in different age ranges.

The data showed that fiction had been translated more by women and got the first place by 507 translated books. Female translators between 31 and 40 had shown more interest in translating fiction, that is to say, 174 female translators in this age range translated fiction. The number of female

translators in the 41-50 age range was the second highest record with 131 female translators. The third place was for the age range of 21 to 30 with 69 female translators.

The second topic priority for women was humanities by 369 translated books. The age range of 31 to 40 seems to be the most active years of female translators' careers in the field of humanities, with 152 female translators in this age range with 41 percent. The second high record was the age range of 21 to 30 with 84 female translators. The third place with a slight difference was the age range of 41 to 50 with 81 female translators.

Women's third topic priority was the general group with 233 translated books. The first high record was in the age range of 41 to 50 with 67 female translators including 29 percent of the total. The age range of 31 to 40 took the second place with 52 female translators. Surprisingly the age range of 61 to 70 had 43 female translators which is a considerable number.

The fourth topic priority focused on children's literature with 116 translated books. The age range of 31 to 40 had the first place, with 57 female translators in this age range which consisted 49 percent of the total amount. The number of female translators in the 21 to 30 age range was the second highest record with 19 female translators. The third place with a bit of difference was in the age range of 51 to 60 with 15 female translators.

Women's fifth topic priority was women's literature with 20 translated books. The first place was for the age range of 41 to 50 with 7 female translators which formed 35 percent of the total numbers. In the age range of 21-30, only 5 female translators worked. 4 female translators worked in the age range of 61-70.

The sixth topic priority for women was the field of applied sciences by 12 translated books. Due to the small number of translated books in this field, the first place with four translated books in the age range of 41 to 50 illustrated the lack of attention and interest of female translators.

The last two topic priorities of female translators were history with 10 translated books and sports and art with only 6 books. The first place was in the age range of 31 to 40 with 4 translated books and the other with 2 translated books in both the age ranges of 21 to 50 and 61 to 70.

Conclusion

The result of reviewing 21000 works showed that only 1273 books were translated by women without considering reprints. In comparison to the works that were translated by men, the number of female translators is not impressive. The results also indicated that women in their 30s and 40s were more interested in translation. The number of female translators in the age range of 31 to 40 years was the highest, which included 443 translators. This age range equals the time that most women complete university education, form a family, and settle down, and in many cases, their children reach a certain age (based on Civil Status Registration Organization's statistics, the average age of marriage for women is 24.8, which can be a proof of what was claimed above). So, they find some time of their own, to follow what they have dreamed of, or to have a more prominent position in society.

The age range of 41 to 50 years ranked second, having 307 female translators. Completing education and raising children can still be one of the reasons for the large number of female translators in this group; however, it seems that there are other problems in this age range, preventing women from being as prolific as the previous age range: having a permanent job, loss of interest, having a busy lifestyle due to new concerns (such as the marriage of children or even raising grandchildren), or decline in physical and mental abilities which lead to lesser contribution of women to the field of translation.

The age range of 21 to 30 years with 216 translators ranked third, with a slight difference compared to the age group of 41 to 50 years. At this age range, women are more energetic and ambitious. Many are passing their university education and are making themselves ready for entering the market, strengthening their resumes. These might be the reasons of their interest in translation. On the other hand, many women are just getting married or raising their children which leads to a shortage of time, and this might be a reason for their limited number of works.

There were 146 female translators between 51 to 60 years and 106 translators in the age range of 61 to 70 years. 24 women translators were found between 71 to 80 and only 13 between 81 to 90. These declining numbers seem to show that as women get older, they lose interest or ability to translate, as it is a highly energy-consuming task, requiring great mental power.

There are also 4 female translators in the age range of 91 to 100. It is quite interesting to find translators in this age range. This age range, which naturally equals retirement, is the age of activity for some, maybe to prove that they are still competent and active in the social arena. Observing 7 female translators in the age range of 101-110, this comes to mind that age is not a criterion in translation.

There were 5 female translators in the age range of 11-20. Initially, the age range of 1 to 10 years was not considered in the chart, but after encountering 2 translators, the statistic was added to the chart. The researcher concluded that we might be dealing with a bilingual child.

We have two female translators aged below 10. One of them was Zahra Javadi. She was born in 2009 and translated her book in 2015; therefore, she was 6 years old when translating, and information about the second one was not available.

In general, female translators were not keen to translate books which were related to applied sciences, history, sports, and art in any of the age ranges. The age range of 21 to 30 showed that female translators preferred to translate in the fields of humanities and fiction respectively. Fiction and humanity were at the center of female translators' attention in the age range of 31 to 40, 41 to 50, and 51 to 60 but the number of female translators shrank as they got older. Female translator of the age range of 61 to 70 had made fiction the priority of their translation too; however, humanity and children's literature had nearly the same numbers. The age ranges of 71 to 80 and 81 to 90 showed that female translators were interested in translating fiction and general group respectively. The number of translated books in the other age ranges is not considerable. The age range of 31 to 40 had the highest number of translating books dealing with children's literature. Female translators of all age ranges paid very little attention to history by translating only 10 books.

This research offers a new perspective to those who are interested in history as historical researches raise public awareness; people who do not know their history, will not be able to know themselves. It may offer useful information to those who have concerns about female issues; it can help the researchers find motivated and talented female translators, and it can also help them to have a better understanding of what goes on in their minds. It might show a way for those who care about social issues to help them raise awareness about females' issues.

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A Descriptive-Analytical Reflection on the Translation of Medical Texts During the Qajar Era

Mojgan Ghaffari* (iD) | MA, Translation Studies, Department of English Language, Faculty of Literature, Humanities, and Social Sciences, Islamic Azad University, Science and Research Branch, Tehran, Iran

Afsaneh Mohammadi Shahrokhabadi (iD) | Assistant Professor, Department of English Language, Faculty of Literature, Humanities, and Social Sciences, Islamic Azad University, Science and Research Branch, Tehran, Iran

Abstract

This article provides a descriptive overview and thematic analysis of translated medical texts from the Qajar era, utilizing a statistical and documentary study methodology. The research compiles all translated books, including manuscripts, lithographic, and lead-printed works, from this period. Findings reveal that medical texts were translated into Persian across various specialized fields such as internal medicine, obstetrics and gynecology, pharmacology, infectious diseases, psychiatry, pediatrics, surgery, dissection, ophthalmology, and pathology. Some translations originated from Western languages like French and English, introducing Western specialties such as surgery, dissection, infectious diseases, pediatrics, and modern medicine to Iran. Meanwhile, translations from languages like Hindi, Turkish, Arabic, and Urdu contributed to fields such as herbal medicine and pharmacology, reflecting their Eastern roots. Noteworthy translations from the Qajar era include Ibn Sina's *Ghanon*, al-Razi's *Tafrih al-Gholoob*, Jurjani's *Zakhireh Kharazmshahi*, Hippocrates' *Resale Ghabrie*, and Galen's *Molkhes Fosul*.

Keywords: Medical Resources, Medical Translation, Medical Translators, Qajar Era

Introduction

Medical research has long served humanity, and scientific centers continue to prioritize traditional medicine and medicinal plants. The written medical literature of our nation stands as a testament to the scientific and cultural diversity that has been, and will remain, a cornerstone of civilization and knowledge. Both present and future generations have the right to access their historical heritage, especially that which remains inaccessible due to various circumstances. Unfortunately, the history of science has not been given its deserved place in today's culture, and research in this area is often conducted in an unplanned and disorganized manner. It is essential to recognize that many of the discoveries others consider inventions were, in fact, accomplished centuries ago by renowned Iranian scientists. These scholars, through the processes of translation and compilation, achieved great scientific advancements under difficult circumstances, as reflected in their handwritten works (Velayati, 2009).

Iran holds one of the world's largest collections of Eastern manuscripts, with its manuscript catalogs making up the most extensive such collection globally (Jasbi, 2009). The preparation of thematic catalogs is essential for Iran's scientific community, particularly in the humanities, as it helps recover parts of our history and culture, transferring our ancestors' scientific heritage to current thinkers. This wealth of knowledge will enable researchers to become more familiar with Iran's significant contributions to civilization (Jasbi, 2009).

The first step in researching medical science and its related fields is to identify the various works that have been produced. A comprehensive list of these works provides a valuable foundation for presenting their background in a scientific and organized way. The current bibliography represents a treasure trove of manuscripts, lithographs, and lead-printed sources from libraries and private collections in Iran, all of which have been translated in the medical field. It is important to note that, according to the bibliographic collectors involved in this research, there is no claim that all manuscripts related to medical knowledge have been included. First, new articles and reports on manuscripts are published daily. Second, there may be errors in gathering information on the existing versions. Third, it is often difficult to determine the exact classification for multi-disciplinary manuscripts.

In the past, the dissemination of medical knowledge through translated books lacked specialization, resulting in bibliographies that did not thematically or systematically classify the sciences. The records were often organized alphabetically, which limited their usefulness for researchers. As such, it is necessary to update public bibliographies with thematic classifications and statistical charts. This current bibliography is valuable in two ways: it thematically presents and introduces medical works to researchers of medical history, and it identifies and presents translated medical sources for researchers in the medical field.

The investigation found that while there are bibliographies for both new and old medical sources, they generally focus on medical works rather than specifically on translated sources. These earlier bibliographies lack the thematic, statistical, or in-depth analysis present in this work. Two of the most extensive are the fifth volume of Monzavi's "Catalog of Manuscripts" (medical sources, 2002) and the "Common Catalog of Manuscripts of Medicine and Related Sciences in Iranian Libraries" (2011).

To meet the research goal of identifying translated medical sources from the Qajar era, the following questions guided this study:

1. What are the descriptive characteristics of translated medical sources from the Qajar era?

2. What are the analytical characteristics of translated medical sources from the Qajar era?

Methodology

The primary data collection method for this study was the library-based approach, which involved reading, reviewing relevant sources, and taking notes. The study utilized two types of information sources: primary and secondary. Initially, all available primary sources were examined. Given that the Qajar-era printing industry was not yet modernized, with books produced as manuscripts, stone-printed, or lead-printed volumes, these works from that period are considered primary sources. An example of one such translated medical text is presented in Figure 1.

Figure 1. Taghvim al-Badan – An instance of primary sources

Figure 1 is a page of *Tāghvim al-Badan, written by* Ibn Jāzleh and translated by Shāmsuddin Mohāmmād Tābib Isfahani, and provides information about internal diseases.

Additionally, several key databases were utilized as secondary sources to search for books, journals, and articles. These include data from the National Library and Archives of Iran, the Library of Tehran University of Medical Sciences, the Library of Parliament (Majles), the Astan Qods Razavi Library, and

the Mālek Library, along with relevant reference sources and bibliographies such as Monzavi's catalog of Persian books and catalogers of Iranian manuscripts. The study covers all translated medical books published during the Qajar era (1175–1304 AH), including manuscripts, lithographic, and lead-printed books. In cases where information was unavailable, the term "unknown" was used after consulting relevant subject lists.

Results

In response to the research's first question regarding the bibliographic list of translated medical sources from the Qajar era, the entries are organized by each subject's area of expertise, including fields such as 'pathology,' 'sexually transmitted diseases,' and 'surgery and dissection.' Each entry follows a consistent structure, listing the title of the translated source, the author or translator's name, the language of origin, and the target language. In some cases, certain details, like the date or translator, remain unknown. This organization offers clarity, enabling a comparative analysis of trends in medical translations during the Qajar era.

Translated sources in the field of 'pathology'

− Pathology, Polak, unknown, from French into Persian.

− Pathology, Kreisel, Ahmad Sharifi Tonekaboni, from French into Persian.

− Pathology, Kreisel, Reza Khan French, from French into Persian.

− Pathology, Kreisel, General Alikhan, from French into Persian.

− Pathology, Kreisel, Mirzareza Dr. Sedighol al-Hukma Tabrizi, from French into Persian.

− Javaher al-Hikma, unknown, Ali Hamedani, from French into Persian.

− New Medicine, Schlimmer Flamenki, unknown, from Persian into unknown.

− Alam al-Maraz, Kreisel, Ahmad Sharifi Tonekaboni, French into Arabic.

− Alam al-Maraz, Kreisel, Dr. Mohammad Reza, from French into Persian.

− Alam al-Maraz, Kreisel, Reza Khan French (Jules), French into Persian.

− Alam al-Maraz, Kreisel, Ali Hamedani, French into Farsi.

Translated sources in the field of 'sexually transmitted diseases'

− Israr Kook (Lazt al-Nasa), unknown, Jeon Mel Brahman, from Hindu into Persian.

− Israr Kook (Lazt al-Nasa), unknown, Muhammad Ibrahim, from Hindu into Persian.

− Al-Ayzah fi Asrar al-Nikah, Galen, David Antioch, from Greek into Persian.

− Al-Ayzah fi Asrar al-Nikah, Haj Zain Attar, unknown, from Arabic into Persian.

− Ab Zandegani, Ahmad Naghashi, Habib Esfahani, from Arabic into Persian.

- Ab Zandegani, Kamal Pashazadeh, Ziauddin Shahshahani, from Arabic into Persian.

- Bah Nameh, Khwaja Tousi, Abdul Latif, from Arabic into Turkish.

- Bah Nameh Nakhshbi, Zia al-Din Nakhshbi, unknown, from Arabic into Persian.

- Javam al-Elaj, Mohammad Karim Khan Qajar, Agha Mohammad Taghi Sarkari, from Arabic into Persian.

- kholasatol Al-Aish, Rostam Jang Zafar Khan, Hajar Dehlavi, from Sanskrit into Persian.

- Rojoa Al-Sheikh's Al-Saba Taghwiyah Quwa Bah, Ahmad Tifashi, Mohammad Saeed Esfahani, from Arabic into Persian.

- Rojoa Al-Sheikh's Al-Saba Taghwiyah Quwa Bah, Kamal Pashazadeh, unknown, from Turkish into Arabic.

- Zia-ul-Absar Fi Hadol-Bah, Khan Mahmood Sadigh Ali, Ighbal Hasan, Arabic into Urdu.

- Cook Shaster (Bahnameh), Abu Taleb Esfraini, unknown into Persian.

- Ganj Al-Asrar, Abdur Rahman Shirazi, Nezam Motshehi, from Arabic into Persian.

- Vasayel al-Ebtehaj fi hefze sehat Al-Ezdevaj, Kreisel, Mohammad Malek Al-Katab Shirazi, from French into Persian.

- Vasayel al-Ebtehaj fi hefze sehat Al-Ezdevaj, Kreisel, Mohammad Akbar Khan Lahori, from French into Urdu.

Translated sources in the field of 'surgery and sissection/

- Anis Al-Moshrehin, Robert Hooper, Mohammad Mahdi Esfahani, from Arabic into Persian.

- Tashrih Al- Aasab, Polak, Mohammad Tabib Tehrani, from French into Persian.

- Tashrih Al Azae Al-badan, Mansoor ben Mohammad, unknown, from Arabic into Persian.

- Tashrih Badan Ensan, Polak, General Alikhan, from French into Persian.

- Tashrih Badan Ensan, Polak, Mohammad Hossein Afshar, from French into Persian.

- Tashrih Badan Ensan Polak, unknown, from English into Sanskrit.

- Al-Tashrih, unknown, Ali Akbar Nafisi, from French into Persian.

- Al-Tashrih, unknown, Ali Khan Tabib, from Latin into Persian.

- Tashrih al-Abdan, Mansour Shirazi, Hakim Gholam Haidar, from Arabic into Urdu.

- Tashrih al-Bashar va Tozih al-Sovar, Richard Carmack, Mohammad Khoei, from English into Persian.

- Tashrih Ghalb va Amal va Oroogh, unknown, Taghi Motabib, from French into Persian.

− Jarahi, Albo, Khalil Saghafi, from French into Persian.

− Jarahi, Polak, Mohammad Hossein Afshar, from French into Persian.

− Jarahi Nezami, Albo, Baqer Tabib, from French into Persian.

− Javaher al-Tashrih, unknown, Ali Hamedani, from French into Persian.

− Kholase al-Tashrih, unknown, Musa Alavi, from French into Persian.

− Resaleh Dokhtor, Polak, Mohammad Hossein Afshar, from French into Persian.

− Resaleh Teb, unknown, Noshahi, from Arabic into Persian.

− Zinat al-Abdan, Polak, unknown, from French into Persian.

− Serol-Hekmeh, Jaber Ben Hayan, Schlimmer-Flamenki, Mohammad Taghi Hosseini Kashani, unknown.

− Teb Professor King, King, unknown, from English into Persian.

− Makhzan Al-Fawaid, Polak, Mohammad Hossein Afshar, from French into Persian

Translated sources in the field of 'ophthalmology'

− Tazkerat al-Kahalin, Ali ben Eisa Kahal, Shamsuddin Ali Hosseini Jurjani, from Arabic into Persian.

− Jala al-Ayoun, Polak, Mohammad Hossein Qajar, from French into Persian.

− Resaleh dar Kahali, Pollock, unknown, from French into Persian.

− Resaleh Teb, unknown, from Persian into Punjabi.

− Zia al-Ayoun dar Derkhali, unknown, Ali Hamedani, from French into Persian.

− Zia al-Ayoun, French doctor, Ali Khan, from French into Persian.

− Zia al-Nazerin, Kalzewski, Mohammad Kermanshahi, from French into Persian.

Translated sources in the field of 'internal diseases'

− Aristotle Talis Fi-al-Nafas, Aristotle, Abdulrahman Badavi, from Arabic into Persian.

− Asbab al-Tadvyeh, Schlimmer Flemanki, Mohammad Taghi Ibn Mohammad Kazem, from French into Persian.

− Asrar al-Atba, French Toluzan, Shahabeddin Sagheb Dehlavi Khorasani, from Turkish into Persian.

− Badai al-Hikma Naseri, Toluzan, Mustafa Alavi Esfahani, from French into Persian.

− Bar al-Saa, Zakaria Razi, Ahmad Sharifi Tankabani, from Arabic into Persian.

− Bar al-Saa, Zakaria Razi, Ahmad Qajar, from Arabic into Persian.

− Bar al-Saa, Zakaria Razi, Abdul Karim Qazvini, from Arabic into Persian.

− Bar al-Saa, Zakaria Razi, Mohammad Afzal Tabatabai, from Arabic into Persian.

- Bar al-Saa, Zakaria Razi, Mohammad Hossein Esfahani, from Arabic into Persian.

- Tohfe Amaniyah, Mohammad Wazah Bukhari, unknown, from Arabic into Persian.

- Tohfe Shahi, Zakaria Razi, Ahmad Sharifi Tonekaboni, from Arabic into Persian.

- Tohfe Shahi, Zakaria Razi, Hossein Jabri Ansari, from Arabic into Persian.

- Tadarok anvaol Al-khata, Ibn Sina, Hossein Jabri Ansari, from Arabic into Persian.

- Taghvim al-Abdan, Ibn Jazla, Shams Al-Din Mohammad Tabib Esfahani, from Arabic into Persian.

- Taghvim al-Abdan, Ibn Jazla, Faraj Ibn Salem, from Arabic into Latin.

- Taghvim al-Abdan, Ibn Jazla, Mohammad Ashraf, from Arabic into Persian.

- Taghvim al-Abdan, Ibn Jazla, Mohammad Tabib Borujerdi, from Arabic into Persian.

- Taghvim al-Abdan, Ibn Jazla, Mohammad Yusef, from Arabic into Persian.

- Tan Suka Puthi, unknown, Sheikh Mohammad Ghoryshi, from Hindi into Persian.

- Al-Tanvir ya Tafsir Al-Faz Ahl Sanaa Al-Tab, unknown, Abol Hasan Aghaji Bokharai, from Arabic into Persian.

- Jame al-Shafaiyeh, John Cameron, Syde Afazl Ali Razavi Faizabadi, from English into Persian

- Javame al-Elaja, Mohammad Karim Khan Qajar, Ali Akbar Nafisi Kermani, from Arabic into Persian.

- Hodudol al-Amraz, Akbar Shah Arzani, Mohammad Ishaq Fayaz, from Arabic into Persian.

- Hadiqa al-Shifa, Sarang Dehar, Mohammad Jamil Abdul Wahab, from Sanskrit into Persian.

- Hadiqa al-Tab, Ibn Nafis Abulhasan Gharashi, Abbas Agha Kochak, from Arabic into Persian.

- Hadiqa al-Tab, Ibn Nafis Abulhasan Gharashi, Abdul Javad Sepahani, from Arabic into Persian.

- Hefz al-Saha, Ali bin Zain al-Abdin Nasir al-Hukma Isfahani, Mohsen Abedi, from Arabic into Persian.

- Hefz al-Saha, Galite Boase, Seyyed Ali Khan Nasr, from Latin into Arabic.

- Hefz al-Saha, unknown, Nusrat Tabib Ghuchani, from French into Persian.

- Haghayegh al-Adviyeh Al-Moosavi, a European physician, Musa Alavi Esfahani from Unknown into Persian.

- Dastur Jalali, Mohammad Jalaluddin Tabib, Abdullah Nouri, from Arabic into Persian.

- Dastur Teb, Zakaria Razi, Mohammad Hossein Esfahani, from Arabic into Persian.

- Daghayegh al-Elaja, Mohammad Karimkhan Qajar, Isa Zia Ebrahimi, from Arabic into Persian.

- Zakhyreh Kharazmshahi, Mirsyed Ismail Jorjani, Sharafuddin Ibrahim, from Persian into Arabic.

- Zakhyreh Kharazmshahi, Mirsyed Ismail Jorjani, Mohammad Hadi Hossein Khan, from Persian into Urdu.

- Resale dar Pezeshki, Aristotle, unknown, from Greek into Persian.

- Resale Teb, Kashifuddin Muhammad, unknown, from Arabic into Persian.

- Resale Teb, unknown, from Hindi into Persian.

- Suhailiyya, Ibn Sina, Qutb Al-Din Tabib Shirazi, from Arabic into Persian.

- Shafa al-Badan, Alavi Dehlavi, Hakim Divan Kahn, from Arabic into Urdu.

- Shafaiyeh, Schlimer Flemanki, Abdul Karim Tabib, from French into Persian.

- Sehat Ajel, Zakaria Razi, Mohammad Bagher Mottabb Hosseini, from Arabic into Persian.

- Zarar Advieh in the treatment of diseases, Biloza, unknown, from French into Persian.

- Teb Akbari, Akbarshah Arzani, Akbarshah Arzani, from Arabic into Persian.

- Teb Akbari, Akbarshah Arzani, Mohammad Seddiqi Nanotoi, from Farsi into Urdu.

- Teb Akbari, Akbarshah Arzani, Najibuddin Samarqandi, from unknown into Persian.

- Teb Kimiyaee, unknown, Mohammad Jaafar Yazdi Arizi, from Arabic into Persian.

- Medicine or Etiology, Honyak, French Reza Khan (Jules), from French into Persian.

- Teb al-Rahmah, Jalaluddin Siyuti, Mohammad Jaafar Khansari, from Arabic into Persian.

- Alaj al-Ghoraba, Hakim Ghulam Imam, Asghar Ali from Unknown into Urdu.

- Alaj al-Amraz, Sharif Khan Dehlavi, unknown, from unknown into Persian.

- Alal al-Amraz, unknown, Ahmad Hosseini Razi Tehrani, from Arabic into Persian.

- Elme al- Amraz, Nafis Ibn Awaz Kermani, Akbar Shah Arzani, from Arabic into Persian.

- Ghayat al-Gharaz, Najibuddin Mohammad Samarqandi, Sharif Mansour Hosseini, from Arabic into Persian.

- Qawabis Shoab fi Tarjume al-Asagharba, Brakleios, Mohammad Ali Mousavi Dezfouli, from Arabic into Persian.

- Kenz al-Asrar, Abdul Rahman Shirazi, Mohammad Hadi Hossein Muradabadi, from Arabic into Persian.

- Gripe, unknown, Haider Mirzai Qajar, from French into Persian.

- Mojrabat Akbari, Akbar Shah Arzani, Shahbaz Khan, from Farsi into Urdu.

- Mojrabat Farangi, unknown, Mattis DeSilva, from Greek into Persian.

- Majmaal al-Tabin, European physician, unknown, from unknown into Persian.

- Mokhtasar al-Elaza, Mohammad Chaghmani, Sohrabi, from Arabic into Persian.

- Mustazar al-Tabib va Mustabshar al-Tabib, Mohammad Chaghmani, Mohammad Saeed Kashmiri, from Arabic into Persian.

- Moaleje ba Ab, Kishish Ferangi, Khalil Saghafi, from English into Persian.

- Ma'rafa al-Bada'i fi Al-Funun va al-Sana'i, Leson Dushouz, Issa Khan Tabib, from French into Persian.

- Miftah al-Khwas Naseri, French physician, unknown, from French into Persian.

- Mafarah al-Qulub, Akbar Shah Arzani, Hakim Molavi Noor Karim, from Persian into Urdu.

- Mojez al-Ghanun, Nafis Ibn Awaz, unknown, from Arabic into Persian.

- Mizan al-Teb, Akbar Shah Arzani, Mohammad Abdul Hakim, from Farsi into Urdu.

- Neghres and Ojaa al-Mafasel, Ahmad Tabatabai, unknown, from Arabic into Persian.

Translated sources in the field of 'pharmacology and medicinal plants'

− Al-Abniyyah an al-Adawiya, Ali Heravi, Abdul Khaliq Akhundzadeh, from Persian to German.

− Bostan al-Tabaa and Ruza al-Laba, Abu Nasr Asad Ibn Matran, unknown, from Arabic to Persian.

− Tohfe Soleimanieh, Zakaria Razi, Aladdin Muhammad Tabib, from Arabic to Persian.

− Tohfe al-Mominin, Hakim Momin, Ahmad Thani, from Arabic to Turkish.

− Tohfe al-Mominin, Hakim Momin, Karachi Mammoud, from Arabic to Urdu.

− Therapy, Albo, Khalil Thaghafi, from French to Persian.

− Therapy, Albo, Mahmoud Kashani, from French to Persian.

− Translation of Israr Kook, unknown, Jeon Mel Brahman, from Hindi to Persian.

− Translation of Samskrit, Samskrit, Sheikh Haider, from Hindi to Persian.

− Tashrih al-Adwieh, Nour al-Din Ain al-Molk Shirazi, unknown, from Greek to Persian.

− Taghvim al-Sahe, Mukhtar ibn Batlan Baghdadi, unknown, from Arabic to Persian.

− Talkhis al-Aghaghir, unknown, Ali Khan, from Arabic to Persian.

− Talkhis al-Aghaghir, unknown, Mohammad Tabib Borujerdi, from Arabic to Persian.

− Hashaysh, Discourides, Malik Mansour Mirza Shuaa al-Sultaneh, from Greek to Persian.

− Hayat Kimiavi, Henrich Schössler, Fazlullah Khan, from French to Persian.

− Daroosazi Jadid, European doctor, Mohammad Taghi Kashani, from French to Persian.

− Dafe Mazar al-Aghzia, Zakaria Razi, Abul Muzafar Tabib Heravi, from Arabic to Persian.

− Samskrit, Hakim Sheikh Haider, unknown, from Hindu to Persian.

− Shimi va Daroosazi, Abu Rihan Biruni, unknown, from Arabic to Persian.

− Saidneh, Aburihan Biruni, Jalaluddin Kashani, from Arabic to Persian.

− Saidneh, Aburihan Biruni, Obaidullah Israilevich Karimov, from Arabic to Russian.

− Teb Hakim, Hakim Momin, Mohammad Momin Al-Mouti Qazvini Isfahani, from Arabic to Persian.

− Teb Shafa'i, Mozafar hossini Shafa'i Kashani Esfahani, Anzhdusen Joseph, from Persian to Latin.

− Teb Qarabadin Shafa'i, Mozafarhsini Shafa'i Kashani, unknown, from Arabic to Persian.

− Teb Kimiyavi, Brakleios, Ibn Salam Halabi, from Greek to Persian.

− Teb Kimiyavi, Brakleios, Hossein Banai, from Greek to Arabic.

− Teb Kimiyavi ,Braclius, Zain al-Abdin Tabatabai, from Latin to Persian.

− Teb Kimiyavi, Braklius, Seyed Ahmad Hosseini, from Latin to Persian.

− Teb Kimiyavi (translation of Kimiai al-Shafa), unknown, Mohammadfani Shirvani, from Turkish to Persian.

− Tabieeyat, unknown, Jafar Qali Khan Qajar, from Arabic to Persian.

− Alaj al-Ghoraba, Hakim Ghulam Imam, Asghar Ali, from Unknown into Persian.

− Alaj al-Ghoraba, Hakim Ghulam Imam, Mutab Manshi, from Arabic to Urdu.

- Alaj al-Ghoraba, Hakim Ghulam Imam, Mohammadi Mutab, from Arabic to Persian.

- Farhang Schlimmer, Schlimmer Flamenki, unknown, from unknown to Persian.

- Farhang Homayoni, Abdul Ghafoor Homayoni, Abdul Ghafoor Homayoni, from Arabic to Hindi.

- Favaed al-Ashiah, Zakara Razi, Abul Mozafar Haravi, from Arabic to Persian.

- Faiz Aam Fi Shafwal Asqam, Sheikh Qadir Bakhsh, Mohammad Hossein Molavi, from unknown to Urdu.

- Gharabadin Farangi, unknown, Mattis DeSilva, from Latin to Persian.

- Gharabadin Ghadri, unknown, Akbar Shah Arzani, from Arabic to Persian.

- Koliat dar Teb Jadid, European physician, unknown, from Latin to Persian

- Kimia al-Shafa, Seyyed Khorasani, Mohammadfani Shirvani, from Turkish to Persian.

- Kimia Basiligha, Braclius, Mohammad Ali Mousavi Dezfouli, from Latin to Arabic.

- Kimia Braclius, Braclius, Mohammad Jaafar Parhehi, from Latin to Arabic.

- Gehar Ganj, Tankloshah Kabir, Mohammad Ibrahim Qaragazlu, from Hindi to Persian.

- Majma al-Adavieh Naseri, unknown, Alireza Khan Tabib, from unknown into Persian.

- Ma'rifah al-Sumum Naseri, unknown, Mohammad Hasan Zanouzi Tabrizi, from unknown into Persian.

- Miftah al-Khwas, Shlimer Flemangi, Mohammad Taghi Kashani, from French to Persian.

- Miftah al-Dawiya Naseri, French physician Hossein Khan Hanjan Kashani, from French to Persian.

- Mofradat Bakrami, Madan Pala, Mohammad Chiraguddin Lahori, from Hindi to Persian.

- Mofradat Pezeshki, Mohammad Hossein Aghili Alavi Shirazi, Jahangir Mirza, from Arabic to Persian.

- Manafe al-Alaghzie, Zakaria Razi, unknown, from Arabic to Persian.

- Minhaj al-Bayan Fima Yatsavad Al-Insan, Ibn Jazla Baghdadi, Mirhashim Muhaddith, from Arabic to Persian.

- Nasir al-Maluk (Nasiriyah), unknown, Abu al-Qasim Nayini, from unknown to Persian.

- Yadgar Rezaei, Reza Ali Hyderabadi, Boal Mohsen, from Persian to Urdu

Translated sources in the field of 'psychiatry'

- Advie Ghalbie, Ibn Sina, Ahmadlallah Khan Dehlavi, from Arabic to Persian.

- Amraz Damaghi, Prussia, Mohammad Hossein Afshar, from English to Persian.

- Amraz Asabani, Krizel, Ali Hamdani, from French to Persian.

- Bar-al-Saaa, Zakaria Razi, Mohammad Jamil Khan, from Arabic to Urdu.

- Teb Shahabi (Shifa al-Mariz), Shahab al-Din Naguri, unknown, from Farsi to Urdu.

- Teb Shahabi, Shahabuddin Naguri, unknown, from Arabic to Urdu.

Translated sources in the field of 'gynaecology and midwifery'

− Bologh al-Ebtahaj fi Sehat Al-Azdwaj, Nasimbeyk Effendi, Nasimbek Effendi, from French to Turkish.

− Balogh al-Ebtahaj fi Sehat Al-Azdwaj, Nasimbeyk Effendi, Akbarbek Lahori, from Turkish to Hindi.

− Bologh al-Ebtahaj fi Sehat Al-Azdwaj, Nasimbeyk Effendi, Mohammad Shirazi, from Hindi to Persian.

− Behjah al-Roaasa in the treatment of gynecological diseases, Ahmad Effendi, unknown, from Arabic to Persian.

− Behjah al-Roaasa in the treatment of gynecological diseases, unknown, Ahmad Effendi, from Arabic to Turkish.

− Tahrir al-Marah (Tarbiat Nesvan), Ghasem Amin Mesri, Yusef Ashtiani, from Arabic to Persian.

− Talim al-Qawabel, Harution Triaikan, Zebardast Khan, from French to Persian.

− Soal va Javab Tabiyeh, Aristotle Talis, Asgharhossein Farukhabadi, from Arabic to Hindi.

− Teb Professor King, unknown, from Latin to Persian.

− Molodih fi Haghigha al-Weladeh, unknown, Ali Mohammad Tabib Karuni Isfahani, from unknown to Persian.

Translated resources in the field of 'infectious diseases'

− Smallpox and Measles, Zakaria Razi, Najmabadi, from Arabic to Persian.

− Badai-ul-Hikma, Polak, Mohammad Hossein Afshar, from French to Persian.

− Cholera Disease, Polak, Ali Naqi Khan Jadidul Islam, from French to Persian.

− Cholera, Polak, Mohammad Hossein Afshar, from French to Persian.

− Talimnameh, Richard Karmack, Mohammad Khoei, from English to Persian.

− Resale on the treatment of cholera, Polak, Mohammad Hossein Afshar, from French to Persian.

− Zubdeh al-Hikmeh Naseri, Toulousan, Mustafa Alavi Esfahani, from French to Persian.

− Description and Treatment of Fever, Polak, Mohammad Hossein Afshar, from French to Persian.

− Plague, Toulousan, Mohammad Rezi Tabatabai, from French to Persian.

− Medicine, Toulousan professor, Mustafa Alavi Esfahani, from French to Persian.

− Treatment of Diphtheria, Mohammad Kermanshahi, Mohammad Kermanshahi, from unknown to Persian.

− Makhbe al-Taoun and al-Vaba, Elias Yehudi, Ali Asghar Maravi, from unknown to Persiani.

− Matlab al-Swal, Zakariya Razi, Ahmad Sharifi Tankabani, from Arabic to Persian.

− Marafah al-Sal, Elizeh Ribar, Reza Sediq Yahiavi, from French to persian.

− Cholera, Yardun Daud Irvani, Yazdanbakhsh Afshar, from English to Persian.

− Wabayeh, Bazil, Abdul Majid Thaghafi, from English to persian.

Translated sources on the subject of 'Islamic medicine'

− Zehbieh, attributed to Hazrat Reza, Mohammad Toosi Mashhadhi, Arabic to Persian.

− Zehbieh, attributed to Hazrat Reza, Mohammad Momin Qazvini Al-Muti, Arabic to Persian.

− Zehbieh, attributed to Hazrat Reza, Mohammad Mahdi Ali Khan, Arabic to Persian.

− Zehbieh, attributed to Hazrat Reza, Mohammad Mahdi Ali Khan, Arabic to Persian.

− Zehbieh, attributed to Hazrat Reza, Mohammad Nasir, Arabic to Persian.

− Zehbieh, attributed to Hazrat Reza, Mulla Faizullah, Shushtri, Arabic to Persian.

− Zehbieh, attributed to Hazrat Reza, Noor Al-Din Mohammad Esfahani, Arabic to Farsi.

− Teb al-Reza, attributed to Imam Reza, Javad Fazel, from Arabic to Persian.

− Teb al-Reza, attributed to Imam Reza, Mohammad Toosi Mashhadi, from Arabic to Persian.

− Teb al-Reza, attributed to Imam Reza, Mohammad Taqi Majlesi, from Arabic to Persian

− Teb al-Reza, attributed to Imam Reza, Nasir Al-Din Mirsadeghi, from Arabic to Persian.

− Teb al-Reza, attributed to Imam Reza, Noor al-Din Mohammad Isfahani, from Arabic to Persian.

− Teb al-Reza, attributed to Imam Reza, Hashim Tehrani, from Arabic to Persian.

− Teb-Nabi, Abu al-Abbas Jafar Samarqandi, Seyyed Hossein Hosseini, from Arabic to Persian.

− Teb-Nabi, Holy Prophet, Khatunabadi, from Arabic to Persian.

− Teb-Nabi, Jalaluddin Siyuti, Mohammad Arzani, from Arabic to Persian.

− Tebl-Nabi, Ali Hamedani, Mahmoud Zarandi, from Arabic to Persian.

− Teb-Nabi, Mohsen Agheel, unknown, from Arabic to Persian.

− Ghanonche, Mahmoud Chaghmini, Akbarshah Arzani, from Arabic to Persian.

− Ghanonche, Mahmoud Chaghmini, Shams Manjem, from Arabic to Persian.

− Ghanonche, Mahmoud Chaghmini, Sadegh Ali Khan, from Arabic to Persian.

− Ghanonche, Mahmoud Chaghmini, Abdullah Khorasani, from Arabic to Persian.

− Ghanonche, Mahmoud Chaghmini, Mohammad Taghi Mirzadeh, from Arabic to Persian.

− Koliat Ghanon, Ibn Sina, Fethullah Shirazi, from Arabic to Persian.

Translated sources on the topic of 'traditional medicine'

− Advieh va Noskheha, Schlimmer Flemanki, Zain al-Abidin Motman Kashani, from French to Persian.

− Al-Asbab and al-Alamat, Najibuddin Samarghandi, Ahmad Sharifi Tankabani, from Arabic to Persian.

− Al-Asbab and al-Alamat, Najibuddin Samarghandi, Abbas Agha Kochuch, from Arabic to Persian.

− Bahr al-Jawahar, Mohammad Tabib Heravi, Mohammad Siddiq, from Arabic to Persian.

− Taj al-Elaja, Ibn Sina, Sedid al-Din Kazruni, from Arabic to Persian.

− Taj al-Elaja, Ibn Sina, Abed Hossein Motawatan, from Arabic to Persian.

- Taj al-Elaja, Sadidi, Abed Hossein Lakhanvi, from Arabic to Urdu.

- Taliph Sharif, Mohammad Sharif Khan Dehlavi, John Playfer, from Hindi to English.

- Tohfe al-Khaghan, Zakaria Razi, Ahmad Qajar, from Arabic to Persian.

- Tohfe Hatamieh, Sheikh Bahai, Mohammad Chasari Bukhari, from Persian to Turkish.

- Tohfe al-Reza al-Ghakhira Al-Muluk Al-Najba, unknown, Habib Isfahani, from Arabic to Persian.

- Tahghigh al-Ghavaed, Mahmoud Chaghmini, Junidullah Hazeq, from Arabic to Persian.

- Translation of Sharh Laghz Ghanon, Malik al-Atbaa Shirazi, and Ebrahim Mesgar Zanjani, from Arabic to Persian.

- Translation and explanation of Hamyat Ghanon, Ibn Sina, and Mohshi Mohammad Wasil Khan, from Persian to Arabic.

- Tafsir Hippocrates, Ibn Nafis, Abdul Hossein Isfahani, from Arabic to Persian.

- Jame al-Fawaid, Yousefi Heravi, Hakim Rostam, from Arabic to Urdu.

- Hamyat Ghanon, Ibn Sina, unknown, from Arabic to Persian.

- Hamyat Ghanon, Ibn Nafis, unknown, from Arabic to Persian.

- Kholase dar al-Teb Ghanon, Mahmoud Chaghmini, unknown, from Arabic to Persian.

- Daf al-Mazar, Ibn Sina, Hossein Jabri Ansari, from Arabic to Persian.

- Dode Hayat, Melskat, unknown, from Arabic to Persian.

- Al-Rahma fi Teb wa al-Hikma, Jalaluddin Siyuti, Ahmad Mullah Suleiman, from Arabic to Persian.

- Al-Rahma fi Teb wa al-Hikma, Jalaluddin Siyuti, Seyed Abd Al-Fattah Khan Khwaja Abdullah, from Arabic to Persian.

- Al-Rahma fi Teb wa al-Hikma, Jalaluddin Siyuti, Mehdi Sanobri, from Arabic to Persian.

- Resale al-Zahabih, attributed to Imam Reza, unknown, from Arabic to Persian.

- Resale Hamyat, Mohammad Hossein Tabib, unknown, from Arabic to Persian.

- Resale Wabayeh, unknown, Abdul Karim Khan Motamed Al-Hakma-Tahrani, from Arabic to Persian.

- Zobda Farsi, Muhammad Abdul Aziz Multani, Muhammad Ibn Hashem, from Arabic to Persian.

- Zoorod Akhzar va Yaghut Ahmar, Mohammad Abdul Aziz Multani, Mansoor Ali Khan, from Arabic to Urdu.

- Sharh al-Asbab and Al-Alamat, Burhanuddin Nafis Kermani, Abulqasem Mousavi Zanjani, from Arabic to Persian.

- Sharh Ghanonche, Mohammad Chaghmini, Iskanderfaiz Tabib, from Arabic to Persian.

- Shafa al-Alil, Ibn Qayyim Jozieh, Khorram Ali Maulvi Belhavi, unknown.

- Indian Medicine, Ainul Molk Shirazi, Hakim Ahsanullah, from unknown to Persian.

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- Al-Fosul al-Ilaghie, Shams Al-Din Ilaghi, unknown, from Arabic to Persian.

– Fosul Hippocrates and Galen, Galen, Hanin ibn Ishaq, from Greek to Arabic.

– Fosul Hippocrates and Galen, Galen, Gholamhossein Kantori, from Arabic to Persian.

– Ghanon, Ibn Sina, Hakim Ali Gilani, from Arabic to Persian.

– Ghanon, Ibn Sina, Fathullah Shirazi, from Arabic to Persian.

– Ghanon, Ibn Sina, Mohammad Sharif Khan from Arabic to Persian.

– Ghanon, Ibn Sina, unknown, from Arabic to Persian.

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– Kenzal Zahab, attributed to Imam Reza, Mohammad Toosi Mashhadhi, from Arabic to Persian.

– Gul Jafari (Resale of Al-Ahliljah), attributed to Imam Jafar Sadiq, Muhammad Tusi Mashhadhi, from Arabic to Persian.

– Mahmoudieh, attributed to Imam Reza, Abu al-Qasim Mousavi Zanjani, from Arabic to Persian.

– Man La Yahzara Al-Tabib, Zakaria Razi, Mahdi Esfahani, from Arabic to Persian.

– Mojez Azim al-Shafa, Ibn Sina, unknown, from Arabic to Persian.

– Mojez al-Ghanon, Ibn Sina, Ibn Nafis, from Arabic to Persian.

– Mousavi dar Teb Razavi, attributed to Hazrat Reza, Hossein Mousavi, from Arabic to Persian.

– Nahayet al-Araz (Kamel Al-Sanaa), Ali bin Abbas Majosi, Gholamhossein Kanturi, from Arabic to Persian, traditional medicine

Translated sources in the field of 'modern medicine'

– Translation of the clinic lessons, Albo, Khalil Saghafi, from French to Persian.

– Hadayegh al-Naseri, Joseph Rek, Taghi Ansari Kashani, from French to Persian.

– Zubdah al-Hikmeh, Polak, Ali Naqi Khan Javed al-Islam, from French to Persian.

– New medicine, Albo, Khalil Thaghafi, from English to Persian.

– New Medicine, King, unknown, from Latin to Persian.

– Al-Teb al-Jadid al-Khimiyai, Theodore Braxos, Mohammad Kazem Kashani, from Latin to Arabic.

– Ghavaed al-Amraz, Schlimmer Flemanki, Mohammad Hossein Afshar from French to Persian.

– Koliat Teb farangi, Schlimmer Flemanki, unknown, from unknown to Persian.

– Kooft, French physician, Mohammad Kermanshahi, from French to Persian.

Translated sources in the field of 'cardiovascular diseases'

– Amraz Davaran Khoon, Schlimmer Flemanki, Mohammad Taghi Hosseini Kashani, from French to Persian.

− Tafrih al-Gholub, Ibn Sina, unknown, from Arabic to Hindi.

− Davaran dam, Toulousan, Toulousan, from French to Persian.

− Fad, Zakaria Razi, Kamaluddin Hossein Shirazi, from Arabic to Persian.

− Al-vajizah fi Duran al-Dam and Tashrihat al-Moltaalegh, Toulousan, Ali Hamedani, from French to Persian.

Translated resources in the field of 'paediatrics'

− Ahya al-Atfal Naseri (Mozaffari), unknown, Ali Hamedani, from French to Persian.

− Amraz al-Atfal, Schlimmer Flemanki, Mohammad Kermanshahi, from French to Persian.

− Amraz al-Sabian, Schlimmer, unknown, from French to Persian.

− Tadbir Saha-Al-Atfal, Iskandar Jaridni, Ali Al-Nasah, from Arabic to Persian.

− Hefzo al-saha Atfal, Abdul Khaliq Akhundzadeh, from Russian .

− Medicine, Joseph Frederick, Mohammad Taghi Kashani, from French to Persian.

Translated sources in the other fields of 'dentistry, medical ethics, as well as respiratory, skin, and death symptoms'

− Amraz Jahaz Tanafos, Schlimmer Flemanki, Mohammad Taghi Hosseini Kashani, from French to Persian.

− Amraz Dandan, unknown, Ali Hamedani, from Arabic to Persian.

− Aeen Pezeshki, Ibratis, unknown, from Arabic to Persian.

− Resale Ghabrie, , Hippocrates , Muhammad Ataullah Yusuf Khan, from Arabic to Hindi.

− Resale Ghabrie, Hippocrates, unknown, from Greek to Persian.

− Zeinat al-Abdan, Schlimmer Flemanki, Mohammad Taghi Hosseini Kashani, from French to Persian.

− Resale Ghabrie, Hippocrates, Adel Shirazi, from Arabic to Persian.

− Teb Manzum, Bozorgmehr, unknown, from unknown to Persian.

− Teb Manzum, Hakim Al-Din Sufi, unknown, from unknown to Arabic.

− Teb Manzum, Mohammad Taqi Malik Al-Atbaa, Bashir Hossein, from Farsi to Urdu

− Teb Manzum, unknown, Almansuri to Arabic.

− Masnavi al-Hifz Al-Saha, Sea Zouk Al-Hakim, Adel Shirazi, from Arabic to Persian.

− Majmaal al-Hekmatin, European physician, Mohammad Khoei, from unknown to Persian.

− Marifah al-Haiwan, French Kasawieh, Mehdi Khan Itzad al-Molk, from French to Persian.

− Miftah al-Aman, Guillaume Ambourge, Ali Namehnagar, from French to Persian.

− Molkhes Fosul Hippocrates, Galen, Gholamhossein Kantori, from Arabic to Persian.

Regarding the second research question, which focuses on the analysis of bibliographic data of translated medical sources from the Qajar era, the following patterns emerge:

The bibliographic data reveals that 11 translated book titles in the field of medical pathology are predominantly translations of works by the French author Kreisel. This suggests that pathology was one of the modern medical sciences introduced to Iran during the Qajar era through the translation of specialized publications. In the field of sexually transmitted diseases, 17 book titles were translated, with most of these translations originating from Arabic to Persian. Notably, one book by Galen was translated from Greek into Persian, while additional translations came from Hindi, French, Arabic, Turkish, and even Sanskrit.

In the field of surgery and organ dissection, 22 translated titles are identified, most of which are translations of Western, particularly French, works into Persian. Mohammad Hossein Afshar is the most prolific translator, and Pollak is the most prolific author in this field. Ophthalmology, referred to as "Kahali" in the Qajar era, saw the translation of 7 book titles, with the French author Polak being the most prolific. Most of these translations were from French into Persian.

The field of internal diseases is represented by 78 translated titles, with Arabic as the predominant source language and Persian as the target language. Other source languages include French, English, Greek, and Hindi. Prolific writers in this field include Akbarshah Arzani, Ibn Jazla, and Zakaria Razi.

While some books share identical titles, variations in source language, target language, and translators have resulted in their inclusion as distinct bibliographic records. Of particular importance is the translation of Mir Seyed Ismail Jorjani's "Kharazmshahi" from Persian into Arabic and Urdu during the Qajar era.

In pharmacology and medicinal plants, 54 book titles were translated, primarily from Hindi, Turkish, Arabic, and Urdu into Persian, indicating an Eastern geographical origin for most of these works. Notable writers in this field include Braklius and Hakim Gholam Imam.

The field of psychiatry saw 6 books translated from French, English, and Arabic into Persian and Urdu. In this domain, translator Ali Hamedani frequently translated Kreisel's French medical works into Persian. Gynecology and midwifery are represented by 10 translated sources, with Nasimbeyk Effendi as the most prolific author. Of these works, only two originated from Western languages (French and Latin), while the others came from Turkish, Indian, and Arabic, mostly translated into Persian.

There are 16 translated sources on infectious diseases, primarily of Western origin, with French as the predominant source language. All were translated into Persian. Mohammad Hossein Afshar and Polak are the most prolific translator and author, respectively, in this field. Islamic medicine is represented by 24 translated titles, with Imam Reza and Mahmoud Chaghmini as the most prolific authors. The source language of all these works is Arabic, and the target language is Persian.

In traditional medicine, 53 book titles were translated, with Arabic as the main source language and Persian as the target. Notably, Ibn Sina's "Ghanon" was translated into Persian by four different translators, with Mohammad Tousi Mashhadi and Gholamhossein Kantori being prolific translators in this field.

Modern medicine, represented by translations of Western works, primarily from French into Persian, features Schlimmer as the most prolific author and Khalil Saghafi as the most prolific translator. In the field of cardiology and vascular medicine, 5 titles were translated, with 4 into Persian and 1 into Hindi. Among these, the translation of Ibn Sina's "Tafrih al-Gholoob" into Hindi and Zakaria Razi's work on bloodletting are noteworthy.

Pediatrics saw the translation of 6 titles during the Qajar era, with most works translated from French and Russian into Persian, indicating that this branch of medical science was also introduced to Iran via Western sources during the Qajar era. Schlimmer Flemanki is the most prolific writer in this field.

In addition to the major categories, other medical specialties such as dentistry, medical ethics, respiratory diseases, dermatology, and the translation of works like Hippocrates' "Resale Ghabrie" and Galen's "Molkhes Fosul" are notable due to their medical significance.

Conclusion

This study explored the rich history of medical text translation during the Qajar era in Iran. By reviewing sources on the history of translation in Iran, particularly medical texts, it was found that prominent Iranian scholars such as Ahmad Monzavi, Abbas Nafisi, Mahmoud Najmabadi, Abdolhossein Azarang, and Ehsan Yarshater have contributed significantly to this field by compiling bibliographies, books, and review articles. Some of these works include manuscripts that offer a brief historiography of translation in Iran, though they generally do not focus on the Qajar era. The available sources and their statistical data, however, appear neither comprehensive nor entirely accurate. This may be due to the absence of modern tools such as the Internet and databases, challenges in recording information, historical issues, and a general lack of attention from historians toward scientific historiography in the East.

Today, scientific communities are often unaware of the crucial role translation has played in their development, including the translation of medical texts in Iran. Therefore, historical research in this area can offer valuable insights. In addition to exploring the history of translation during the Qajar era, this study also attempts to analyze statistical data on translated medical sources by combining existing bibliographic information with modern databases.

Looking forward, further statistical analysis of translated texts from the Qajar era will shed light on the significant role translators played in advancing medical science in Iran. These findings will also benefit future research on the history of medicine, as they may help recover sources that have been lost or overlooked throughout different periods in Iran's history.

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Ecotranslation: A Metaphorical Comparison Between Ecology and Social Systems Theory

Pantea Changizi[*] iD | PhD Candidate in Translation Studies, Department of English Translation Studies, Allameh Tabataba'i University, Tehran, Iran

Abstract

Translation has been examined from diverse perspectives, including linguistic, cultural, and sociological viewpoints. Across these fields of study, human involvement has remained central to all translational activity—whether as translators, publishers, editors, or in other roles. Even when the primary focus has shifted to aspects like the text itself, human influence invariably surfaces. In other words, certain facets of translation have remained unexplored, overshadowed by the dominance of human agency. With the advent of ecotranslation, which merges ecology with translation studies, these hidden dimensions of translation can now be uncovered, opening up new avenues for research. This paper explores Luhmann's social systems theory in comparison with ecology, drawing on a parallel approach to that used by Beebee, Childress, and Weidman (2017) in *Translation Ecologies: A Beginner's Guide*. However, whereas their work contrasts ecology with polysystem theory, this paper instead examines the relationship between ecology and social systems theory within the context of translation studies.

Keywords: Ecotranslation, Ecology, Translation, Social System Theory

Introduction

In translation studies, we typically consider various elements, such as different genres of translation, the factors influencing the final translation product, and the roles of the agents and parties involved, as well as the translators' work environment and status. While other examples could certainly be added, these topics have long been discussed within translation studies and are not entirely new concepts. However, if this conversation had taken place years ago, it's unlikely anyone would have envisioned a concept like "eco-translation". Merging ecology and translation might seem unusual, but this concept marks a new direction: "Ecotranslation is not a task; it's a new form of life. Ecotranslation starts by challenging our intellectual capacity and emotional resilience, and then calls on a collective exchange – again, more importantly, a listening posture" (Shread, 2023, pp. 115-116).

Eco-translation challenges traditional perspectives and reveals the need to expand beyond conventional understandings of translation. This transformation, however, requires more than simply introducing a new concept and expecting readers to interpret it independently. It calls for collaborative research from experts across fields to keep pace with these contemporary ideas. As Hu and Tao (2016) argue, "based upon the knowledge of the deficiency of contemporary translation theories, scholars in translation academia have studied and, in particular, provided their remarks, which suggest that the contemporary translation theories need improvement" (p. 122).

> Clearly, the imperative for a radical rethinking is incumbent upon us, one that starts by acknowledging the power of all those excluded from the very realm of translation through the human exceptionalism that may lead ultimately to the demise of the human. The empowerment of human translators is thus qualified by reckoning with vast forces of translation beyond humankind. (Shread, 2023, pp. 113-114)

In translation studies, the central figure in the translation process – beyond the text itself, whether written or oral – is the "human". The translator, publisher, editor, and other participants each play distinct yet interconnected roles in producing the final translated product. Ecotranslation has emerged to reveal previously overlooked aspects of translation that were obscured by the prominence of human involvement. As noted, scholars and researchers in translation and related fields bear the responsibility of illuminating these hidden dimensions. "Due to different countries, cultures, languages, educational and training backgrounds, researchers have different interests which lead to different focuses among the existing translation theories" (Hu & Tao, 2016, p. 121).

Translation has been approached from many perspectives, leading to a variety of theories. "Various scholars have studied translation from the perspective of linguistics. Roman Jakobson, a linguist of the Prague School, was among the first" (Hu & Tao, 2016, p. 116). Ecotranslation, in turn, offers a fresh lens for examining translation, addressing areas that traditional approaches may not fully encompass.

> Linguistic approaches to studying translation theories are mainly limited to the bilingual (language-pair) transference, form and context … Literary translation is the earliest and the most important translation activity in the history of translation, which is influenced by philological theories (namely, the theories of Literature and Art). (Hu & Tao, 2016, p. 117)

The basic concept of translation as an "ABC act" refers to the straightforward act of translating from Language A to Language B (or vice versa). In this view, translation is primarily approached from a linguistic perspective, focusing on language itself. Moving beyond this purely linguistic approach, however, translation can be studied from a cultural perspective as well. "Cultural factors are deeply integrated into the language system, reflecting the social, historical, cultural and psychological characteristics of a nation, including ways of thinking, values, social customs, religious beliefs, psychological states, cultural background, etc." (Hu & Tao, 2016, p. 118). Considering these cultural

dimensions in translation involves examining the cultural features and nuances conveyed in the source text that may be implied or inferred within its context.

When encountering a translation issue, one common source of difficulty lies in "cultural-specific items" – words, phrases, or expressions that are "culture-bound" in the source text. Resolving such issues requires the translator to find either an appropriate equivalent (if available) or to create an alternative solution that conveys the intended meaning.

To many, especially laypersons, the primary function of translation is to enable communication between two parties, individuals, or texts. In this context, the translator acts as a "mediator" between two languages. "Eugene Nida … has studied translation from the perspectives of communication and information theory. He believes that translation is a communicative activity and also a way for the exchanging of information and ideas between two languages" (Hu & Tao, 2016, pp. 118-119). Thus, within the communicative aspect of translation, there are at least two key parties – the speakers of Language A and Language B – with the translator serving as a bridge to facilitate effective communication between them.

> Communication is the unity of the difference between three selections: utterance, information, and understanding. Communication is always communication on something, as it always includes information. Information is a selection, in that the choice of any topic excludes other topics. Information is always uttered. Communication includes utterance, showing intentions, motives, reasons, knowledge; utterance is a selection, as it is designed in a way instead of others. Understanding is a crucial selection to realise and differentiate utterance and information: through understanding. Understanding makes it possible for further communication. (Luhmann, 2017, pp. 16-17)

Communication consists of three main components: utterance, information, and understanding. In a communicative exchange between speakers of two languages, A and B, Speaker A (of Language A) may "intend" to convey a message containing certain "information". However, if Speaker A does not know Language B, and Speaker B does not know Language A, a translator is needed to mediate so that "understanding" (communication) can occur. In this process, the translator's role serves as the communicative link enabling the exchange.

Taking this a step further, translation can also be viewed from a societal perspective that combines cultural and communicative elements. In this expanded view, society encompasses the cultural, social, political, and other contextual factors embedded in the source text. These elements come together to influence both the content and approach of the translation, creating a richer and more informed translational act.

> The principles of "socio-translation studies" originated from James Holmes. He advocates that the functionally orientated descriptive translation is not interested in the description of translation itself, but in the role of translation in the social culture of the target language, emphasizing the context rather than the text. (Yan, 2022, p. 16)

The scope of translation is continually expanding. No longer limited to the linguistic exchange between two languages, translation now encompasses a broad range of concepts, addressing cultural, social, and contextual elements that influence both written and oral translation acts.

> When more focus is placed on function and context, "Translation Sociology" will take shape. While Holmes also pointed out that name as "Socio-Translation Studies" is more accurate because this new discipline is both the research field of translation and sociology. (Yan, 2022, p. 16)

In summary, "translation sociology" or "socio-translation studies" refers to an approach where the sociological context of the source and/or target text is carefully considered during the translation

process. This involves being mindful of the sociological norms and restrictions embedded in the source text, as well as those of the target culture, which may influence text selection or impact the translation approach itself. In other words, certain texts may be preferred or restricted based on the cultural and societal norms of the target language.

A key concept that specifically addresses the purpose and constraints of the target language in translation is "skopos theory":

> Skopos Theory, a component of the theory of translational action, is first proposed by Hans J. Vermeer, a German scholar. It regards translation as a type of transition action, which is distinctive as it is based on its original text. Skopos Theory believes that translation is an action, and since every action has a purpose, translation is conditioned by its purpose. (Hu & Tao, 2016, p. 119)

According to "skopos theory", the target language and culture guide the selection and approach to translating a source text. This means that if a source text contains language or themes that are considered taboo in the target culture, these elements may need to be modified or omitted to align with cultural norms and regulations before the text is published and shared within that society.

When attention shifts to the translated products themselves, a critical question arises: Do all translated works hold the same value within a particular culture and society? The answer to this lies in the concept of "polysystem theory":

> Polysystem was proposed by Israeli literary theorist Itamar Even-Zohar in the 1970s. It intends to study the relationship between literary system and its social environments. The theory argues that there are always primary and secondary literary systems in a certain culture, with the refined culture taking up an important position. (Hu & Tao, 2016, p. 120)

The concept of "polysystem theory" is not limited to translated works; it extends to all "literary products", both translated and original. According to this theory, not all literary products hold the same status within the "literary system" of a particular culture and language.

So far, six different approaches to translation have been explored. Each new approach represents a broader perspective on the translation phenomenon. For example, skopos theory expands beyond a purely linguistic focus to consider the purpose and cultural context of translation, making it a more encompassing view than previous approaches.

While there is general agreement on these established approaches, some hold differing views. One perspective reduces translation to a binary: good or bad, categorizing all translations based solely on quality. However, another view suggests a more nuanced spectrum, where translations are not simply good or bad but may fall somewhere in between. This perspective aligns with the concept of "deconstruction":

> With his deconstruction on translation studies, Jacques Derrida opened up new horizons for translation and infused its studies with new vitality. The term *differance* which means both 'defer' and 'differ', is the cornerstone of his theory. In his opinion, due to the differences between signified and signifier and their uncertainty and variability, the language itself is not harmonious but there exist various kinds of differences, contradictions and ambiguities. (Hu & Tao, 2016, p. 120)

This implies that, for instance, translations cannot simply be classified as good or bad; rather, there exists a middle ground that may require revision to achieve an acceptable standard of translation. According to the principle of deconstruction, dichotomous terms like good and bad become inadequate, as this concept serves as a tool to challenge previously established notions and ideas that were widely accepted. Through this new lens, we can examine translations with greater depth,

allowing for the possibility of rejecting outdated concepts or replacing them with entirely novel ideas and frameworks.

Table 1. Summary of Approaches to Translation Studies (Hu & Tao, 2016, pp. 116-121)

Approach	Scholars	Focus
Linguistic	Roman Jacobson	Language pair, equivalence
Cultural	-	Social, historical, cultural and psychological characteristics
Communication	Eugene Nida	Translation as a communicative activity and a way for the exchanging of information and ideas
Socio-Translation Studies	James Holmes	The role of translation in the social culture of the target language
Skopos Theory	Hans J. Vermeer	Translation as a type of action and having a purpose
Polysystem	Itamar Even-Zohar	Primary and secondary literary systems in a certain culture
Deconstruction	Jacques Derrida	Differences between signified and signifier

Discussion

Up to this point, this paper has focused primarily on the concept of translation, with little attention given to the specific nature of "ecotranslation". Before delving into ecotranslation, it is essential to briefly examine the term "ecology". Recently, especially in the context of globalization, ecology has taken on a pivotal role in ensuring the survival and sustainability of human societies, cultures, and languages (Yuliia, 2021, p. 701).

> The ways that the call to eco-translation has been taken in many con-texts in a conventional manner of summoning scholars to a new area of representation and theme of study that understandably garners interest as authors seek to express their disarray and offer narratives of climate disruption, environmental degradation, loss and the desire for conservation. (Shread, 2023)

In the field of translation, research has predominantly focused on traditional human roles, such as the translator, publisher, and editor. Discussions surrounding non-human roles, particularly from an ecological perspective, have been notably scarce. The integration of ecology into translation has given rise to the concept of "ecotranslation", which offers a fresh approach and a new framework for examining aspects of translation that were previously overlooked.

Ecology can be employed in three distinct ways to study various phenomena: as a theme, a metaphor, and as a form of criticism.

Ecology as a Theme

"Alongside the advent of ecocriticism as a newly relevant form of literary criticism, some Translation Studies theorists have recently adopted the theme of ecology as a new research topic. In other words, here ecology is the object of study" (Shread, 2023, p. 117). In this context, ecology serves as the primary subject, allowing researchers to explore it from various related perspectives.

Ecology as Metaphor

Shread (2023, pp. 118-119) argued that the thematic and metaphorical understanding of ecology is employed as a "metaphorical analogy" to better introduce or comprehend other concepts. This

metaphorical use can provide insights that enrich our understanding of translation and its broader implications.

Ecotranslation as Radical Practice and Criticism

In discussions of ecotranslation, Cronin frequently underscores the often-overlooked reality that the technological entanglements of the digital age are inherently material. He asserts that "there is nothing virtual about the ecological impact of the virtual". Cronin urges us to consider the consequences of extractivist practices on the material foundations essential for the task of extracting meaning. He highlights "the other 'black box' of translation in a globalized world", emphasizing that it is not only what occurs in the translator's mind but also what transpires when their fingers touch the screen or hit the keyboard, referring to "the long tail of resource extraction" (Shread, 2023, p. 120).

By adopting ecological approaches in translation, the perspective shifts dramatically from traditional views. Research can move beyond established theories and discussions to explore previously overlooked facets, opening new avenues for understanding the interconnectedness of translation and ecological concerns.

> Academically speaking, ecology is a philosophy, a science, an aesthetics and technology; it is a systemic science of studying the relationship between organic bodies, including human beings and environment … To put it simple, ecology is a science studying the environment relations connecting human beings and their peers, things and their background . . . ecology, as a science based on holism, focuses its research methods on the entirety of interrelation and interaction". (Hu & Tao, 2016, pp. 123-124)

In this paper, the aim is to study Luhmann's "social system theory" in translation, drawing parallels with the work *Translation Ecologies: A Beginner's Guide* by Beebee, Childress, & Weidman (2017). Michael Cronin emphasizes the significance of examining translation as a process shaped by socio-cultural forces within political and environmental contexts, as well as understanding it as a "product" (Yuliia, 2021, p. 702). When translation is analyzed from a broader perspective, such as a societal or social aspect, a wider range of factors can be considered, shifting the focus away from merely language pairs or the translator's strategies for resolving translational problems. Although these aspects remain valid subjects for study, they are approached differently than before. For instance, using ecology as a metaphor – consistent with the methodology of this study – enables a more diverse exploration of translation.

As previously mentioned, this paper aims to examine Luhmann's social system theory in translation alongside the insights from Beebee, Childress, & Weidman's (2017) work. By employing ecology as a metaphor, this study seeks to analyze Luhmann's perspective on translation through a sociological lens in an ecotranslational context. This approach facilitates a deeper understanding of how translation operates within complex social systems and the ecological factors that influence this dynamic.

> Expanding the category of translators and interpreters (hereafter, translators refers to both) and redistributing power amongst them as we learn to receive new forms of translation, the call to empower translators is, then, far more radical than it even thinks. In the same way … biosemiotics [another new approach to Translation Studies] argue that humans are not the only ones to have language, ecotranslation reminds us that humans are not the only ones to translate. (Shread, 2023, pp. 113-115)

With the help pf ecotranslation, it is learned that human being is no more the only omnipotent factor to be considered in studies. However, there are many more aspects which were previously under the

shadow of human and were not dealt with before the emergence of ecotranslation. Now the time has come to unveil these hidden sides of translation and study each of which from a proper vantage point.

> Different from other approaches to translation studies, Eco-Translatology takes "ecology" as its perspective of argumentation, a comprehensive and holistic study of translation from the ecological perspective. Namely, Eco-Translatology tries to interpret and examine translation from eco-holism, rather than from the perspectives of linguistics, literature, culturology, communication, Skopos, feminism, ideology, etc. (Hu & Tao, 2016, p. 123)

Ecotranslation is indicated to study translational subjects on a larger scale than previous methodologies.

> Methodologically, ecology is a holism-based science, thus, the research approach of ecology highlights the integrity of correlation and interaction. Due to such interaction between correlated elements of ecological system, the change of any constituent would lead to modification in others. (Hu & Tao, 2016, p. 125)

Methodologically, ecology is a holistic science that emphasizes the interconnectedness and interactions among its elements. Any change in one component of an ecological system can lead to modifications in others (Hu & Tao, 2016, p. 125). Similarly, both ecology and the sociology of translation share the characteristic of interaction among the various parts of their systems. This interaction is the primary focus of this paper. Each system consists of factors that work harmoniously together, enabling the overall system to function efficiently.

> What's worth mentioning is that, as for translation research, while other various research approaches may possibly pay attention to "holisticism" and "systematic balance" to some degree, however, their focus differs from that of Eco-Translatology … In other words, as long as translation is evaluated from the stand of ecological system, it is natural and a must to consider systematic interaction, balance, coherence and holistic harmony. (Hu & Tao, 2016, pp. 125-126)

Like any other system composed of multiple subsystems, each with its own responsibilities and the need to coordinate with others, translation also functions as a system. Within this system, various internal subsystems work together harmoniously to produce an effective translation.

> Eco-translatology, as has been argued by Chinese scholar Hu Gengshen, approaches translation as a process of the translator's adaptations and selections. It proposes that the focal research concern should be given to translator's subjectivity in both adapting to translating requirements and selecting/choosing translating strategies or concrete linguistic expressions from the translational eco-environment. (Liu, 2011, p. 87)

Each translation begins with the process of selection. First, the translator chooses a work to translate, and throughout the translation process, they continue to engage in selection – whether that involves identifying suitable equivalents (beyond mere mathematical equivalence) or determining the most appropriate solutions for translational challenges. As Liu (2011, p. 88) states, "According to Eco-translatology, translation is 'a selection activity of the translator's adaptation to fit the Translational Eco-environment.'" Another aspect of selection for the translator is ensuring that the translation aligns with the norms and conventions of the target culture and environment, as previously discussed in the section on skopos theory. Beyond selection, various other factors play a role in the translational process. "By analogy with ecological ethics, and in light of translation practice … the following fundamental principles of eco-translation ethics:" (Hu & Tao, 2016, pp. 127-128).

> Firstly, Principle of Balance and Harmony — mainly refers to maintaining the balance and harmony of Source-text Ecology and Target-text Ecology. Specifically, on one hand, through "selective adaptation" and "adaptive selection", translators should try with great effort to

> maintain and transfer the linguistic ecology, cultural ecology and communicative ecology of source text; on the other hand, through "selective adaptation" and "adaptive selection", translators should try with great effort to adapt the target text to the linguistic ecology, cultural ecology and communicative ecology of target text. (Hu & Tao, 2016, pp. 127-128)

One interesting aspect of ecotranslation is how effectively it can describe and study traditional concepts and approaches in translation studies through an ecotranslational lens. The "source and target ecology" can be likened to the norms of the target culture discussed in skopos theory. When it is stated that the translator should adapt and engage in selective adaptation, it can be interpreted in a traditional sense: the translator must consider their purpose and adapt the work to the constraints of the target culture.

> Secondly, Principle of Multiple Eco-Integration — mainly refers to the criteria of translation, which not only requires faithfulness to "source text" and appealingness to "readers", but on the basis of maintaining textual ecology, the Holistic Degree of Adaptation and Selection in order to make the target text "survive/thrive" in the new linguistic ecology, cultural ecology and communicative ecology. (Hu & Tao, 2016, p. 128)

"Maintaining textual ecology" offers a fresh perspective on studying translational phenomena within an ecotranslational framework. Textual ecology refers to the need for the translated text to align with the purpose (skopos) of the translation. For instance, it involves deciding whether culturally specific items from the source text should be preserved exactly in the translated version or substituted with appropriate equivalents that facilitate easy reading for the target audience, avoiding odd or difficult phrasing.

Lastly, the "translator's responsibility" is undoubtedly one of the most crucial factors in the translation process.

> Principle of Translator Responsibility — mainly means that the translator should take "full responsibilities" for translation process, translation behavior and the whole translation activity, specifically, coordinating the interrelationship between "translational eco-environment", "translation community", and "source/target text", so as to, through "translator responsibility", embody the associated interaction and the balance and harmony in ecological holism among "environment", "community", and "text" (three phases). (Hu & Tao, 2016, p. 128)

In discussing the various factors involved in the translation process, a crucial question arises: Is the translator the only participant in this process? Certainly not. It is well recognized that multiple actors and parties contribute to the successful completion and production of the final translation. As noted by Beebee, Childress, and Weidman (2017), "numerous actors collaborate in order to bring about a published translation: literary agents, translators, publishers, funding agencies, reading publics, distribution channels, and so forth. This system of translation is surrounded by its environment."

When considering translation as a holistic system, each involved actor can be viewed as a subsystem that collaborates to create the translated product. As Wolf (2010) states, "Various entities involved in a translation 'action' constitute a set of interdependent systems in the environment of the overall translation system."

> Eco-translatology focuses on three eco-themes. The so called three eco-themes are "ecology," "life," and "survival." "Ecology" here refers to translation ecology, the ecological system and environment of translation. "Life" here refers to the life of the texts involved in translation process, the vital status and living conditions of the texts. And "survival" here refers to the survival of the translators, the living standards and the future development of the translators. (Hu & Tao, 2016, p. 125)

Here, ecology is once again employed metaphorically and analogously to enhance the understanding of translation as a system, along with its various subsystems.

> In speaking of ecology in the narrow sense, that is, as a science attempting to understand the ways that living creatures interact with each other and with their environments, there is a structure of systems nesting within environments. The largest ecological environment is Gaia, also known as the biosphere or the Earth, which is usually divided into biomes, defined as generalized habitats such as tundra, desert, or tropical forest. Within biomes are ecosystems, within ecosystems communities, within communities' populations, which are in turn made up of individual organisms. (Beebee, Childress, & Weidman, 2017, p. 4)

The term "environment" is also relevant in the field of translation, alongside the concept of a system. Translation is characterized as a system composed of various parts and subsystems. In addition to these subsystems, which are smaller components of the overall system, there are larger entities that exist beyond the system itself and can influence it or interact with it. These larger entities can be referred to as the "environment". As Tyulenev (2013) notes, "Translation has always been implicitly or explicitly associated with structures larger than itself: it was considered a factor in the exchange between languages, cultures, or semiotic domains". These larger structures or environmental factors may include language, culture, and other related elements.

> Sociological approaches to translation have been developed on the basis of the insight that translation is an activity deeply affected by social configurations. The majority of these approaches were elaborated in the wake of the "cultural turn", which anticipated many of the issues developed later in more explicitly social contexts and foregrounded concerns related to power, politics, ideology, ethics, or individual agency. (Wolf, 2010, p. 337)

The cultural turn marked a shift away from focusing solely on linguistic and equivalence-based relationships between source and target languages. Instead, attention shifted to aspects such as power relations, identities, and other sociocultural factors. According to Yan (2022, p. 16), "Niklas Luhmann's social system theory and Bruno Latour's actor-network theory have advanced translation research, promoting a 'sociological turn' in the field".

> The German sociologist Niklas Luhmann's social systems theory (SST) allows translation to be viewed as a social system or a subsystem, part of a larger social system. Luhmann theorised modern society as a system consisting of subsystems with their distinct functions ('function subsystems'), such as religion, politics, education, art, translation. Translation can be described as a social system, because it can be shown to have all the properties of a social system. (Tyulenev, 2013)

Earlier, it was noted that translation can be viewed as a system made up of smaller sub-systems. Additionally, translation exists within larger systems, making it a sub-system of these broader entities. For example, society is a large system of which translation is a component. It was also discussed that society, as this larger system, can be regarded as an environment. According to Luhmann (2017, p. 12), "the basic distinction in Luhmann's theory is between system and environment. Social phenomena are seen as social systems, indicating the system as distinguished by the (undetermined) environment". In this context, translation is recognized as a system (whether large or small), while society serves as the surrounding environment.

> Social systems are defined as systems, which produce themselves *qua* systems. This circular self-reproduction is called *autopoiesis* (from Greek *auto*—self, and *poiein*—to produce) . . . autopoietic systems produce their elements themselves out of themselves and thereby constitute operational closures because no outside operation can penetrate them. Autopoietic

> systems are however interactionally open. They utilize energy and information of their environment. (Tyulenev, 2014, p. 350)

Translation, as an "autopoietic" system, enables its sub-systems to operate independently while interacting to produce the translated product. As mentioned earlier, translational systems are influenced by external factors. For example, if a work is being translated, any economic changes in society (the environment), such as inflation, may affect the payments and prices associated with the translator's work. According to Seidl and Becker (2010, p. 8), "the contact with the environment, however, is regulated by the autopoietic system itself; the system determines when, what, and through which channels energy or matter is exchanged with the environment". This implies that each system allows for specific mechanisms, elements, and actors to be involved. For instance, if we consider literary translation as a distinct system, only those works classified as literary translations are permitted to enter this system from the environment. In contrast, texts related to tourism would not be deemed appropriate for this literary translation system, and thus would be excluded.

As previously stated, the primary aim of this paper is to compare Luhmann's social system theory in translation with the ecological sub-systems discussed in Beebee, Childress, & Weidman's (2017) work. While their book compares ecology with polysystem theory, the current paper replicates this approach by instead focusing on Luhmann's social system theory. Consequently, the ecological categories and sub-systems are identical to those in the aforementioned book. The only modification made in this paper regarding the ecological side of the table is the merging of the "population" and "individual" components into a single sub-system.

Table 2. A parallel comparison between ecology and Luhmann's social system theory in translation (based on Beebee, Childress, & Weidman, 2017)

Ecologies	Social System Theory in Translation
Gaia	Society
Biomes	Translation
Ecosystems	Different genres and types of translation
Communities	Publishers and financial agencies
Population and individuals	Translators and editors

According to Beebee, Childress, and Weidman (2017, p. 4), terms like "Gaia" and "biomes" originate from scientific descriptions of ecological systems and their sub-systems. They explain that "the largest ecological environment is Gaia, also known as the biosphere or the Earth, which is usually divided into biomes" (Beebee, Childress, & Weidman, 2017, p. 4). In this paper's comparison between ecology and social system theory in translation, Gaia is considered the largest ecological system, while society is seen as the largest system within social system theory, with its respective sub-systems. Following this analogy, after identifying Gaia as the largest system, its sub-systems include biomes, ecosystems, communities, populations, and individuals. Similarly, society's sub-systems encompass translation, various genres and types of translation, publishers and funding agencies, as well as translators and editors. All these sub-systems in both ecology and social system theory work in coordination to support their larger systems, ensuring they function in an organized and efficient manner. In this comparison, ecology serves as a metaphor to enhance our understanding of the classification of social systems theory in translation. In other words, ecological systems and sub-systems provide a framework for comparing and understanding social system theory in translation.

Conclusion

For many years, translation studies primarily focused on foundational levels, such as linguistic considerations, emphasizing the appropriateness of equivalences and the quality of translations. However, the introduction of new approaches like skopos theory, polysystem theory, and deconstructionist views shifted attention to more complex translational issues and dimensions. Despite these advancements, certain aspects and layers of translation remained obscured, particularly those involving the human element. The emphasis on human beings as the central actors in translation has often left other areas underexplored in research. Fortunately, the emergence of ecotranslation has gradually unveiled these hidden aspects, paving the way for new perspectives in the field of translation studies.

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Adaptation Strategies in Video Game Localization: A Case Study of *Civilization*

Farkhondeh Touiserkani* iD | PhD Candidate in Translation Studies, Department of English Translation Studies, Allameh Tabataba'i University, Tehran, Iran

Abstract

In audiovisual translation, where video game localization plays a critical role, integrating visual elements with spoken content is essential. This study investigates the translation of expressions within the video game *Civilization*, exploring the prevailing norms of adaptation in Persian translation. The study has two main objectives: first, to examine the application of Skopos theory principles in the Persian translation of *Civilization*; second, to analyze the adaptation strategies based on Bastin's (2005) model in this translation. For this purpose, a corpus of English text segments from the *Civilization* video game and their Persian translations was selected and analyzed. Using Skopos theory and Bastin's adaptation model, the study examines adaptation strategies. The findings illuminate how adaptation strategies an6 d societal ideologies interact within the context of video game localization. Ultimately, the study reveals that, as video games are primarily designed for enjoyment, coherence as an adaptation strategy should be prioritized to enhance the game's appeal.

Keywords: Video Game, Localization, Adaptation, Skopos Theory

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Introduction

As a branch of descriptive study, research in audiovisual translation occupies a prominent position within translation studies (Orero, 2004). Audiovisual translation, as a professional practice, has seen considerable growth, particularly within two key subfields: subtitling and dubbing (Diaz Cintas, 2009). With the rapid increase in audiovisual products since the 1990s, the demand for audiovisual translation has intensified significantly (Perez Gonzalez, 2006).

Translation studies encompass both oral and written forms of translation. Audiovisual translation, however, presents a unique challenge as it integrates both spoken and written modes of communication, demanding specialized considerations to establish its position within the discipline (Varela, 2002). Varela (2002) argues that audiovisual translation differs fundamentally from both written and oral translation. Remael (2000) similarly highlights that numerous scholars strive to bridge the gap between traditional translation studies and the distinct field of audiovisual translation.

As noted, audiovisual translation diverges from other forms of translation due to its simultaneous reliance on spoken content and visual elements. In this context, Varela (2002) identifies several constraints that translators face in audiovisual texts: (1) the speakability of the audiovisual translation; (2) the cohesion between verbal and visual elements and their meaning in communication; (3) synchronization of body gestures and lip movements in dubbing; and (4) the effective conveyance of emotions through voice and intonation.

Localization has thus been proposed as a strategy to address these constraints. Pym (2010) describes localization as a process that adapts both source and target languages and cultures, emphasizing that it goes beyond mere translation, as cultural perception varies widely (Diaz Cintas & Anderman, 2009). Diaz Cintas (2009) further asserts that language both reflects and manifests culture, situating translators at the intersection of language and culture.

According to Bastin (2005), adaptation as a translation strategy is essential when the source culture context differs significantly from the target culture. In video game translation, as a type of multimodal text, visual elements necessitate the consideration of special norms and adaptation strategies. Therefore, this study seeks to (1) examine the application of Skopos theory in the Persian translation of the *Civilization* video game; and (2) investigate the adaptation strategies in this translation according to Bastin's (2005) model.

Literature Review

Audiovisual Translation

A substantial body of research has developed within the field of audiovisual translation, leading to a broad spectrum of studies and publications. According to Orero (2004), audiovisual translation is a dynamic and evolving branch of translation studies. He argues that technological advancements have transformed a traditionally paper-oriented society into one that is media-oriented, posing new challenges and practices for audiovisual translation. Furthermore, Remael, de Houwer, and Vandekerckhove (2008) emphasize audiovisual translation as a distinct discipline within translation studies, encompassing a variety of forms such as partial dubbing, off-screen narration, and voice-over. These scholars also highlight its importance as a medium that considers both language and culture, recognizing the significant role of bridging linguistic and cultural gaps to foster impactful understanding and communication. They underscore the complexity of audiovisual translation and the critical need for approaches that incorporate both linguistic and cultural dimensions.

Perez Gonzalez (2009) contends that audiovisual translation is integral to translation studies, facilitating the transfer of multimodal texts across languages and cultures, thereby forming a foundation for global communication. He further notes that the multimodal nature of audiovisual texts entails interpreting elements like image, color, music, and perspective.

Multimodality and Video Games

Video game translation is essential to providing players with a quality experience in their own language (Fernandez Costales, 2012). According to O'Hagan (2005), the multimodality of video games connects them to other art forms, such as cinema, offering players a chance to immerse themselves in the game's narrative. She highlights the multimodal and polysemiotic environment in which players interact with the game through various channels. Video game translation involves blending audio, video, and narrative techniques, allowing players to participate in the story, which combines narrative techniques and technical advancements. This type of translation plays a key role in creating an authentic atmosphere within a foreign culture (Fernandez Costales, 2012).

Initially, players could perform limited functions as games had basic interfaces (Tavinor, 2009). Advances in programming and graphic design led to greater interactivity between players and the machine (Fernandez Costales, 2012). Early video games included basic special effects, sounds, and music, which were gradually optimized to today's standards, where sound cues can signify enemy locations (Tavinor, 2009). Fernandez Costales (2012) states that video games now feature original orchestral soundtracks, and the audio elements are integral to translating spoken dialogues. The game industry's development has led to using real actors' voices in dialogue recordings.

Additionally, narrative techniques like cinematics and cut-scenes are now used in video game plot development. In translating these scenes, they resemble animated movies. Video game producers use lip-sync techniques to match facial expressions with spoken dialogue (Chandler, 2005). Bernal Merino (2008) adds that adapting dialogues requires considering subtitling, dubbing, and voice-over features.

Besides spoken dialogue and music, turning subtitles in modern video games requires synchronization with dialogue based on audiovisual translation principles (Diaz Cintas, 2009). Diaz Cintas and Remael (2007) define subtitling as presenting written text at the bottom of the screen while preserving the original speaker's audio. They suggest that subtitling, as a faster and more cost-effective method than dubbing, involves mode changes from oral to written and needs alignment with the screen. Ghaemi and Benyamin (2010) emphasize that subtitling's distinctness lies in its technical and contextual constraints. Gottlieb (1992) categorizes subtitling constraints into formal (space and time) and textual (visual context influence) constraints, proposing ten types of subtitling strategies like paraphrase and expansion. Orero (2004) also suggests that the term "screen translation" can encompass screen-based products like computer games and web pages, similar to how "radio translation" falls under audiovisual translation.

Dubbing is another technique used in modern game translation. Chaume (2012) regards dubbing as both a technical and artistic practice, replacing original speech with recorded dialogue. Ensuring coherence between lip movements, character visuals, and the dialogue is crucial. Luyken et al. (1991) argue that the dynamics of the original text, such as pacing and lip movements, must be preserved in the dubbed version to maintain authenticity.

Additionally, Gambier (2003) introduces terms like "multimedia translation" and "transadaptation" within audiovisual translation. Multimedia translation involves localizing software and internet programs, adapting content for specific platforms, while transadaptation goes beyond literal translation, focusing on target culture and cultural nuances.

Diaz Cintas (2009) notes that Tomaszkiewicz (1993) identifies eight translation strategies within audiovisual translation categories like dubbing and subtitling. Due to the inherently untranslatable nature of culture-specific elements, these strategies – such as omission, literal translation, borrowing, and adaptation – help translators manage culturally specific content.

Bastin (2005) associates "adaptation" with audiovisual translation and advertising, categorizing it as follows:

–   Transcription, which reproduces the original word-for-word, preserving the source text's authenticity.

–   Omission, where specific elements are excluded, especially culturally specific references not relevant in the target culture.

–   Expansion, adding or clarifying information through footnotes, glossaries, or other means.

–   Exoticism, which introduces unfamiliar elements to intrigue the target audience.

–   Updating, replacing outdated content with modern equivalents to resonate with the target audience.

–   Situational or cultural adequacy, tailoring content to the target culture's values and expectations.

–   Creation, substituting source text elements to maintain core ideas and clarity for target readers. (Bastin, 2005)

These adaptation strategies enable audiovisual translators to address various cultural and linguistic challenges, ensuring that the translated content effectively conveys the intended message to the target audience. Bastin (2005) further divides adaptation into "local" and "global" types, with the former addressing text-specific issues and the latter involving comprehensive revisions based on external factors.

Additionally, several social factors affect audiovisual translation, including race, pragmatics, class, gender, sound, and ideological influences (Varela, 2002). These factors enhance understanding of audiovisual content complexities, highlighting the ideological contexts shaping the final products.

Localization of Video Games

Although video games have a shorter history compared to other entertainment products, they have expanded significantly across languages and cultures, addressing both verbal and non-verbal aspects of translation (Chandler, 2006). Verbal translation addresses linguistic aspects, while non-verbal translation encompasses non-linguistic elements.

Munday (2001) argues that video game translation combines audiovisual translation and software localization. Diaz Cintas and Remael (2007) add that video game translation lies between localization and audiovisual translation, necessitating cultural adaptation for local audiences to ensure content comprehension. Mangiron and O'Hagan (2006) refer to this as "game localization", which includes both subtitling and dubbing forms to expand market reach. O'Hagan and Mangiron (2013) describe game localization as the varied processes required to adapt a game for a target market.

Bernal Merino (2008) outlines three levels of game localization: "Box and Docs" (translating only packaging and manuals), "Partial localization" (translating text and subtitles but not dialogues), and "Full localization" (adapting all game elements to the target language and culture). Bernal Merino (2015) emphasizes the importance of considering cultural, linguistic, technical, visual, and legal aspects.

Furthermore, Bernal Merino (2007) argues that translation is essential to adapting games for diverse cultures, stressing that it encompasses more than language transfer, extending to semiotic elements and audio-visual components.

Chandler (2005) suggests that video game translation incorporates cultural and legal considerations, along with audio components like dialogue. For example, violent scenes might need modification for certain cultures, and marketing materials should also be localized.

In Iran, Jooyaeian and Khoshsaligheh (2022) explore game localization, particularly in translating video games into Persian. They find that Coping Structure, emphasizing word-for-word translation, is commonly used, while Cultural Correspondence, requiring creative transfer of culture-specific elements, is less frequent. They note challenges and gaps in the Persian localization within the Iranian cultural and industrial context.

In summary, advancements in video games underscore the audiovisual elements and artistic dimensions, like music, positioning video games as complex multimedia products. As a result, adapting video games for different cultures requires specialized strategies and approaches. Video game translation is a growing area within translation studies and can be explored from multiple perspectives (Fernandez Costales, 2012).

Skopos Theory

Translation studies have developed significantly across various fields, with multiple approaches emerging for translation analysis (Bassnett, 2010). Skopos Theory, introduced by Reiss and Vermeer in the 1980s, represents one of these critical developments, extending beyond literary translations. This theory emphasizes the purpose, or skopos, of the translation, guiding translation strategies to achieve a functional outcome, known as the translatum (Munday, 2001).

Reiss and Vermeer (1984, p. 119) outline several fundamental rules within Skopos Theory:

1. A Translatum (TT) is assigned by the skopos (purpose)
2. A TT is related to the information of the target culture and language (the purpose changes according to the receiver)
3. A TT does not initiate an offer the information in a clearly reversable way
4. A TT is coherent internally
5. A TT is coherent with the source text
6. The mentioned rules are hierarchical.

Rule 2 is particularly significant as it links function and translator, facilitating intercultural communication and the creation of the Translatum. Rule 3 highlights the function of the Translatum, while Rules 4 and 5 contribute to information conveyance through the coherence and fidelity rules, respectively. The coherence rule ensures that the TT is accessible to its audience, and the fidelity rule requires alignment between the TT and the source text (Munday, 2001). These principles guide translators toward meaningful translations that bridge cultural and linguistic differences while honoring the source text.

Munday (2009) argues that, as a TT-oriented approach, Skopos Theory prioritizes the purpose and function within the target culture, emphasizing the role of the receiver or initiator. He contends that in light of communication skopos, equivalence strategies from the source text are not suitable for assessing the TT. Additionally, Munday underscores the importance of coherence and fidelity, noting that a key critique of Skopos Theory lies in defining situations where fidelity is achieved. Nevertheless, he asserts that a significant advance in the 1980s was recognizing the cultural role of the TT.

Norms in Translation

According to Perez Gonzalez (2014), scholars in audiovisual translation frequently draw upon descriptive translation studies, examining concepts of polysystem and norms. Researchers explore the influence of source and target cultures within audiovisual translation (Baker, 2010).

Toury (1995, p. 55) provides a broad definition of norms as "the translation of general values or ideas shared by a community – as to what is right or wrong, adequate or inadequate – into performance instructions appropriate for and applicable to particular situations". He identifies norms as sociocultural, shaped by the broader culture, era, and community, and classifies them into product-oriented, process-oriented, and function-oriented norms. Toury also describes three types of translational norms: initial norms, preliminary norms, and operational norms (Munday, 2001). Through examining norms, researchers gain insight into sociocultural dynamics, enhancing their understanding of audiovisual translation's complexities.

Chesterman (2016) approaches norms as descriptive phenomena, referring to them as "correct behavior". While individuals hold personal knowledge and awareness of norms, social norms gain recognition through collective acceptance, such as standing on an escalator. Chesterman (2016) extends Toury's (1995) framework, identifying product norms and professional norms. Product norms concern readers' expectations for specific translations, while professional norms include three categories: the accountability norm (an ethical norm), the communication norm (a social and pragmatic norm), and the relation norm (a linguistic norm).

Studies on localization norms have produced notable findings. For instance, Sharifi (2016) examines Toury's (1995) initial norms within an Iranian video game, Garshasp. He explores the translators' inclination toward source (adequacy) or target (acceptability) norms, observing that the translation leans more toward acceptability than adequacy. Touiserkani and Afzali (2014) similarly analyze localization norms in Persian video games, arguing that adaptation norms in game translation align with Toury's acceptable norms. They suggest that target-language norms serve as localization standards in video game translations, noting colloquial language and euphemism as pivotal norms in this process.

Ideology in Translation

The concept of "ideology" has attracted substantial attention from researchers and scholars. Sedighi and Najian Tabrizi (2012) argue that ideology and translation intersect in numerous ways. Schaffner (2003) asserts that all translations are ideological, with social agents' objectives shaping the selection of source texts. Calzada-Perez (2003) defines ideology as "a belief or set of ideas, especially the political beliefs on which people, parties or countries base their actions", highlighting ideology's influence on community norms. Similarly, Mason (in Baker, 2010, p. 83) describes ideology as "the set of beliefs and values which inform an individual's or institution's view of the world and assist their interpretation of events, facts and other aspects of experience."

Lefever (1992) emphasizes the translator's ideology as a critical factor, asserting that translation is a form of "rewriting" that reflects the translator's ideological stance (Munday, 2001). Diaz Cintas (2012) also underscores the translator's role in transferring ideological and cultural elements, acknowledging that translators can choose to either uphold or deviate from ideological norms. Diaz Cintas (2018) points out that ideological shifts often occur through manipulation. Recognizing the impact of ideology in translation, Lefever (1992) suggests that translators bring their values, beliefs, and attitudes into the translation process.

Baker (2010) adds that genres, texts, and discourse serve as semiotic systems that carry ideological weight, essential within an ideological framework. She argues that the translation process communicates two distinct ideologies: one from the text and another from the translator. Lemke (2002) echoes this sentiment, asserting that discourse formation is inherently ideological, reflecting society's social power structures. A comprehensive analysis of discourse can therefore reveal underlying ideologies and their relationship to social power.

In a study, Sedighi and Najian Tabrizi (2012) investigate strategies for translating taboo words and expressions in romantic films dubbed after Iran's Islamic Revolution. Their findings reveal that translators employ various strategies to convey taboo language in ways that align with societal moral, cultural, and religious values. Rather than direct translation, these expressions were rendered to respect societal norms, underscoring the significant role of ideology in translating romantic films.

Methodology

This study examines a corpus of 1,030 textual elements from the English video game Civilization, randomly extracted and compared with their Persian translations. Civilization is a turn-based, 4X strategy game series, released in 2016 by Firaxis Games, published by 2K Games, and directed by Sid Meier in the United States. This series, comprising six main games, is readily accessible on multiple platforms and is distributed by Steam Club in Iran. In the gameplay, players aim to achieve victory through various conditions, such as military domination, or technological and cultural supremacy.

The primary reason for selecting Civilization lies in its strategic and comprehensive appeal to gamers and its accessibility across multiple platforms. Each game level begins with "demos"—video segments introducing each stage, providing a rich source of textual material. Additionally, as audiovisual products continue to advance, this game stands out for its high-quality visuals, engaging design, and well-executed narration.

To address the first research question, i.e. identifying adaptation strategies used in the Persian translation, the study analyzed the frequency and percentages of three adaptation strategies proposed by Bastin (2005), namely omission, expansion, and situational or cultural adequacy. Then, the study measures the frequency and percentage of two Skopos Theory rules: the coherence rule and the fidelity rule.

To answer the second research question, the study also examined the ideological implications of these adaptation strategies within the context of current Iranian society, analyzing how these reflect prevailing social values.

Results

In this study, 1,030 text segments from the Persian localized version of the video game Civilization were analyzed and compared to their corresponding English segments to determine the application of Bastin's (2005) three adaptation strategies: omission, expansion, and situational cultural adequacy. The analysis revealed a total of 232 instances of these adaptation strategies summarized in Table 1.

Table 1. Frequency and percentage of adaptation strategies

Strategies	Frequency	Percentage
Omission	74	32%
Expansion	39	16%
Situational/Cultural Adequacy	119	52%

Specifically, the findings indicated that 74 instances, or approximately thirty-two percent, involved omission; 39 instances, or about sixteen percent, were categorized as expansion; and 119 instances, representing roughly fifty-two percent, were classified under situational cultural adequacy.

According to Table 1, situational cultural adequacy was the most frequently employed strategy in the localization process, while expansion was the least utilized. The high percentage of situational cultural adequacy may reflect an effort to align the game content more closely with cultural contexts familiar to Persian-speaking players.

An instance of the omission strategy can be observed in the translation of the English segment, "Change the plan quickly, but the lord will be angry and piss out," which appears in the game as " نقشه را زود عوض کن، وگرنه پادشاه ناراحت میشه" ("Change the plan quickly, or the king will be upset"). In this segment, spoken by a character in a commanding role, the phrase "piss out" was omitted in the Persian localization. This omission likely occurred due to cultural constraints, as the phrase contains a mild profanity inappropriate for Persian-speaking audiences. Since the meaning is conveyed effectively without the final phrase, the translator's choice to omit it aligns with cultural sensitivities and maintains coherence.

Another example of omission appears in a dialogue from the introductory sequence, where a father figure says to his son, "We built wonders of monuments honoring the gods." This was translated as "بناهای بزرگی ساختیم" ("We built great monuments"). Here, the phrase "honoring the gods" was removed, likely because references to multiple deities conflict with Islamic beliefs and cultural norms. By omitting this segment, the translator ensures that the dialogue aligns with the target audience's religious expectations without altering the central message of historical achievement.

The expansion strategy is illustrated in the translation of "... go with my blessing," spoken by a father to his son who is about to assume a leadership role. In the Persian version, this becomes " برو و کارت را شروع کن که دعای خیر من بدرقه راهته" ("Go and start your work, my blessings are with you"). The addition of "... my blessings are with you" provides cultural clarity, adding depth to the relationship between father and son, which resonates with Persian-speaking audiences and aligns with the tradition of parental blessings.

Finally, situational or cultural adequacy is demonstrated in the phrase, "It is time to change the animals' coverings", which was translated as "وقت عوض کردن پالان الاغ ها است" ("It's time to change the donkeys' saddles"). Here, the original term for animal coverings is adapted to "پالان الاغ ها" (donkeys' saddles), a more contextually appropriate term in Persian culture, aligning with familiar rural imagery. This adaptation preserves the functionality of the phrase while ensuring cultural relevance for Persian players.

In the next phase of analysis, the application of two primary principles of Skopos theory—the fidelity rule and the coherence rule—was examined across the selected segments, with findings summarized in Table 2.

Table 2. Frequency and percentage of skopos rules

Skopos Theory Rules	Frequency out of 798	Percentage
Fidelity Rule	306	38.34%
Coherence Rule	295	36.96%
Other Rules	197	24.68

As indicated in Table 2, the fidelity rule was applied in 306 instances, or approximately 38.34%, while the coherence rule appeared in 295 instances, or 36.96% of cases. Together, these two rules

demonstrate a significant adherence to Skopos theory in the translation of this video game, with coherence and fidelity serving as guiding norms.

Examples for Fidelity Rule

In one instance of the fidelity rule, the English phrase "Come sit with me and listen" is translated as "بیا کنارم بشین و گوش کن" ("Come sit by me and listen") in Persian. This line occurs during a dialogue in the introductory movie of the game, where an elder character gives advice to a younger character, the player's avatar. Here, fidelity to the source text's direct and intimate tone is maintained, preserving the instructive role of the elder's dialogue.

Another example is "Allah saves our tribe," translated into Persian as "الله قبیله ما را حفظ می‌کند" ("Allah protects our tribe"). This line is spoken by the leader of an Arabian tribe, and the use of "الله" aligns with the character's cultural and religious background, enhancing authenticity and preserving the source text's original religious tone.

Examples for Coherence Rule

The coherence rule can be seen in the translation of the phrase "If I may interrupt!" rendered as "میشه مزاحمت بشم!" ("May I interrupt!"). In this instance, the player character seeks guidance from an advisor. The translation of "interrupt" to "مزاحم شدن" (to disturb or interrupt) makes the expression more familiar and contextually appropriate for the target audience.

Further examples include the phrases "... That will stand the test of time" translated as "که از آزمون زمانه سربلند بیرون بیای" ("to come through the test of time with pride") and "... And decide your future" translated as "برو و آینده‌ات رو بساز" ("Go and build your future"). Spoken by a tribal elder to encourage the young leader, these phrases are adapted in a way that emphasizes hope and resilience, resonating with the cultural values of the Persian audience. Here, the coherence rule ensures that the expressions remain optimistic and motivational, aligning with the expected tone and context for Persian-speaking players.

Conclusion

he results of the current study highlight the significance of Bastin's (2005) adaptation model as a framework for analyzing translation strategies in video games. Among the adaptation strategies identified, situational or cultural adequacy emerged as the dominant norm in the localization process, underscoring the crucial role of adapting cultural content to resonate with the target audience. Additionally, the coherence and fidelity rules are recognized as essential strategies within Bastin's model, reflecting their frequent application by translators. These rules serve as important norms in video game translation, shaped by the prevailing cultural and ideological contexts.

The study also reveals that the coherence rule functions as a translation strategy that aligns closely with the cultural and situational context of the target audience. By fostering a coherent relationship with players, this strategy enhances the overall appeal and engagement of video games, making the content more relatable and enjoyable for Persian-speaking gamers.

Overall, the findings of this research provide valuable insights into the norms of adaptation in video game translation, equipping translators with a deeper understanding of industry practices. These insights can benefit not only translators but also dubbers, linguists, and gamers. Future research could explore adaptation strategies in other forms of software and audiovisual media, such as websites and mobile applications, to further enrich the understanding of localization practices.

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Assessment of Entrepreneurship Traits of English Translation Students: The Case of Islamic Azad Universities in Mazandaran Province

Saeed Ranjbar[*] iD | Assistant Professor, Islamic Azad University, Qaemshahr Branch, Qaemshahr, Iran

Parisa Nejatimoqadam iD | MA, Islamic Azad University, Qaemshahr Branch, Qaemshahr, Iran

Abstract

In recent decades, numerous studies in Iran have examined entrepreneurial traits among university students. However, the entrepreneurial potential of undergraduate English translation students remains unexplored. This study investigates the entrepreneurial characteristics of English translation students at Islamic Azad University branches in Mazandaran Province and identifies key obstacles hindering their development. A sample of 106 English translation students from four branches was selected through convenience sampling. Participants completed a validated questionnaire assessing traits such as risk-taking, internal locus of control, success orientation, pragmatism, challenge-seeking, intellectual vitality, and tolerance of ambiguity. Additionally, they engaged in semi-structured interviews after being informed about the study's objectives. Descriptive statistics and one-way ANOVA analysis indicated that entrepreneurial traits were generally average, with no significant differences across the four branches. Qualitative analysis of interview data highlighted personal, financial, legal, and educational barriers as primary entrepreneurial obstacles.

Keywords: English Translation, Entrepreneurship, Obstacles, Undergraduate Students

[*]Corresponding author: saeed.ranjbar43@gmail.com

Introduction

In recent decades, entrepreneurship as a desirable social behavior has been continuously promoted and expanded, prompting many developed and developing countries to approach it as a means of social transformation (Spinelli et al., 2014). In this regard, universities today have become central to training entrepreneurial students, supporting them in reaching their career goals by offering both entrepreneurship courses and research opportunities in the field (Kuratko, 2004; Nouri et al., 2022).

Although research in the field of entrepreneurship is broad, a significant area of study has consistently focused on the entrepreneurial tendencies of university students, who are widely considered a crucial potential source of entrepreneurship. This line of research operates on the basic premise that entrepreneurship consists of specific personality traits that can be cultivated (Soofi & Daylami, 2022). Among experts in the field, there is a well-established belief that entrepreneurial characteristics, such as locus of control and success-seeking behavior, can be enhanced through targeted training, even within a relatively short period (Nouri et al., 2022).

To delve deeper, these studies typically adopt a behavioral approach to examine personality traits that underpin entrepreneurial behavior. Within this theoretical framework, entrepreneurship is viewed as a set of behaviors that can be learned and nurtured. In other words, "no entrepreneur was born" (Drucker & Maciariello, 2014). This approach has also gained traction in Iran, where numerous studies on entrepreneurial tendencies have been conducted at various universities over the past decade (e.g., Hosseininia et al., 2017; Khalili Khezrabadi et al., 2023). Researchers believe that understanding students' entrepreneurial orientation across disciplines can foster a more informed approach to entrepreneurship education.

Gaining insight into students' entrepreneurial inclinations and capabilities post-graduation offers higher education institutions a clearer path to implementing sustainable education strategies that promote entrepreneurship. Accepting the premise that many students enter English translation programs with the goal of finding employment after graduation suggests that translation students should acquire essential entrepreneurial knowledge and behavioral skills for business creation and development – especially in undergraduate programs. Otherwise, an unfavorable employment outlook for graduates may arise, potentially discouraging prospective students and raising doubts about whether the field of English translation can reliably lead to stable employment. Translation program developers and administrators must therefore reassess the motivations for studying translation. Simply put, fostering entrepreneurship among translation students is crucial for the field's vitality in Iranian universities and its inclusion in field-selection booklets distributed after the national entrance exam.

Since little research has been conducted on the entrepreneurial traits of translation students, this study fills an important gap by using a mixed methods design to assess the entrepreneurial characteristics of English translation students at Islamic Azad Universities in Mazandaran Province. This research also investigates factors that either foster or hinder entrepreneurial behavior among undergraduate English translation students. Specifically, the study is guided by the following research questions:

1. To what extent do English translation students at Islamic Azad Universities in Mazandaran Province exhibit entrepreneurial traits, namely risk-taking, internal locus of control, success-seeking, pragmatism, challenge-seeking, intellectual health, and tolerance of ambiguity?

2. Is there any significant difference among Islamic Azad University branches in Mazandaran Province regarding students' entrepreneurial traits?

3. What are the barriers that diminish the entrepreneurial desires and intentions of English translation students?

Literature Review

Entrepreneurship is an excellent psychological process that means the ability to take risks and new actions, to deal with uncertainty and to consider inherent risks in business and innovative activities (Rodríguez-López & Souto, 2020). Entrepreneurs must have the ability to plan for the development of business plans to achieve goals in various areas, including finance, sales, production, marketing, and staff. They must have good communication, interpersonal, leadership, and marketing skills, and the ability to create and maintain positive relationships with customers and employees, financial lenders, investors, lawyers, and accountants. Moreover, they need to have basic management skills for hiring and dividing the work of others, creating their own vision for the company to inspire employees. They must also learn from other failures. Before starting a business, entrepreneurs should research the business and the mistakes of other entrepreneurs, and make sure that the company or business is what he wants (Gedik et al., 2015). López-Núñez et al. (2020) found in their research that entrepreneurs and students with entrepreneurial traits have the same characteristics in some psychological aspects. These characteristics include entrepreneurial spirit, extroversion, willingness to experience, conscientiousness, ability to face problems and solve them, emotional intelligence, self-confidence, and ambiguity tolerance.

The results of the study by Embi et al. (2019) showed that leadership skills, need for progress, tolerance of ambiguity, and tendency to risk have a significant positive relationship with students' intention to start entrepreneurial activities. In this context, the results of Rodríguez-López and Souto (2020) showed that companies owned by founders who had a university degree and studied in higher education have a higher probability of competition and more success in business, because entrepreneurs with a university degree often have higher problem-solving skills than company owners that do not have such educational records.

Research on Entrepreneurship

The study of the characteristics of entrepreneurs goes back to the early 1950s. It can be claimed that the studies conducted at that time started with the basic thesis that entrepreneurial people have distinct personality traits that make them different from others. Among those early studies conducted during that period, the classic study of McClelland done in 1961 showed decisively that the motivation to succeed or the desire to succeed is the determining factor. That is, with the increase in the number of people who have a strong desire for success, the economic development of society will also increase. From then on, success-seeking defined as improving performance and finding a shorter way and/or a faster way to do things and the desire to win by relying on individual effort have been emphasized in many research attempts, and it was consistently raised as one of the characteristics of entrepreneurs (e.g., Gartner, 1988; Hosseinpour et al., 2011; Hosseininia et al., 2017).

In later research, other characteristics such as willingness to do things that are likely to fail (risk-taking), attributing failures to one's own efforts rather than environmental factors (internal locus of control), optimism, and independence were also added to the list (Raadi Afsooran , 2010; Zali et al., 2008). In the meantime, it is noted that the features presented in different researches are not necessarily one hundred percent compatible.

In various researches, different characteristics have been listed for entrepreneurial people. For example, Timmons (1978) classified the characteristics of entrepreneurship into six categories: commitment, opportunism, risk tolerance, ambiguity, creativity, adaptability, and high motivation,

with the analysis that he did in 50 other studies, but this same classification is not the common feature of all studies and are not seen in different researches. Zali et al. (2008) believe that independence, risk-taking, and creativity are among the behavioral characteristics of entrepreneurs, which are accepted by most researchers.

Theoretical Framework of the Study

In this research, the model developed by Kurdnaij et al. (2006) for measuring the personality traits of Iranian entrepreneurs was utilized to evaluate the entrepreneurial traits of English translation students at Islamic Azad Universities in Mazandaran Province (see Figure 1). This model targets seven specific traits for measurement: risk-taking, internal locus of control, success-seeking, pragmatism, challenge-seeking, intellectual health, and tolerance of ambiguity.
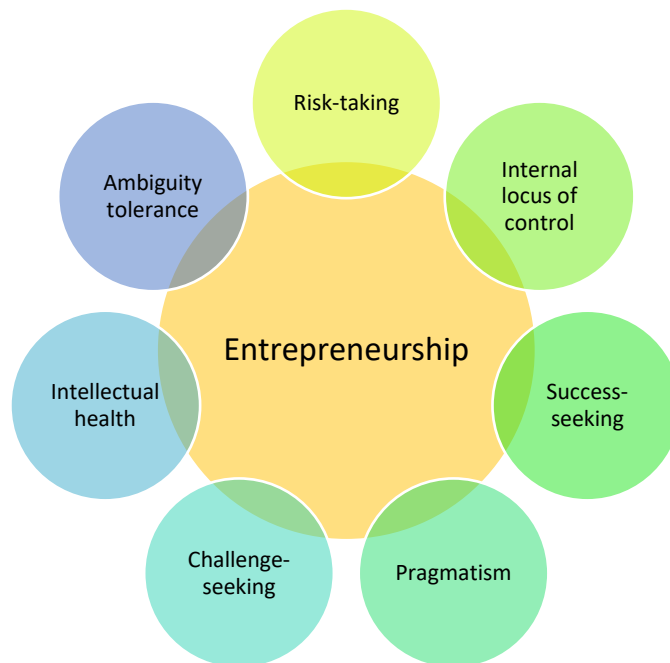

Figure 1. The theoretical framework of this study (Kurdnaij et al., 2006)

Each component in this model has a specific definition relevant to entrepreneurial traits. Risk tolerance is the capacity of an individual to accept or avoid risks when confronted with potentially dangerous situations (Anwar & Saleem, 2019). Internal locus of control, initially defined by Rotter (1982), refers to people's perceptions of their ability to control actions or specific events that impact their lives; it is commonly believed that entrepreneurs possess a heightened sense of control over the outcomes of their actions (Embi et al., 2019). Success-seeking reflects a strong drive to excel and succeed across various tasks (Greenberg & Baron, 2008; Kusmintarti et al., 2018). Intellectual health describes creativity in entrepreneurial individuals, particularly the capacity to act spontaneously and effectively solve problems (Kurdnaij et al., 2006).

Pragmatism, considered one of the core entrepreneurial traits, focuses on practical methods for achieving goals. Decision-making and experimentation are essential entrepreneurial strategies linked to pragmatism, as pragmatists are driven by practical outcomes and adapt to the belief that "change" is constant (Jena, 2020). Ambiguity tolerance is an individual's willingness to engage in tasks despite uncertainty and unpredictable outcomes. Entrepreneurs often face uncertain situations, making

tolerance for ambiguity a crucial trait, as new business ventures involve unpredictable challenges and potential successes (Kusmintarti et al., 2018). Finally, challenge-seeking measures an individual's readiness to tackle complex and ambiguous activities and to provide solutions suited to these challenging situations (Kurdnaij et al., 2006).

Research on Students' Entrepreneurship Skills

Over time, research on the characteristics of entrepreneurial individuals expanded from the professional sphere to university settings. This shift may stem from the growing cognitive perspective on entrepreneurship, where experts and researchers increasingly believe that entrepreneurial skills can be taught (Soofi & Daylami, 2022). Consequently, a view has emerged that by identifying the traits of entrepreneurial students, these skills can be taught and strengthened, helping students who may struggle to take the plunge in their career paths.

Similar to findings from studies on entrepreneurial professionals, research in this area indicates that the traits of entrepreneurial students can vary depending on the context. For instance, Burns (2022) showed that when starting a business, students prioritize traits like ambition, self-confidence, leadership, risk-taking, independence, and creativity. However, in the business development phase, the order shifts to ambition, risk-taking, leadership, creativity, self-confidence, and independence.

An additional insight is that there isn't always a direct relationship between students' entrepreneurial interests and their knowledge of entrepreneurship. For example, research by Wang and Wong (2004) found that although 71% of the students expressed a strong interest in entrepreneurship, more than two-thirds had minimal knowledge about it. This finding suggests that interest alone does not make an entrepreneur out of a student, nor does it drive them to acquire entrepreneurial knowledge. It underscores the necessity of formally teaching entrepreneurship skills, as most students lack sufficient understanding in this area.

In this context, Gürol and Atsan (2006) conducted research at Turkish universities, revealing that not all characteristics typically associated with entrepreneurial people distinguish interested students from their less interested peers. For instance, traits such as tolerance of ambiguity and self-confidence were similar in both groups. However, key traits like risk-taking, internal locus of control, success-seeking, and innovation were what set the interested students apart from those who were not interested in entrepreneurship.

Research on Students' Entrepreneurship Skills in Iran

The history of research on student entrepreneurship in Iran spans less than two decades. Unfortunately, within this period, only very few studies have focused on entrepreneurship among translation students. This section reviews some Iranian studies that have examined the indicators and characteristics of entrepreneurial skills among students from various fields. Reviewing these traits, characteristics, as well as the instruments and methods used in past research, could enhance the quality and interpretation of the current research results.

One of the earliest studies in Iran, conducted by Hosseinpour and Rezaei (2011), found a significant positive relationship between various entrepreneurship variables, including students' internal and external motivations, subjective perceptions of the attractiveness of entrepreneurship, self-efficacy, expectation, creativity, and attitude. In the same study, Hosseinpour and Rezaei (2011) noted that a lack of personal financial resources and insufficient knowledge were the primary obstacles for students aiming to start a business. Zali et al. (2008) reported that about 21 percent of students in their study possessed entrepreneurial skills. They also observed that while these students showed strong

determination, their levels of independence, risk-taking, and creativity fell slightly below the minimum acceptable threshold. In further research, Raadi Afsooran (2010) found that neither gender nor faculty significantly impacted students' acquisition of entrepreneurial characteristics. However, their analysis showed that success-seeking and tolerance of ambiguity differed significantly among various groups.

Research conducted in the following decade continued to highlight weaknesses in certain aspects of entrepreneurship among Iranian students. These studies indicated that entrepreneurial traits among students were unevenly distributed across behavioral components. For instance, Rezaee and Rahsepar (2010) found that students demonstrated high levels in all entrepreneurship components except risk-taking. Further analysis revealed that male and female students were similar in internal locus of control, creativity, and risk-taking, but differed in success-seeking and independence. Additionally, significant differences were found across departments in all components except creativity.

Some studies in Iran over the past decade have focused on identifying barriers to entrepreneurship among students. For example, Hosseini and Khosravilaghab (2017) identified leadership self-efficacy, leadership motivation, and financial support as key factors influencing entrepreneurship aspirations among students at public universities in Tehran. Similarly, Keshavarz and Mehri Shandi (2021) identified seven primary obstacles for students: family, personal, educational, specialized-technical, financial, socio-cultural, and legal factors. Hosseininia et al. (2017) also identified additional barriers, such as a lack of planning, teamwork, and awareness of legal and regulatory issues. They found that progress motivation, success-seeking, marketing skills, and pragmatism were predictors of students' entrepreneurial intentions.

Recent studies have highlighted the impact of educational factors on the entrepreneurial ambitions of Iranian university students. For instance, Khalili Khezrabadi (2023) emphasized a strong correlation between the quality of undergraduate curricula and students' entrepreneurial intentions. Their findings suggested that strengthening university-business connections and developing entrepreneurial skills would help students better navigate environmental challenges and foster their entrepreneurial ambitions by enhancing emotional factors. Similarly, Darini et al. (2022), based on data from 482 students, concluded that entrepreneurship education can strengthen self-confidence, mindset, and attitude, thereby increasing students' entrepreneurial intentions. Their research showed that entrepreneurial desire is primarily influenced by behavioral and emotional factors, while cognitive factors have less impact. Consequently, they argued that universities can play a crucial role in developing entrepreneurial skills, which, in turn, fosters a positive attitude and mindset, ultimately enhancing students' entrepreneurial intentions.

Method

Participants

The participants in this research were selected from eighth-semester English translation students in the English Departments of Islamic Azad Universities in Mazandaran province. A total of 106 students, consisting of 31 males and 75 females with an average age of 23 years, participated. Given the population size, a convenience sampling method was used to select participants. Among them, 21 seniors (nine males and twelve females) voluntarily took part in an interview after completing the questionnaire.

Instruments

Personality Traits of Iranian Entrepreneurs Inventory

To collect quantitative data, a validated questionnaire designed to measure entrepreneurial characteristics within Iran's context was used. The reliability of this questionnaire, calculated using

Cronbach's alpha, was 0.82 for this study. This instrument includes 95 items assessing eight major entrepreneurial personality traits: risk-taking, internal locus of control, success-seeking, pragmatism, challenge seeking, intellectual health, and tolerance of ambiguity. Each item was rated on a Likert scale ranging from 1 (completely disagree) to 5 (completely agree).

Semi-structured Interview

To identify factors influencing the entrepreneurial characteristics of English translation students, a semi-structured interview with five pre-determined questions was employed. These questions were approved by two Assistant Professors of English translation and two lecturers of entrepreneurship courses. Individual interviews were conducted in Persian, each lasting between 10 and 20 minutes. Prior to the interviews, the researchers explained the purpose of the study and clarified how the data would be utilized.

Procedure

This research employed a mixed-methods approach, utilizing both quantitative and qualitative data. Quantitatively, it is classified as a survey; qualitatively, it can be considered explanatory research. The study began with the sampling process. Data collection was conducted face-to-face in classrooms, where the researchers explained the research purpose to students and invited interested individuals to complete the questionnaire at their own pace. Students who preferred not to participate were free to leave the class. To encourage participation, researchers informed students that individual results would be shared through a message on a social network after data collection concluded. A total of 117 questionnaires were distributed, and 106 were returned without missing data. After announcing results, students interested in further participation were invited to an interview, leading to 21 volunteering students (nine males and twelve females) from the senior class. Recorded interviews were fully coded for analysis, and the results were interpreted in conjunction with questionnaire data.

Results

This section is divided into two parts. The first part presents the results of the quantitative data analysis from the questionnaire, while the second part focuses on the qualitative content analysis of interview data. The first and second research questions were answered based on data collected from English translation students at four Islamic Azad Universities in Mazandaran province. The table below summarizes the findings from the descriptive and inferential statistical analyses conducted. Specifically, a one-way ANOVA was performed to compare entrepreneurial traits among students from the four university branches in Mazandaran province.

Table 1. Descriptive statistics and results of one-way ANOVA for entrepreneurial traits

Traits	Descriptive Statistics			Level	One-way ANOVA		
	M	N	SD		F	df	p
Risk-taking	3.20	106	.71	Average	1.82	3	.16
Internal locus of control	3.06	106	.56	Average	.98	3	.68
Success-seeking	3.30	106	.80	Average	1.54	3	.19
Pragmatism	3.52	106	1.02	Average	1.53	3	.17
Challenge-seeking	3.11	106	.61	Average	1.34	3	.31
Intellectual health	3.25	106	.75	Average	2.0	3	.13
Ambiguity tolerance	2.73	106	.32	Average	.16	3	.87

As previously mentioned, each entrepreneurial trait was measured on a 1-to-5 scale, with a theoretical mean of 3. Table 1 shows that the averages for these traits – risk-taking (M = 3.20), internal locus of control (M = 3.06), success-seeking (M = 3.30), pragmatism (M = 3.52), challenge seeking (M = 3.11), intellectual health (M = 3.25), and tolerance of ambiguity (M = 2.73) – are close to this theoretical mean. Consequently, in response to the first research question, it can be stated that the overall level of entrepreneurial traits among English translation students in the Islamic Azad Universities of Mazandaran province is generally at an average level.

To address the second research question, a comparison of mean scores across four branches of Islamic Azad Universities in Mazandaran province was conducted using one-way ANOVA. The results, shown in Table 1, indicate no significant differences among students from these branches in terms of their entrepreneurial traits. Specifically, there was no significant difference in risk-taking (F = 2.82, p = .16 > .05), internal locus of control (F = .98, p = .68 > .05), success-seeking (F = 3.54, p = .19 > .05), pragmatism (F = 3.53, p = .17 > .05), challenge seeking (F = 1.34, p = .31 > .05), intellectual health (F = 2.39, p = .13 > .05), or tolerance of ambiguity (F = .16, p = .87 > .05). Therefore, in response to the second research question, it can be concluded that there are no significant differences in entrepreneurial traits among students from different branches in Mazandaran province.

To answer the third research question, open coding content analysis of the interview data revealed four primary themes related to obstacles: personal, legal, financial, and educational. These themes are illustrated in Figure 2 and elaborated on in the following sections.
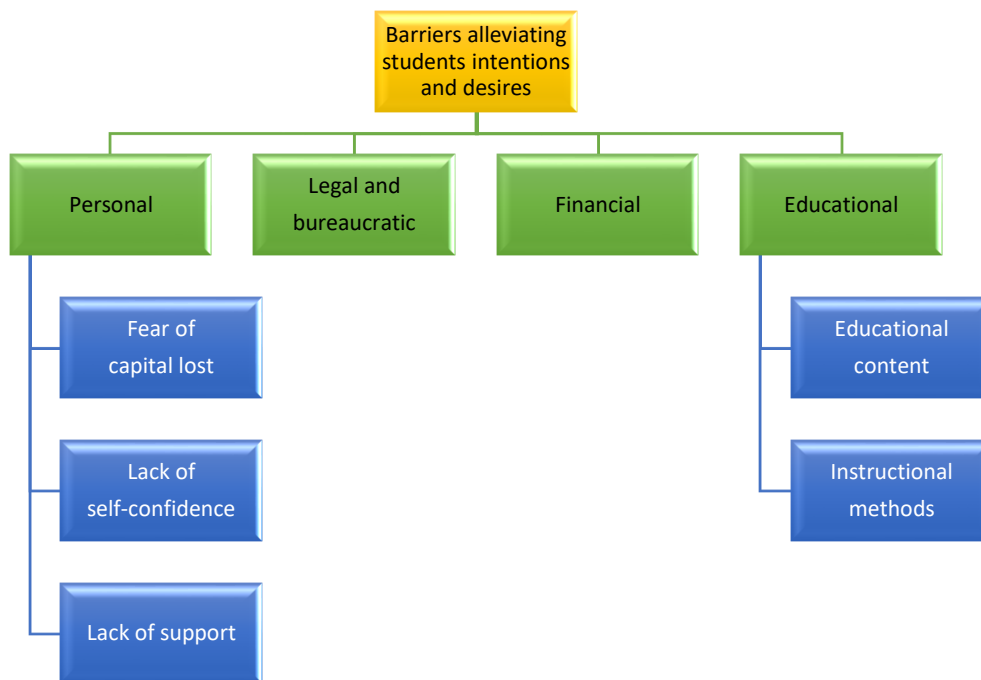

Figure 2. The emerged themes and subthemes from the interview data

Personal Obstacles

Personal obstacles, as identified in this study, are barriers arising from personal concerns or from relationships with people close to the students, such as family members or friends. These obstacles are internal to the students, meaning they are experienced individually, and eliminating other external obstacles does not directly address these personal challenges. Three main types of personal obstacles emerged from the data:

A significant personal obstacle is the fear of losing initial capital. Many students worry that investing in a business idea might result in the loss of their own savings or resources provided by family or other sources, leaving them without a second chance. For instance, student 7 expressed this concern:

> *How much capital do I have that I want to use? If it disappears, I will also be destroyed.*

Some students, despite having financial support, feel a lack of self-confidence in their abilities to start and manage a small business. This self-doubt can inhibit their entrepreneurial pursuits. As student 12 noted:

> *The fact is that my father supports my financial independence regarding my future, but I don't see it in myself. I mean, even when we talk about collective work with friends, I still think I can't.*

Another personal obstacle is the perceived lack of support from family members and friends. This refers to students' uncertainty about receiving emotional or financial backing during potential financial or business difficulties. For example, student 14 shared:

> *I know my wife and her family. Even if the financial support is from my own family, again, if there is a problem, they blame me and say they warned me. I don't know what to do after that.*

Legal and Bureaucratic Obstacles

A significant barrier for translation students aspiring to entrepreneurship is navigating legal and bureaucratic requirements. These include a lack of familiarity with the legal protocols essential for establishing and running a business. Student 7 voiced this concern:

> *I have friends who, after starting work, faced 100 paperwork mazes in offices and even regretted it. I don't want to experience it.*

Additionally, students often feel overwhelmed by the complexity of administrative systems. Many expressed anxiety over the unfamiliarity of formal processes, which makes initiating a business appear daunting. For instance, student 2 stated:

> *I feel I need a lawyer. In fact, I don't know what to do, or who to turn to; even though my parents are employees, I still don't have anything to do with this kind of work.*

Financial Obstacles

Financial constraints were another common theme. Both students and their families, who are often their primary sources of financial support, typically lack sufficient capital to fund a startup. Moreover, obtaining external funding from banks and institutions poses additional challenges. As student 3 explained:

> *I have other siblings who have to be provided by my family, as well. I have to take a loan. In your opinion, will a bank give me a loan? I need a deposit; I need a guarantor; there are thousands of other excuses.*

Educational Obstacles

The final theme identified from the interviews was educational obstacles. The students in this study generally felt that their formal education, both in school and at university, did not adequately support the development of their entrepreneurial skills. One aspect of this obstacle relates to the educational content itself, which, according to students, focuses heavily on theoretical knowledge without demonstrating how these theories could be applied practically. For instance, student 16 noted:

> *We only read books and pamphlets and memorized them. We took an exam and wrote answers to the questions. We translated and they corrected our papers. No one said anything about business.*

Students reported that essential skills for establishing a business based on their translation expertise were not covered in their coursework. Student 20 voiced a similar frustration:

> *I have already mentioned all the obstacles and problems, financial issues, and other things. In the whole 4 years, we have not talked about these things in our classes as we did during this meeting.*

Another significant obstacle highlighted was the gap between professors' teaching methods, the current curriculum, and the real needs of the job market. Many students felt their professors lacked awareness of what is required to succeed in the professional translation field. One student observed:

> *It seems that the professors are not aware of what a student needs in the job market in the field of translation. You can see how many of our professors have translation businesses.*

Moreover, students pointed out the absence of practical training and internship opportunities in translation programs. They felt unprepared for the realities of the workplace, lacking knowledge of the limitations, challenges, opportunities, and risks they might encounter. One student explained:

> *I think even our professors don't have experience working as translators. During these 4 years, they did not talk about their memories as a translator even once. They told us all kinds of memories, but even once, they didn't say anything about it; that means they didn't tell us about the tricks, they didn't do it themselves, so they didn't have anything to tell us.*

Overall, the students concluded that the current curriculum and teaching methods do not provide adequate guidance or role models, and the gap between university education and the job market remains wide.

Discussion

The results from the quantitative and qualitative analyses reveal that the entrepreneurial readiness of English translation students at Islamic Azad University in Mazandaran province is currently suboptimal. The findings indicate that students' entrepreneurial characteristics are generally at an average level, influenced by personal, legal, financial, and educational factors. However, it is essential to interpret this average level with caution, as previous studies suggest variability in entrepreneurial traits across disciplines. For instance, Narenji Thani et al. (2020) found that management and information technology students at the same university displayed higher entrepreneurial characteristics, while industrial engineering students exhibited only average levels. Therefore, generalizing the results of this study to other universities, provinces, or national institutions requires careful consideration.

Further insights arise when the findings of this research are compared to those of Raadi Afsooran (2010) and Khalili Khezrabadi (2023), underscoring that the specific environment within a department can be more impactful than the general university setting. The qualitative data here highlights the importance of curriculum content in fostering entrepreneurial traits. The qualitative analysis aligns with Burns' (2022) findings on pre-business students, as the participants in this study also showed deficiencies in personal traits, particularly in self-confidence and self-reliance. Additionally, the current findings reflect Wang and Wong's (2004) conclusion that a lack of knowledge, both specialized and legal, about the job market hinders students' entrepreneurial development.

In line with past research conducted in Iran, this study's findings – that translation students exhibit insufficient entrepreneurial characteristics – echo earlier studies by Zali et al. (2008), Hosseinpour and Rezaei (2011), and Hosseini and Khosravilaghab (2017), all of whom identified financial constraints as significant barriers to entrepreneurship. The consistent appearance of these obstacles over time highlights the deeply rooted nature of these challenges in the Iranian educational context.

Previous studies have indicated that the factors influencing students' entrepreneurial traits are both internal and external to the university environment. Thus, addressing these factors requires collaborative, multi-faceted efforts rather than action from a single institution. This study corroborates the view of Keshavarz & Mehri Shandi (2021), who proposed a triangular framework involving personal, intra-university, and external factors to guide initiatives that enhance students' entrepreneurial skills.

Finally, while the standardized instrument by Kurdnaij et al. (2006) provided valuable insights into the entrepreneurial characteristics of English translation students, this study suggests the need for a more comprehensive tool. Such an instrument should encompass various dimensions – including educational factors, legal knowledge, financial preparation, and personal readiness – to better assess the entrepreneurial potential of students in translation programs.

Conclusion

University education plays a pivotal role in shaping students' career trajectories, and in today's competitive job market, the ability to launch and manage an independent business is increasingly essential. For English translation students, developing an entrepreneurial spirit is particularly important, as it directly impacts their success in a field where traditional career pathways are often limited. If graduates lack career success, disillusionment with the field could grow, underscoring the need to assess and nurture entrepreneurial traits among these students.

This study was motivated by a significant research gap on this topic in Iran and focused on final-year English translation students from Islamic Azad Universities in Mazandaran province, using a mixed-methods approach. Results showed that while students generally possessed only average entrepreneurial traits, this was due to personal, legal, financial, and educational obstacles.

The findings are a call to action for educators, administrators, and curriculum designers to enhance entrepreneurial skills within translator training programs. Collaboration with other departments and university offices, such as the Office of Industry Relations, is recommended to provide students with cross-disciplinary insights and real-world skills. Additionally, revising teaching methods and curricular content to better align with industry needs is essential. Holding events like translator talks, publishing seminars, and labor market exhibitions could further familiarize students with the practical, legal, financial, and business aspects of the profession.

Despite its limitations, this study is one of the first of its kind in Iran, providing valuable initial insights into entrepreneurial skills in translation education. Future research should involve larger sample sizes to better understand entrepreneurial traits among translation students across the country. Phenomenological studies are needed to delve into overlooked aspects of entrepreneurship within this field, and the development of entrepreneurship training programs for translation students could serve as a practical step forward. Testing these programs' effectiveness in different academic settings could help identify best practices for cultivating students' entrepreneurial potential.

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A Case Study of Game Localization in Iran: *Counter-Strike: Global Offensive* and *Zula*

Mohammad Shokoohifar[*] iD | PhD Candidate, North American Studies, Faculty of World Studies, University of Tehran, Tehran, Iran

Hamideh Nemati Lafmejani iD | Assistant Professor, English Department, Islamic Azad University, Science and Research Branch, Tehran, Iran

Abstract

This study explores video game localization as a rapidly expanding field with significant potential in Iran's market, focusing on *Zula*, the Persian localized version of the video game *Counter-Strike: Global Offensive (CS:GO)*. The comparison examines various aspects of the games, including loading pages, user interface, settings, game modes, gameplay mechanics, announcements and voices, character adaptation, maps and weapons, monetization strategies, resource systems, items and accessories, as well as bugs. The findings demonstrate that *Zula* effectively integrates Iranian cultural values through features such as localized maps, Persian-language text, and culturally neutralized characters, fostering a sense of national identity and enhancing the overall user experience. However, the study also identifies shortcomings in the localization process, particularly regarding writing direction and translation inconsistencies, emphasizing the need for improvements in translation practices.

Keywords: Game localization, *Zula*, *Counter-Strike: Global Offensive*

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[*]Corresponding author: shokoohi@ut.ac.ir

1. Introduction

The video game industry is rapidly expanding, and localization holds significant potential in Iran due to the lack of foreign companies operating in the market. A study by Khoshsaligheh and Ameri (2020) indicates that Iranian gamers are dissatisfied with the current state of game localization. As a specialized field within Translation Studies, game localization involves adapting video games to suit different linguistic and cultural contexts. This field has experienced significant growth with technological advancements and increased internet access, which have broadened the global reach of video games and attracted a larger user base.

Several studies have been conducted on the comparison of games and their Persian localized versions. For example, Fatehi Rad and Bagheri Masoudzadeh (2021) explored the frequency of procedures adopted in the localization process of several popular games such as *GTA 5*, *Resident Evil*, and *Life is Strange* based on Tomaszkiewicz's (1993) model. In her research, Isapour (2016) examined how localizers encountered challenges and employed procedures during the localization process and found cultural challenge to be immense in Iran. Sheikh Baha'i (2013) examined the norms proposed by Toury (1995) and investigated the adequacy and acceptability of localized versions of video games in Iran. He found that Iranians tend to strive for adequacy rather than acceptability.

As highlighted in the literature review, research on video game localization in Iran remains limited and has primarily focused on challenges, strategies, and norms. This study examines *Counter-Strike: Global Offensive (CS:GO)*, one of the most popular games worldwide, and its Persian localized version, *Zula*. The *Counter-Strike* series is a team-based first-person shooter game, and *Zula* draws heavily from this globally acclaimed title, particularly in its gameplay mechanics and weaponry.

2. Background

The following sections address the definition of localization, with a particular focus on game localization, and explore its various modes. Additionally, a brief review of studies conducted on game localization is provided.

2.1. Localization

Although localization is taking place worldwide, scholars are not on the same page on its definition. Some try to draw a border between translation and localization and consider it a distinct field, while others see no difference between these two (Jiménez-Crespo, 2013). However, there are specific characteristics that are more or less agreed upon. According to Schäler (2012, p. 209), localization is defined as "the linguistic and cultural adaptation of digital content to the requirements and the locale of a foreign market; it includes the provision of services and technologies for the management of multilingualism across the digital global information flow". Dunne (2006) also specifies that the adaptation of digital products for different geographical, linguistic, and cultural contexts involves various processes. Localization encompasses translation, adaptation of non-textual elements, and consideration of cultural and regulatory factors. Essentially, localization focuses on the overall processes of product adaptation rather than mere tasks.

As Dunne (2006) noted, localization is one of the four integrated processes called GILT which stands for Globalization, Internationalization, Localization, and Translation. Internationalization "primarily consists of abstracting the functionality of a product away from any particular language so that language support can be added back in simply, without worry that language-specific features will pose a problem when the product is localized" (Jiménez-Crespo, 2013, p. 25). According to Jiménez-Crespo

(2013), the process of internationalizing a digital product occurs primarily during the development stage. Generally speaking, a process that ensures three points:

1. There is no cultural tie to the source digital products;
2. No matter in what language they are developed, normally in English, they do not depend upon that language;
3. Once the localization process has started, no technical adaptations will be made.

Jiménez-Crespo (2013) asserts that globalization encompasses the comprehensive range of business decisions and actions necessary for an organization to attain a genuinely international perspective and reach. It involves the adaptation of business practices and processes to effectively serve customers globally, accommodating their diverse languages, countries, and cultures.

While internationalization is a one-way process, globalization by contrast is cyclical, as it occurs before localization, during distribution, and after it, in the form of multilingual customer support. This process meets several objectives, from facilitating localization to establishing mechanisms for managing the multiplicity of bilateral and multilingual interactions (Jiménez-Crespo, 2013).

2.2. Localization Models

There are various models which are globally used by game producers to localize games. O'Hagan and Mangiron (2013) classify game localization models based on two criteria. The first one is the agent and the second one is the release date.

There exist two models based on the agent criterion. In the in-house model, localization is performed by the game producer, while in the outsourcing model, a localization institution or translator completes the task. The localized version of *Zula*, not released by the *Counter-Strike* producer, serves as an example of the outsourcing model. The in-house model incurs significant costs, and returning the budget to the producer's account can take a long time. For this reason, producers do not release games in all languages (O'Hagan & Mangiron, 2013).

In terms of release date, there are also two models. The first is the sim-ship model, which means producing the localized version simultaneously with the original version. The second model is post-gold, in which the company releases the original version first and then the localized version after several months or possibly a year. Both models have their pros and cons, but the post-gold model may be more efficient as it allows producers to fix bugs and release the localized version at a lower cost and with fewer issues since gamers play the original version and report potential bugs to the company (O'Hagan & Mangiron, 2013).

Many games are now available on more than one platform, and these are referred to as "cross-platform games" or "multiplatform games" (O'Hagan & Mangiron, 2013). In most cases, games are initially released on one or two platforms and later made available on additional platforms to reach a wider audience. As O'Hagan and Mangiron (2013) note, one important factor influencing this decision is the need to maintain or increase sales of specific consoles or hardware. However, it is preferable to develop the game from the outset so that it can be easily released on other platforms in the future, thereby avoiding duplicated coding tasks. Additionally, certain games are more efficiently played on specific consoles, prompting game developers to choose platforms based on the game's nature.

2.3. Studies on Localization

The research on video game localization in Iran has revealed significant insights into the complexities and cultural sensitivities involved in adapting games for local audiences. The study by Fatehi Rad and Bagheri Masoudzade (2021) explores the localization strategies employed by Iranian translators, identifying shortcomings in the process. Their research, grounded in Tomaszkiewicz's (1993) model, analyzes five popular computer games, revealing that literal translation is the most frequently used strategy, while omission and borrowing are less common. This highlights a tendency towards direct translation that may overlook cultural nuances.

Similarly, the work of Zoraqi and Mousavi (2023) focuses on cultural localization practices within two major Iranian software companies, Parnian and Gerdoo. Their qualitative analysis of six localized games compared to their original English versions uncovers that changes primarily address religious, socio-cultural, and socio-political contexts relevant to Iran. Specific strategies included removing cut scenes and altering soundtracks to align with local values.

Both studies emphasize that localization transcends mere translation; it involves a careful adaptation of content to resonate with local audiences while paying attention to legal and cultural considerations. The findings from Fatehi Rad and Bagheri Masoudzade's (2021) study complement those of Zoraqi and Mousavi (2023) by illustrating how localization practices are not only about linguistic accuracy but also about cultural relevance. The intersection of these studies underscores the necessity for translators to navigate complex cultural landscapes, ensuring that video games are both engaging and appropriate for Iranian players. This body of research contributes to a broader understanding of media consumption in culturally diverse contexts, highlighting the critical role of localization in the global video game industry.

Khoshsaligheh et al. (2023) in their article explore the evolving landscape of video game localization in Iran, addressing a significant gap in the existing literature. The research question centers on how cultural, linguistic, and technological factors influence the localization practices of video games in the Iranian context. To investigate this, the authors employed a qualitative methodology, conducting interviews with industry professionals and analyzing various localized games. This approach allowed for an in-depth understanding of the challenges and strategies involved in adapting foreign video games for Persian-speaking audiences. The results reveal that while there is a growing interest in game localization in Iran, several obstacles persist, including limited resources, lack of standardized practices, and cultural sensitivities. The study highlights the importance of collaboration between developers and translators to create culturally relevant content that resonates with local players. Ultimately, the findings suggest that enhancing localization efforts could significantly contribute to the development of the Iranian gaming industry, fostering greater engagement among Persian-speaking gamers and promoting cultural exchange through interactive media.

Regarding the role and agency of video games in Iran, Zoraqi and Kafi (2023) addressed a gap in Translation Studies concerning the sociological aspects of game localization. Their research question focuses on the visibility of translators within the localization process and their agency in practice. The introduction emphasizes the importance of localization in aligning video games with the socio-cultural values of target markets, noting that translators often have significant freedom to adapt content for local audiences. The method involves a textual analysis of four Persian localized video games from different genres, allowing for an examination of the translators' visible and invisible agency based on varying levels of interactivity. Results reveal that translators exert visible agency by clarifying game references and providing commentary, while their invisible agency is directed at interpreting semiotic elements within the games. The study concludes that the level of interactivity significantly influences how translators navigate their roles, ultimately impacting their visibility and agency within the

localization process. This research contributes to a deeper understanding of the complexities involved in video game localization in Iran.

3. Methodology

This study employs a qualitative approach to compare the English video game *Counter-Strike: Global Offensive (CS:GO)* and its Persian localized adaptation, *Zula*. Developed by Valve and Hidden Path Entertainment, *CS:GO* is a globally popular multiplayer first-person shooter game released in 2012. The game features two opposing teams – terrorists and counter-terrorists – competing in a variety of objective-based modes. Players can choose from nine distinct game modes or join community-hosted servers that offer custom maps and modes. Renowned for its intuitive user interface and robust gameplay mechanics, *CS:GO* has become a cornerstone of the global gaming community.

Zula, developed by Madbyte Games and distributed in Iran by Sourena Games, serves as a Persian localized adaptation of *CS:GO*, incorporating numerous cultural modifications to resonate with Iranian players. Unlike *CS:GO*'s minimalist design and universal appeal, *Zula* integrates culturally specific elements, such as Persian-language user interface captions, localized maps (e.g., Tehran and Persepolis), and Iran's national weapons. Additionally, *Zula* introduces monetization features tailored to the Iranian market, enhancing accessibility for local players while maintaining the competitive nature of the game.

The comparison between the English video game and its localized counterpart focuses on 13 features: 1) loading pages, 2) user interface, 3) settings, 4) game modes, 5) shooting modes, 6) zooming modes, 7) announcements and voices, 8) names and characters, 9) maps and weapons, 10) monetization strategies, 11) resource systems, 12) items and accessories, and 13) bugs.

4. Analysis and Findings

The following sections provide analyses of *CS:GO* and *Zula* across thirteen categories, including loading pages, user interface, settings, game modes, shooting modes, zooming modes, announcements and voices, names and characters, maps and weapons, monetization strategies, resource systems, items and accessories, as well as bugs.

4.1. Analysis of Loading Page

The loading page is the first screen that gamers see when they launch the game, and it remains visible until the game has fully loaded. The loading page for *CS:GO* is quite basic (Figure 1), featuring only the game's logo.

Figure 2. *CS:GO* loading page

Zula's loading page, in contrast, is intricate and visually appealing, designed to capture gamers' attention. *Zula* releases new game seasons every few months, introducing updates and changes. Each season features a redesigned loading page, often inspired by national and religious events such as Nowruz or Ramadan. The current loading page for the Fatehan (Conquerors) season (Figure 2) prominently displays the flag of Iran in two locations: a large flag on the trench and a smaller one on the fighter's vest. Additionally, the organizational logo of the Iranian army is featured on the fighter's military beret, along with the Ranger logo on his arm, indicating one of the training courses for the Ranger Forces in Iran. Other localized elements include a 106 mm war cannon mounted on the jeep and a G3 weapon held by the fighter, both of which are national weapons of the Iranian army. This loading page is fully localized for the Iranian context, allowing gamers to feel a connection to their language and nationality from the very start of the game.

Figure 3. *Zula* loading page

4.2. Analysis of User Interface

A user interface is where users interact with an application, website, or computer. An effective user interface should make the user's experience easy and intuitive while requiring minimal effort on the user's part to achieve the maximum desired result (Indeed, 2022). User interfaces typically include elements such as menus, start and exit buttons, and settings.

In terms of user interface, the main page in both games is simple enough for gamers to access the sections they need. In *Zula* (Figure 3), universal icons for settings, exit, rankings, and more are accompanied by captions in Persian, while *CS:GO* designers opted for icons alone (Figure 4). Although most gamers are familiar with these icons, providing captions can help avoid confusion for new players.

The *Zula* main page informs gamers about the status of servers, allowing them to choose a server based on their preferences. Server status bars indicate the number of players. New gamers can select the "Quick Start" button to begin playing immediately without needing to choose servers or rooms. In contrast, *CS:GO* does not allow players to select servers or rooms; they can only choose the mode and click on the play button to start the game with random players. While this may seem easier, offering more options enhances player choice. *Zula* players can see the names and ranks of their opponents before starting a game, whereas in *CS:GO*, this information is only available after the game begins. Additionally, *Zula* players can view general account information such as points, level, number of resources, and *Zula* Golds. *CS:GO* players can access their profile information by clicking on their profile picture at the top right of the page; however, this information is not as detailed as in *Zula* and features a simpler ranking system based on earned XP in each match.
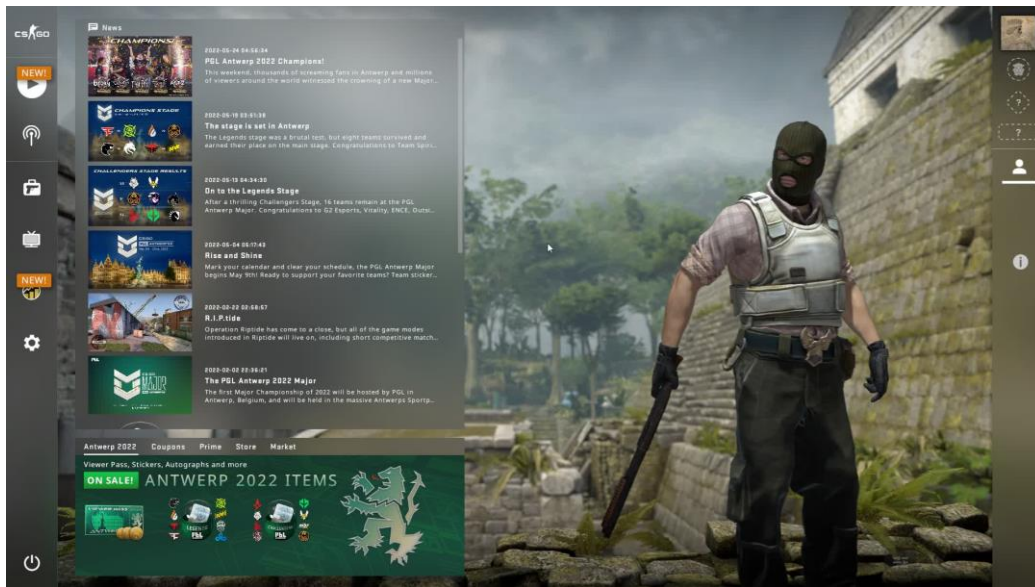

Figure 3. *Zula* user interface

Figure 4. *CS:GO* user interface

4.3. Analysis of Settings

All games have a settings section that allows gamers to personalize the features according to their preferences. The settings section can include tabs for video, audio, gameplay, keyboard, and more. Depending on the game's complexity, each tab contains different features that can be customized.

Zula offers fewer customization options in the settings section (Figure 5), which may be due to the fact that *CS:GO*'s graphics (Figure 6) are significantly superior to those of *Zula*. Additionally, localizing the textual content of the settings is crucial, as it helps gamers understand which aspects of the game each feature modifies. Although *Zula* has translated the textual content of the settings, some sections still remain untranslated or are only transliterated which could be due to absence of established equivalents.
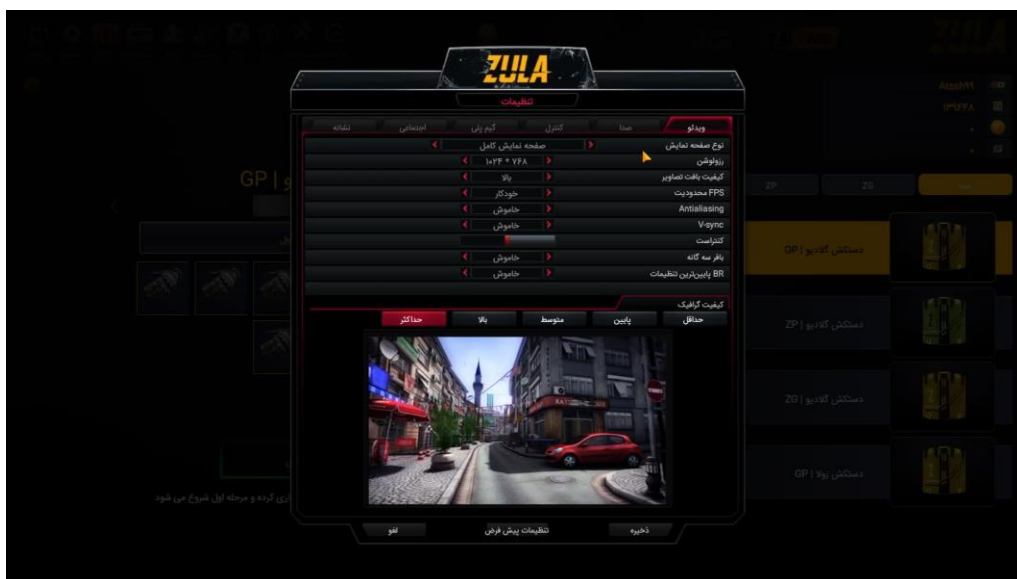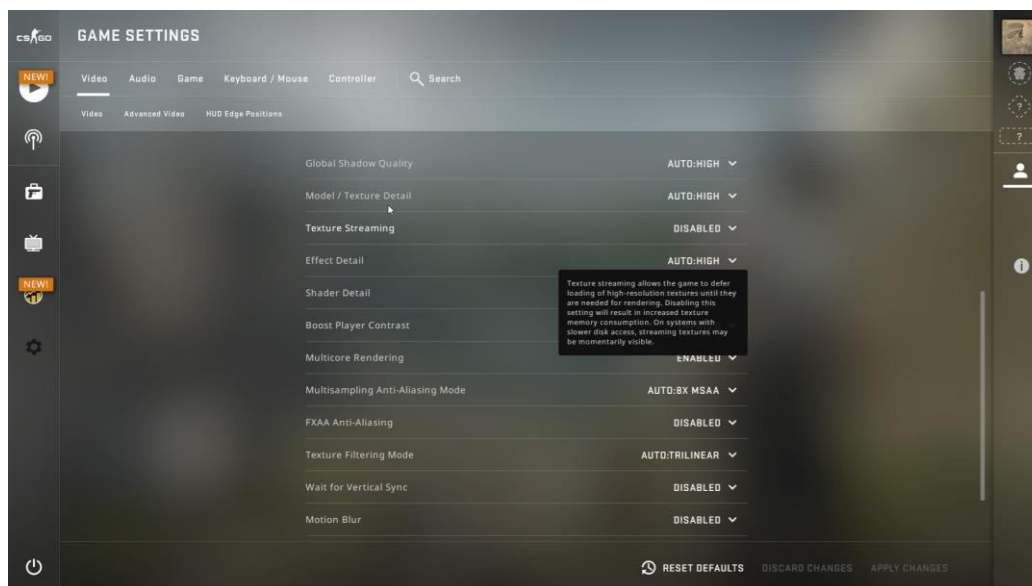

Figure 5. *Zula* settings section

Figure 6. *CS:GO* settings

4.4. Analysis of Game Modes

Both games offer different game modes that gamers can play with various rules and styles. A typical mode in both versions is "Counter-Terrorists vs. Terrorists." However, *CS:GO* features more game modes, providing a wider range of player choices. It should be noted that *Zula's* variety of game modes has increased since its release and will probably continue to grow over time.

4.5. Analysis of Shooting Modes

CS:GO players must aim at the enemy and shoot with the left mouse button, whereas *Zula* players can activate automatic zooming and only need to control the shooting action. This option allows amateur gamers to play with less effort until they gain enough experience to play more professionally by managing both zooming and shooting actions. As a result, *Zula* is more accessible than *CS:GO* for amateur gamers.

4.6. Analysis of Zooming Modes

In *CS:GO*, gamers cannot zoom in with all weapons for better accuracy, as this feature is limited to a select range of firearms. In contrast, *Zula* allows players to zoom in and out with most weapons. Zooming modes are among the options that can enhance user experience if offered in the localized version of games.

4.7. Analysis of Announcements and Voices

Zula has added announcements and background voices to enhance the game's engagement. In specific situations, such as when killing an enemy, these announcements appear alongside their verbal versions. For example, when a player scores a headshot, an announcement appears with the voice

saying "شلیک به سر" which translates into "headshot". As players defeat various opponents in succession or take revenge on the enemy who killed them, they hear different announcements with varying voice tones, such as "قاتل سریالی" (serial killer) and "انتقام" (revenge). One of these announcements is shown in Figure 7.

Figure 4. Headshot announcement

There are also other voices in *CS:GO* which are preserved in *Zula*, in the form of dialogues that players can use to communicate with their teammates, such as "برگرد عقب" (get back!) or "آفرین!" (bravo!), as well as system notifications that inform players of important game events, such as "بمب کار گذاشته شد" (the bomb has been planted). All Persian voices and announcements are recorded with a deep, bass voice which provides players with a more enjoyable gaming experience.

4.8. Analysis of Names and Characters

As mentioned earlier, *CS:GO* and *Zula*, like their predecessors, feature two teams that each aim to eliminate the other. The teams in *CS:GO* are named "terrorists" and "counter-terrorists," while in *Zula*, they are called "تبهکاران" and "ضربت" respectively. "تبهکاران" and "ضربت" are Persian words meaning malefactors and strike, respectively.

CS:GO and *Zula* can also be compared in terms of the outfit of the characters. In CS:GO, the characters in the "terrorists" team wear keffiyeh (Figure 8), which symbolizes Islamic culture and implicitly coveys that terrorists are Muslims. In *Zula*, however, the characters in the تبهکاران team have no Keffiyehs (Figure 9) and the Islamic associations are removed.

Figure 5. Terrorist team in *CS:GO*

Figure 6. Tabahkaran team in *Zula*

4.9. Analysis of Maps and Weapons

CS:GO and *Zula* share many maps and weapons. However, *Zula* includes several maps and weapons that reflect Iranian culture, which are absent in *CS:GO*. For instance, as shown in Figure 10, *Zula* features a map of Persepolis, highlighting Iranian history and culture.

Figure 7. Persepolis map in *Zula*

Moreover, the two games differ in the options available for weapon selection during gameplay. In *CS:GO*, all players start with the same budget, limiting their initial purchases to inexpensive weapons such as sidearms during the first round. Players can then earn additional funds by eliminating opponents and surviving rounds, meaning that acquiring better weapons depends solely on in-game performance rather than external financial investment. Conversely, *Zula* provides all players with a few free weapons but allows them to access more powerful weapons for a limited time through monetary payments, introducing a pay-to-win dynamic absent in *CS:GO*.

4.10. Analysis of Monetization Strategy

The primary goal of the gaming industry appears to be entertaining people of various age groups while generating significant revenue. Localization serves as a key strategy for increasing revenue by broadening the target market. Since game localization is still in its early stages in Iran, there are numerous opportunities for translators and game developers to address existing gaps, potentially resulting in substantial profits.

In the case of *CS:GO* and *Zula*, while *CS:GO* is free to play, *Zula* restricts access to certain features unless payment is made. This monetization model undeniably has a negative impact on the gaming experience, as players who are unwilling to spend money are at a disadvantage. In *Zula*, players who invest more in purchasing weapons and items gain a significant advantage, making it easier for them to defeat others and enhancing their overall enjoyment of the game.

4.11. Analysis of Resource Systems

In *CS:GO*, weapons have consistent destructive power for all players, ensuring a level playing field. In contrast, *Zula* allows players to upgrade their weapons by collecting resources such as iron, cobalt, titanium, and chromium (see Figure 11). These resources can be acquired either by playing the game or by purchasing resource chests. This system introduces a pay-to-win element, as financial investment can grant certain players a significant advantage over others. It is worth noting that *Zula* is not unique in enabling players to gain access to superior equipment through monetary investment. However,

some game development companies, particularly those backed by significant financial resources or affluent sponsors, place less emphasis on monetizing players directly.

An important aspect of *Zula*'s resource system is the uncertainty surrounding weapon upgrades. The probability of a successful upgrade is not guaranteed, and each attempt consumes resources regardless of the outcome. Players can increase their chances of a successful upgrade by purchasing specific in-game items, adding another layer of financial incentive to the gameplay mechanics.

Figure 8. Weapon-upgrading menu in Zula

4.12. Analysis of Items and Accessories

Zula introduces a wide range of skins, items, and accessories that allow players to personalize their weapons and engage with opponents in unique ways (Figure 12). For instance, players can spray humiliating phrases on the bodies of defeated opponents, fostering a competitive atmosphere and encouraging arguments or boasting about gameplay, which enhances the entertainment value of the game. Additionally, players can customize their weapons with various skins and accessories, which not only improve their visual appeal but, in some cases, can also enhance weapon accuracy. The sale of these items generates substantial revenue for the game developers, enabling further enhancements to the game's features and overall quality.

Figure 9. *Zula* store offering items and accessories

4.13. Analysis of Bugs

Quality control is a standard stage in game development, during which experienced players and technicians test the game to identify and resolve issues, ensuring it is released with minimal bugs. While many bugs are addressed before launch, some may emerge during gameplay under specific conditions. In the context of localization, several errors warrant attention.

One significant issue arises from the unique characteristics of languages, such as writing direction. Persian, for example, is written from right to left, unlike English. However, *Zula*'s developers have often neglected this fundamental aspect. In many instances, textual content has been translated without adjusting for the correct writing direction. As shown in Figure 13, punctuation marks are incorrectly placed, reflecting the orientation of English text rather than Persian.

Figure 10. Incorrect placement of punctuation marks in *Zula*

Another issue concerns the inappropriate use of literal translation. While scholars such as Vinay and Darbelnet (1995) and Newmark (2001) advocate for literal translation as an effective strategy under certain conditions, it is only suitable when the resulting text sounds natural in the target language. For instance, in one section displaying the number of players in the game, the English phrase "Players: 30 Players" was translated into Persian as "بازیکنان: بازیکنان ۳۰" which sounds unnatural and redundant. A more appropriate localization would be "تعداد بازیکنان: ۳۰ نفر" which aligns with Persian linguistic norms. This example highlights the importance of contextual and cultural appropriateness in the localization process.

Beyond linguistic issues, *Zula* also suffers from visual inconsistencies. One notable example involves the popular map called "کشتی" (meaning "ship"). As gamers wait for the game to load, a loading screen appears featuring Turkey's national flag displayed on a massive ship (Figure 14). However, when the loading screen disappears, the game begins with the localized version of the ship which features Iran's national flag (Figure 15). These discrepancies undermine the coherence of the game's visual and cultural elements.

Localization is inherently dynamic, requiring meticulous attention to ensure alignment across all semiotic channels. A lack of such alignment, as demonstrated in these examples, can detract from the overall quality of the gaming experience.

Figure 11. The ship with the national flag of Turkey

Figure 12. The ship with the national flag of Iran

5. Conclusion

Zula exemplifies both the accomplishments and the challenges within Iran's emerging localization industry. The game demonstrates a capacity to address cultural and social sensitivities by reframing stereotypical portrayals and tailoring content to align with the values of Iranian gamers. However, technical and linguistic shortcomings, such as issues with writing direction and grammatical inaccuracies, underscore the developmental nature of Iran's localization sector, highlighting the need for greater expertise, resources, and industry maturity. Despite these challenges, *Zula*'s widespread popularity and significant economic impact reveal a strong demand for culturally resonant gaming experiences in Iran, suggesting substantial potential for industry growth if investments are made in skill development, technological advancements, and strategic planning.

To advance the Iranian localization industry, leveraging local experiences and adopting best practices from more developed markets could help avoid common pitfalls and achieve higher standards more efficiently. A critical aspect of this development lies in education and training. Introducing specialized courses in game localization within Translation Studies programs could equip future professionals with the skills needed to compete internationally. Such academic initiatives, from undergraduate to doctoral levels, would create a highly skilled workforce capable of elevating the industry to meet or exceed global standards.

While *Zula* may not yet represent the pinnacle of Iranian localization, it serves as a valuable case study. The insights gained from its successes and limitations provide a solid foundation for improving localization practices, raising industry standards, and strengthening the economic potential of the localization field in Iran. With strategic investment and a focus on education, the Iranian localization industry can evolve into a sophisticated and competitive sector, poised for sustainable growth on both local and international stages.

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