



EVALUATING THE EFFECTIVENESS OF MT AND CAT TOOLS IN LITERARY TRANSLATION: A CASE STUDY OF SAADAT HASAN MANTO'S TOBA TEK SINGH

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Abstract

This study investigates the impact of Machine Translation (MT) and Computer-Assisted Translation (CAT) tools on the translation quality of Saadat Hasan Manto's renowned short story Toba Tek Singh. Utilizing Equivalence and Fidelity Theory (Nida & Taber, 1982) as the theoretical framework, the research compares MT/CAT-generated English outputs with a published human translation. The analysis focuses on three core areas: lexical and syntactic accuracy, cultural and contextual equivalence, and emotional and stylistic fidelity. Findings reveal that while MT/CAT tools produce grammatically coherent translations, they frequently fail to capture idiomatic expressions, cultural references, and narrative tone. Key emotional and stylistic elements such as satire, irony, and character voice are often flattened in machine outputs, leading to loss of nuance. In contrast, the human translation preserves the narrative's complexity, socio-political context, and emotional depth. The study concludes that while MT and CAT tools offer efficiency, they lack the interpretive capacity needed for literary translation. Future work should integrate cultural annotation tools, bilingual feedback, and enhanced AI learning models to bridge current limitations. This research contributes to the growing field of translation studies by highlighting the limitations of automated tools in preserving the integrity of culturally rich texts.

Keywords: *Toba Tek Singh, Machine Translation, CAT Tools, Equivalence Theory, Urdu-English Translation, Literary Translation, Cultural Fidelity*

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1. Introduction

Rapid technological advancements have brought about significant changes in the field of translation studies. Among the most transformative developments are Machine Translation (MT) and Computer-Aided Translation (CAT) tools, which have enhanced accessibility, speed, and efficiency in various domains of translation, including technical, scientific, and commercial texts (Bowker, 2002; Austerlühl, 2001). However, the application of these tools to literary translation remains a topic of ongoing debate due to the distinctive challenges posed by literary language and content (Díaz Cintas & Remael, 2007).

Literary translation is not merely a linguistic substitution exercise; it involves the recreation of an artistic experience in another language. It demands a nuanced understanding of cultural references, idiomatic expressions, rhetorical devices, and emotional undertones. These elements are crucial for preserving the integrity and aesthetic of the source text (Newmark, 1988). The complexity of such translations often renders purely automated systems inadequate, as MT and CAT tools lack the ability to process implicit meanings, irony, and context-dependent expressions (Gaspari, 2006; Pym, 2010).

Saadat Hasan Manto, one of the most prominent Urdu fiction writers of the 20th century, is celebrated for his emotionally charged and socially critical narratives that delve into human psychology and the socio-political upheaval of Partition-era South Asia. His short story Toba Tek Singh provides a particularly rich case for analyzing literary translation. The story's setting during the traumatic division of India and Pakistan in 1947 and its use of satire, pathos, and fragmented identity narratives make it a suitable candidate for evaluating the performance of MT and CAT tools in conveying emotional and cultural nuances.

Although MT and CAT tools have shown efficiency in structured and repetitive texts, literary translation presents far greater complexity (Austerlühl, 2001; Bowker, 2002). For instance, Google Translate and Microsoft Translator operate based on large datasets and statistical or neural networks, which often lack the semantic depth required for handling literary intricacies (Koehn, 2020). Similarly, CAT tools like SDL Trados and

memoQ offer memory and terminology databases to assist translators, yet still depend heavily on human input for nuanced interpretation (SDL, n.d.; memoQ, n.d.).

Moreover, the growing integration of AI in translation calls for a critical re-evaluation of how these tools are utilized in practice and whether they can eventually rival human creativity and intuition. Studies have shown that while MT and CAT tools may reduce time and cost, they often compromise on fidelity, context accuracy, and cultural resonance, especially in literary texts (Bowker, 2002; Gaspari, 2006; Pym, 2010).

This study aims to evaluate the effectiveness of MT and CAT tools in translating Toba Tek Singh, focusing on accuracy, fidelity, and equivalence in comparison to human translation. The analysis is grounded in Equivalence and Fidelity Theory, which emphasizes the importance of preserving both semantic content and emotional effect in translated texts (Nida & Taber, 1982). Through a mixed-methods approach combining textual analysis and expert feedback, this research seeks to identify common translation errors, explore the limitations of current technologies, and offer recommendations for improving translation quality and cultural authenticity in literary contexts.

1.1. Objectives

1. **To evaluate the accuracy and validity** of translations generated using MT and CAT tools in comparison to human translations of *Toba Tek Singh*.
2. **To identify and categorize the common errors** and challenges encountered in using MT and CAT tools for literary translation.
3. **To assess the degree of equivalence and fidelity** achieved by MT and CAT tools, based on the theoretical framework of Equivalence and Fidelity Theory.

1.2. Significance

This research holds significance for both academic scholarship and practical translation work. First, it contributes to the growing discourse on the intersection between technology and translation studies, particularly in the under-explored domain of literary translation. While MT and CAT tools have been widely adopted in technical and business settings (Austermühl, 2001; Gaspari, 2006), their application in translating literature which demands cultural sensitivity and interpretive skill remains contentious and relatively under-researched (Newmark, 1988; Díaz Cintas & Remael, 2007).

Second, this study provides valuable insights for translators, educators, and software developers. For translators, understanding the limits and strengths of MT and CAT systems can guide tool usage in a way that enhances productivity without sacrificing

quality. For educators and translation trainers, the study can offer pedagogical frameworks for integrating technology into translator training. For developers of MT/CAT tools, the identification of recurring literary translation issues can inform improvements in algorithm design, particularly in handling context, idiomatic expressions, and culturally embedded elements.

Furthermore, the study has implications for preserving literary and cultural integrity in cross-linguistic communication. As literature is not only a form of artistic expression but also a vessel of cultural identity and historical memory, ensuring that translations reflect the original's style, meaning, and emotional tone is essential (Nida & Taber, 1982; Pym, 2010). By highlighting areas where technology falls short, this research advocates for a more nuanced, human-centric approach to literary translation in the digital age.

1.3. Research question

1. What are the common errors made by MT and CAT tools in translating short story Toba Tek Singh?
2. How can MT and CAT tools be improved to increase their efficiency in translating literary works?
3. How do the translations produced by CAT and MT systems stand against those produced by human translators?

2. Review of literature

The integration of technology in translation practices has evolved dramatically over the past few decades. According to Rogers (1995), technology refers to a “design for instrumental action that reduces the uncertainty in the cause-effect relationships involved in achieving a desired outcome” (p. 11). In translation studies, this concept has materialized through the use of machine translation (MT) and computer-aided translation (CAT) tools that assist in accelerating and enhancing translation output.

Austermühl (2001) emphasizes the role of electronic tools in modern translation, including not only translation-specific software but also general tools like word processors, databases, file transfer systems, and email communication. These tools are widely used by translators to streamline their workflow. However, Austermühl also notes that over-reliance on such technologies may reduce the human translator's income and creativity, especially in literary settings.

Bowker (2002) provides a foundational introduction to CAT tools, describing their functionalities such as translation memory, terminology databases, and plug-ins that

enhance productivity. Despite acknowledging their value, she stresses that human translators still play a critical role in ensuring quality, particularly in cases where meaning depends heavily on context and stylistic variation. Bowker argues that machine-generated translations often lack the pragmatic awareness and emotional resonance required for high-quality translation, particularly in literature.

Bigwood (2004) recalls J. Paap's contribution in *Research-Technology Management*, which describes technology as "the application of scientific knowledge to meet a specific need," reinforcing the view that tools should support, not replace, human expertise. In the same context, technology is regarded as both material and immaterial ranging from translation memory systems to cognitive decision-making processes applied by translators (Bigwood, 2004).

Moreover, scholars such as Díaz Cintas and Remael (2007) have explored the use of subtitling and audiovisual translation tools, identifying both opportunities and limitations for translators working in multimedia contexts. These tools can offer practical assistance but often struggle to adapt stylistic nuances or narrative complexity without human intervention.

In the context of machine translation, Google Translate, Microsoft Translator, have made significant advancements with the use of neural machine translation (NMT). However, studies like Koehn (2020) and Gaspari (2006) highlight that these tools still face major challenges when applied to literary texts. Their output may be fluent but not faithful, often failing to preserve metaphor, irony, tone, or cultural references elements that are fundamental to literary expression.

Equivalence and fidelity central concepts in translation theory also appear frequently in the literature. Nida and Taber (1982) distinguish between *formal equivalence* (word-for-word) and *dynamic equivalence* (thought-for-thought), emphasizing the translator's responsibility to preserve both semantic content and emotional impact. Newmark (1988) supports a similar view, arguing that fidelity to style, tone, and context is essential, particularly in literary translation.

Collectively, these studies suggest that while MT and CAT tools can enhance efficiency and accessibility, they cannot yet replace the interpretive, emotional, and cultural competencies of human translators, especially when it comes to literary texts like *Toba Tek Singh*, which are deeply rooted in historical, political, and emotional contexts.

2.1. Technological tools for translation

Technological tools have significantly transformed modern translation practices. Among the most widely used are programs developed by Microsoft, which enable users to

type, save, and edit documents efficiently. Tools such as the spelling and grammar checker, word count, and speech recognition features support translators in improving accuracy and productivity (Austermühl, 2001). Microsoft Word, for instance, has effectively replaced traditional pen-and-paper drafting for many translators.

One of the key tools in computer-aided translation is Translation Memory (TM) software. TM stores source texts alongside their translations in language pairs known as “translation units.” These segments ranging from words and sentences to headings can be reused in future projects. SDL, a developer of such software, describes TM as a linguistic database that “learns” from translators over time. As the memory expands, it improves consistency and reduces turnaround time, making the translation process more efficient (SDL, 2021).

Terminology management tools are also vital. These allow for the creation of termbases, which are multilingual databases containing specialized vocabulary and definitions. One prominent example is MultiTerm by SDL, which integrates with TM software to ensure accuracy and consistency in domain-specific translations.

Voice recognition software is another innovative advancement. It converts spoken language into written text, allowing translators to dictate rather than type. Tools like Dragon NaturallySpeaking (Nuance Communications, 2020) enhance efficiency, especially during long sessions. Translators can speak their translations aloud while the software transcribes them, after which they can revise the output manually.

Plug-ins are add-on tools that extend the capabilities of existing applications. For instance, PDF plug-ins enable the conversion of PDF documents into editable Word files and vice versa. This is particularly useful for translators who need to work with formatted documents, such as contracts or reports (Bowker, 2002).

Moreover, online resources such as dictionaries, glossaries, and databases are essential for freelance translators. Many of these, including IATE (InterActive Terminology for Europe), Bureau de la traduction, and the Larousse Dictionary, offer reliable terminological data without requiring expensive subscriptions (Austermühl, 2001).

Electronic communication tools like email, Skype, and messaging platforms facilitate interaction between translators and clients. These tools ensure smooth coordination, quick feedback, and remote project management (Bowker, 2002).

Lastly, subtitling tools are gaining popularity, especially in regions where audiovisual translation is common. Tools like Aegisub, VisualSubSync, and Subtitle Workshop allow translators to add subtitles manually, ensuring synchronization and

cultural relevance (Díaz Cintas & Remael, 2007). Freelance translators can benefit greatly from mastering these platforms, especially when dealing with media content.

2.2. Machine Translation vs. Computer-Assisted Translation

There are three main categories of translation workflows: human translation, computer-assisted translation (CAT), and fully automated machine translation (FAMT).

In human translation, all processes are carried out by the translator, using digital tools only for typing or formatting. In contrast, CAT tools assist human translators by offering suggestions, consistency checks, and access to previously translated material. These tools increase efficiency without compromising quality, as final decisions remain with the human translator (Austermühl, 2001).

When using CAT tools, translation memory (TM) plays a central role. Whenever a new segment is opened, the software scans the database for matches:

- A 100% match indicates that the segment has been translated before and can be reused as-is (with optional editing).
- A fuzzy match suggests a close but not exact match, which can be modified accordingly.

In both cases, these matches save time and effort while maintaining coherence across documents. However, contextual understanding remains essential. Even a perfect match might require editing if tone, audience, or cultural context differs.

On the other hand, Machine Translation (MT) systems like Google Translate and Microsoft Translator use algorithms and neural networks to produce automated translations without human input. While these tools are continually improving, they struggle with nuanced language use. MT systems often fail to grasp contextual implications, cultural references, or stylistic elements inherent in literary texts (Koehn, 2020; Bowker, 2002).

Thus, MT tools are best suited for structured or repetitive content. In contrast, literary translation, which demands interpretive sensitivity and emotional resonance, still requires the insight and creativity of human translators. Post-editing is often necessary when using MT outputs for literary purposes to ensure that the final product aligns with the tone, style, and intent of the source text.

2.3. Research gap

While translation technologies such as machine translation (MT) and computer-aided translation (CAT) tools have made notable advancements in recent years,

most research and application of these tools have been concentrated on technical, scientific, and business texts (Bowker, 2002; Koehn, 2020). These genres typically contain standardized language and terminologies, making them well-suited for automation. In contrast, literary translation, which involves complex linguistic, cultural, and emotional elements, remains largely underrepresented in empirical technology-focused studies (Díaz Cintas & Remael, 2007; Pym, 2010).

Studies on MT and CAT systems have consistently pointed out their limitations in handling literary texts, particularly regarding figurative language, stylistic variation, and cultural references (Gaspari, 2006; Austerlühl, 2001). Despite the integration of neural networks in modern MT tools such as Google Translate, Microsoft Translator, these systems continue to fall short when translating nuanced narrative forms. Furthermore, CAT tools like SDL Trados and memoQ, although helpful in maintaining consistency and terminology management, still depend on human translators to interpret context, emotion, and authorial intent critical elements in literature (Bowker, 2002).

There is a clear lack of research focusing on the comparative analysis of MT/CAT translations and human translations of culturally embedded literary works, particularly in South Asian languages like Urdu. Most existing studies are Eurocentric and rarely engage with literature from the Indian Subcontinent, despite its rich historical and linguistic heritage.

This study addresses this gap by conducting a detailed comparative evaluation of MT and CAT outputs versus human translations of *Toba Tek Singh*, one of Saadat Hasan Manto's most celebrated short stories. By focusing on a text rich in cultural symbolism, political irony, and emotional subtlety, the study offers a critical assessment of how well current technologies can handle literary translation tasks.

The analysis is conducted through the lens of Equivalence and Fidelity Theory (Nida & Taber, 1982), providing a framework to examine how accurately the meaning, tone, and cultural significance of the source text are preserved. The study not only highlights specific error types but also explores the implications of technological reliance on preserving literary and cultural authenticity in translation. In doing so, it contributes a much-needed perspective to the growing body of translation technology research, especially in the context of Urdu-English literary translation.

3. Research Design and Methodology

This study adopts a mixed-methods research design, integrating both quantitative and qualitative approaches to evaluate the effectiveness of machine translation (MT) and computer-aided translation (CAT) tools in literary translation. Specifically, it compares

translations of Saadat Hasan Manto's short story *Toba Tek Singh* generated by MT and CAT systems with those produced by professional human translators. This triangulated approach allows for a comprehensive understanding of translation quality, with particular focus on accuracy, fidelity, and cultural sensitivity. The study is grounded in the pragmatic worldview as proposed by Creswell (2015), allowing the use of diverse data sources and analytical strategies to explore a complex phenomenon. A comparative textual analysis is conducted on the source text and its translations to identify strengths, weaknesses, and translation patterns.

3.1. Data Collection and Translation Process

3.1.1. Source text selection

The original Urdu version of *Toba Tek Singh* serves as the primary data source, selected for its emotional depth, sociopolitical context, and complex narrative style.

3.1.2. Translation tools used

- **Machine Translation (MT) Tools:**
 - Google Translate
 - Microsoft Translator
- **Computer-Aided Translation (CAT) Tools:**
 - SDL Trados
 - memoQ
 - OmegaT

These tools were selected based on their industry relevance, public availability, and frequent use in professional practice (SDL, n.d.; memoQ, n.d.).

3.2. Human translation baseline

A published or academically accepted human-translated version of *Toba Tek Singh* is used as the reference point for evaluating the MT and CAT outputs.

3.3. Theoretical framework: equivalence and fidelity theory

This study is grounded in the Equivalence and Fidelity Theory, a foundational approach in translation studies that emphasizes the preservation of meaning, style, and effect between the source and target texts. These concepts are particularly relevant when evaluating literary translation, where not only the linguistic content but also the emotional depth, cultural nuances, and stylistic features must be faithfully transferred.

Equivalence: The degree to which the target text faithfully grabbed the meaning of the source text is known as equivalency. It can be of two types:

- **Formal Equivalence:** Emphasizes word-for-word precision.
- **Dynamic Equivalence:** Places emphasis on communicating the same idea as the source material, even if it requires changing of some words.

Fidelity: Fidelity is the state of being true to the content, style, and tone of the original work. It preserves the message of the source text while making sure that the translation has same effects and emotion.

Applying Equivalence and Fidelity Theory allows for a systematic evaluation of MT and CAT outputs. The theory serves as a benchmark for assessing translation quality, helping determine whether automated translations can:

- Convey the emotional and cultural richness of the original text
- Preserve the author's stylistic choices
- Maintain semantic and pragmatic accuracy

Given that *Toba Tek Singh* is a politically charged, culturally rooted short story, the framework helps analyze whether MT and CAT tools can meet the high standards required for literary translation. This theoretical lens also guides the error analysis framework used in this study, which classifies translation issues in terms of equivalence (formal vs. dynamic) and fidelity (content vs. style).

4. Findings and Discussion

The original Urdu text is fed into the selected MT and CAT tools to generate English translations. Segments of the translated texts are then compared side by side with the human translated version. Each translated segment is evaluated based on three core criteria derived from Equivalence and Fidelity Theory (Nida & Taber, 1982):

1. **Accuracy:** Faithfulness to the original meaning
2. **Fidelity:** Preservation of tone, style, and emotional effect
3. **Cultural Equivalence:** Successful rendering of idiomatic and context-specific references

This document provides an expanded and near-complete subtitle error analysis of Saadat Hasan Manto's 'Toba Tek Singh'. Each Urdu sentence is evaluated against MT/CAT and human translations using Equivalence and Fidelity Theory (Nida & Taber, 1982). Entries are categorized for detailed syntactic, cultural, and emotional insights.

Table 1: Lexical and Syntactic Accuracy

The table 9.1 identifies Lexical and Syntactic Accuracy in early lines of the translation.

Source Text (Urdu)	MT/CAT Output	Human Translation	Observation	Syntactic Error	Correction
بٹوارے کے دو تین سال بعد پاکستان اور ہندوستان کی حکومتوں کو خیال آیا کہ اخلاقی قیدیوں کی طرح پاگلوں کا تبادلہ بھی ہونا چاہیے	After two or three years of partition, the government s of Pakistan and India thought that mad people should also be exchanged like moral prisoners.	Two or three years after Partition, the government s of Pakistan and India decided to exchange lunatics in the same way that they had exchanged civilian prisoners.	The MT output is grammatically correct but lacks lexical refinement. 'Mad people' is more pejorative than 'lunatics', and 'moral prisoners' is an incorrect rendering of 'civilian prisoners', weakening the sociopolitical nuance.	Lexical misinterpretation and tone deviation	Replace 'mad people' with 'lunatics' and 'moral prisoners' with 'civilian prisoners'
سپاہیوں نے اسے نیچے اترنے کو کہا تو وہ اور اوپر چڑھ گیا۔	The guards told him to come down but he climbed even higher.	When the guards told him to come down, he climbed higher.	MT is syntactically correct but does not reflect the conditional phrasing or the cohesive narrative sequence.	Simplified clause structure	Use conditional clause structure for natural progression of events
یہ سن کر بشن	Hearing this, Bishan	Hearing this, Bashan	MT translation	Loss of participial detail	Include full clause to

سنگھ اچھل کر ایک طرف ہٹا اور دوڑ کر اپنے باقی ماندہ ساتھیوں کے پاس پہنچ گیا۔ وہ اگر ان سے پوچھنا کہ ٹوبہ ٹیک سنگھ کہاں ہے؟ تو وہ اسے یقیناً بتا دیتے کہ پاکستان میں ہے یا ہندوستان میں وہ چونکہ بہت کم نہاتا تھا اس لیے داڑھی اور سر کے بال آپس میں جم گئے تھے، جس کے باعث اس کی شکل بڑی	Singh jumped to the side and ran to his remaining companions . If he asked them where Toba Tek Singh was, they would surely tell him it's in Pakistan or India.	Singh leapt back and ran to where his remaining companions stood waiting. Surely they could tell him whether Toba Tek Singh was in Pakistan or India.	omits 'stood waiting', weakening the anticipation and tone of finality conveyed in the human version. MT is structurally correct but lacks modal emphasis and rhetorical certainty conveyed by 'surely'.	retain pacing and implied anxiety Loss of rhetorical emphasis Stylistic flattening and lexical blandness	Use 'surely' or 'certainly' to preserve modal certainty and reflect psychologica l state Use expressive lexical choices like 'matted' and 'appearance' to reflect literary tone
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بھیانک ہو گئی تھی۔ ایک دن وہ درخت پر چڑھ گیا اور دو گھنٹے مسلسل تقریر کرتا رہا جو پاکستان اور ہندوستان کے نازک مسئلے پر تھی۔ اس کو یہ قطعاً معلوم نہیں تھا کہ دن کون سا ہے، مہینہ کون سا ہے یا کتنے سال بیت چکے ہیں۔ بڑی مشکلوں کے بعد جب اس کا دورہ سرد پڑا تو وہ نیچے	One day he climbed a tree and gave a two- hour continuous speech on the sensitive issue of Pakistan and India.	One day he climbed a tree and sat on one of its branches for two hours, lecturing without pause on the complex issues of Partition.	MT is grammaticall y accurate but lacks descriptive imagery and narrative nuance such as 'sat on a branch' and 'lecturing without pause'.	Omission of narrative structure	Include descriptive actions and pacing for cohesive storytelling
He absolutely didn't know what day it was, what month, or how many years had passed.	He had very little sense of time, what day it was, what month, or how many years had passed.	MT version sounds too absolute and lacks the contextual hint of diminished rather than total loss of awareness.	Overstatement of mental condition	Use phrases like 'very little sense of time' to reflect partial awareness	
After great difficulty, when his fit subsided, he came down and started crying, hugging his	With much difficulty, they eventually coaxed him down. When he reached the	MT translates literally but omits the interpersonal dynamic of being 'coaxed down', weakening	Missing interpersonal subject	Clarify who coaxed him and add context to strengthen emotional weight	

اترا اور اپنے ہندو سکھ دوستوں سے گلے مل مل کر رونے لگا۔	Hindu and Sikh friends.	ground he wept and embraced his Hindu and Sikh friends.	the emotional interplay.
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In table 1 Lexical and syntactic errors primarily involve mistranslations, incorrect word choices, and simplified sentence structures. In the example presented, MT renders the phrase 'mad people' instead of 'lunatics,' missing the connotative tone and formal context. Additionally, the substitution of 'moral prisoners' for 'civilian prisoners' distorts the political implications embedded in the original text. These inaccuracies diminish the fidelity and communicative effect of the source material, particularly in politically charged or formal narratives (Pym, 2010; Koehn, 2020).

Table 2: Cultural and Contextual Equivalence

This table covers Cultural and Contextual Equivalence

Source Text (Urdu)	MT/CAT Output	Human Translation	Observation	Syntactic Error	Correction
زمیندار اخبار کا قاری	Reader of the fiery newspaper Zamindar.	A regular reader of the fiery Urdu daily Zamindar.	The MT translation omits the term 'Urdu daily', missing cultural and contextual reference to the publication.	Omission of cultural marker	Include 'Urdu daily' to retain cultural specificity
پاکستان زندہ باد	Pakistan Zindabad!	Long live Pakistan!	Literal translation lacks the emotive and nationalistic	Literal rendering of idiom	Translate as 'Long live Pakistan!' to match

			tone conveyed in the idiomatic phrase.		emotional tone
کیا انہیں ڈبل روٹی کے بجائے بلڈی انڈین چپاتی تو زہر مار نہیں کرنا پڑے گی؟ جب اس نے سنا کہ امرتسر ہندوستان میں چلا گیا ہے تو اسے بہت دکھ ہوا۔	Would they have to eat bloody Indian chapati instead of bread? When he heard that Amritsar had gone to India, he was very upset.	What, would they be forced to eat poisonous bloody Indian chapattis instead of bread? He was distressed to hear that Amritsar was now in India.	MT captures literal words but misses the exaggerated cultural disdain and satire conveyed by 'poisonous'. MT uses 'upset' instead of 'distressed', which underplays the emotional and cultural gravity of the loss.	Understatement of cultural insult Underspecification of emotional context Omission of narrative subtlety	Include adjectives that reflect disdain to match original tone Use 'distressed' or 'grieved' to capture cultural loss Add institutional marker 'in that madhouse' and soften assertion with 'thought he was'
ایک پاگل ایسا بھی تھا جو خود کو خدا کہتا تھا	There was a lunatic who called himself God.	There was another lunatic in that madhouse who thought he was God.	MT is literal and misses institutional context and gradual reveal suggested in human version.		
اس کی ایک لڑکی تھی جو ہر مہینے ایک انگلی بڑھتی	He had a daughter who grew a finger every month and became young in	Bashan Singh had a fifteen- year-old daughter who grew by a finger's	MT renders an idiomatic expression literally, making it awkward and biologically	Literal translation of idiomatic measurement	Translate as 'a finger's height every month' to preserve poetic and figurative meaning

پڑھتی پندرہ برسوں میں جوان ہو گئی تھی۔ جب اسے خبر ملی کہ امرتسر اب ہندوستان میں ہے تو اسے بہت صدمہ ہوا۔ اس کی محبوبہ ہندوستانی بن گئی اور وہ پاکستانی۔	fifteen years. When he got the news that Amritsar is now in India, he was very shocked. His beloved became Indian and he became Pakistani.	height every month. He was distressed to hear that Amritsar was now in India. So that his beloved remained Indian while he became Pakistani.	absurd instead of poetic. MT overuses 'very shocked', which lacks cultural resonance and emotional specificity conveyed in 'distressed'. MT output is too abrupt and loses the poetic contrast and underlying irony captured in 'remained' and 'while'.	Flat emotional register Loss of contrastive implication Cultural lexical substitution	Use culturally sensitive and contextually rich terms like 'distressed' Use contrasting conjunctions like 'while' or 'but' to reflect emotional divide Preserve accurate livestock terms that reflect rural cultural context
دو بھوری بھینسیں جو وہ چھوڑ گئے تھے، ان میں سے ایک نے کٹا دیا ہے۔۔۔ اور دوسری کے کٹی ہوئی تھی پر وہ چھ دن کی ہو	Of the two brown buffaloes they left, one gave birth to a calf... and the other gave birth too but it died after six days.	One of the two brown cows that he left has calved. The other one calved also, but it died after six days.	MT output is largely accurate, but 'buffaloes' vs. 'cows' shifts cultural specificity in rural South Asian context.		

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In table 9.2 Cultural and contextual errors emerge when translations fail to convey localized meanings, idiomatic references, or societal connotations. For instance, the omission of 'Urdu daily' when referring to 'Zamindar' eliminates a critical cultural marker, and translating 'Pakistan Zindabad' literally strips the expression of its emotive nationalist force. Such flaws highlight the limitations of MT/CAT tools in recognizing socio-cultural signifiers that human translators intuitively grasp (Gaspari, 2006; Díaz Cintas & Remael, 2007).

Table 3: Emotional and Stylistic Fidelity

Table 9.3 Focuses on clarity of Emotional and Stylistic Fidelity

Source Text (Urdu)	MT/CAT Output	Human Translation	Observation	Syntactic Error	Correction
اس نے تمام کپڑے اتار کر دفعدار کے حوالے کر دیے	He took off all his clothes and gave them to the orderly.	He stripped off all his clothes, gave them to a guard, and ran in the garden stark naked.	MT omits narrative and emotional build-up; lacks the vivid imagery and character's mental state.	Simplification of narrative detail	Expand the phrase to reflect the dramatic tone and pacing
پاکستان ایک ایسی جگہ ہے جہاں استرے بنتے ہیں	Pakistan is a place in India where razors are made.	It's a place in India where they make razors.	The MT translation introduces factual confusion by stating 'Pakistan in India' and misses the sarcastic tone.	Semantic confusion and tone misrepresentation	Clarify with 'It's a place in India where they make razors' to maintain irony
درمیان میں زمین	In between,	Toba Tek Singh lay in	MT rearranges	Loss of narrative rhythm and	Maintain emphasis

کے اس ٹکڑے پر جس کا کوئی نام نہیں تھا توبہ ٹیک سنگھ پڑا تھا۔	on the nameless piece of land, lay Toba Tek Singh.	the middle, on a piece of land that had no name.	clause structure in a way that weakens the poetic closure and symbolism.	symbolic positioning	on spatial metaphor and symbolic impact
سورج نکلنے سے پہلے ساکت وصامت بشن سنگھ کے حلق سے ایک فلک شگاف چیخ نکلی۔	Before sunrise, a blood- curdling scream came from Bishan Singh's throat.	He was quiet all night, but just before sunrise he screamed.	MT includes vivid language, but human version builds dramatic tension by emphasizing silence and timing.	Lack of narrative suspense	Emphasize prior silence and climax for narrative impact
اوپر دی گڑ گڑ دی انیس دی بے دھیانا دی منگ دی دال آف توبہ ٹیک سنگھ اینڈ پاکستان	Upar di gur gur di annex di be dhiyana di mung di daal of Toba Tek Singh and Pakistan.	Upri gur gur di annexe di be-dhiyana mang di daal of di Toba Tek Singh and Pakistan!	MT fails to render the nonsense phrase rhythmically, missing the emotional climax and satirical energy.	Phonological and expressive mismatch	Match rhythm and phonetic intensity of nonsense speech to preserve stylistic identity
جب بشن سنگھ نے اسے دیکھا تو ایک طرف ہٹ گیا اور واپس جانے لگا	When Bishan Singh saw him, he stepped aside and started to leave.	Seeing him, Bashan Singh turned abruptly and started walking away.	MT is semantically accurate but lacks urgency and emotional reaction shown in 'abruptly' and 'walking away'.	Emotional dilution	Use action verbs that suggest emotional discomfort or resistance

یہی وجہ ہے کہ پاگل خانے میں وہ سب پاگل اس مخمصے میں گرفتار تھے کہ وہ پاکستان میں ہیں یا ہندوستان میں۔	That is why all the lunatics in the asylum were caught in this confusion whether they were in Pakistan or India.	This is why all the lunatics who hadn't entirely lost their senses were perplexed as to whether they were in Pakistan or India.	MT fails to capture the psychological subtlety and hesitancy implied in 'hadn't entirely lost their senses' and 'perplexed'.	Simplified psychological state	Emphasize partial awareness and internal dilemma through nuanced phrasing
میں ہندوستان میں رہنا چاہتا ہوں نہ پاکستان میں۔۔۔ میں اس درخت پر ہی رہوں گا۔	I don't want to live in India or Pakistan... I will live on this tree.	I will live neither in India nor in Pakistan. I'll live in this tree right here!	MT loses the emotional defiance and spatial immediacy conveyed in 'this tree right here'.	Loss of emphatic tone and spatial focus	Add spatial emphasis and tone markers like 'right here' to enhance expressive strength
سورج نکلنے سے پہلے ساکت و صامت بشن سنگھ کے حلق سے ایک فلک شگاف چیخ نکلی۔	Before sunrise, a blood- curdling scream came from Bishan Singh's throat.	He was quiet all night, but just before sunrise he screamed.	MT version is vivid but lacks the emotional contrast built up through the human translation's narrative timing.	Lack of emotional pacing	Build contrast using silence followed by sudden scream for greater dramatic impact

In table 3 Emotional and stylistic fidelity pertains to the translator's ability to preserve tone, irony, narrative rhythm, and character voice. The examples show how literal renderings flatten narrative expression and weaken character portrayal. A vivid description like 'he stripped off all his clothes and ran in the garden stark naked' carries emotional weight and pacing that the MT version lacks. Furthermore, sarcasm and satirical metaphors

are often rendered factually, without capturing the underlying tone, which compromises the literary quality (House, 2015; Nida & Taber, 1982).

The findings are organized according to three core areas of analysis: lexical/syntactic accuracy, cultural and contextual equivalence, and emotional fidelity.

4.1. Lexical and Syntactic Accuracy

This category focused on whether the MT/CAT outputs accurately rendered word choice, grammar, sentence structure, and clause arrangement. While MT tools such as Google Translate and Microsoft Translator generally produced grammatically coherent sentences, they frequently simplified or misrepresented nuanced syntactic constructions and embedded clauses. CAT tools like memoQ and OmegaT, though more consistent due to their use of translation memory, still struggled with shifts in discourse structure and syntactic cohesion across segments.

Example 1:

Source Urdu: "بٹوارے کے دو تین سال بعد پاکستان اور ہندوستان کی حکومتوں کو خیال آیا کہ"

MT Output: "After two or three years of partition, the governments of Pakistan and India thought that mad people should also be exchanged like moral prisoners."

Human Translation: "Two or three years after Partition, the governments of Pakistan and India decided to exchange lunatics in the same way that they had exchanged civilian prisoners."

This MT version is grammatically valid but misses out on both the subtle temporal framing ("two or three years after") and the euphemistic tone of "it occurred to," flattening the metaphorical texture of the original.

Example 2:

MT often overstates or understates mental states. For instance, translating "اس کو" as "He absolutely didn't know" (MT) overstates cognitive disorientation, while the human translation "He had very little sense of time" better captures the delicate psychological ambiguity intended in the original.

These examples demonstrate that MT/CAT tools often fail to preserve temporal specificity, figurative framing, and syntactic layering — elements essential in literary texts (Koehn, 2020; Pym, 2010).

4.2. Cultural and Contextual Equivalence

This category examines how well culturally specific references, idiomatic expressions, and social context were handled in MT/CAT translations. Several key

examples showed how MT tended to treat culturally embedded phrases too literally, often leading to semantic confusion or loss of meaning.

Example 3:

Source Urdu: "زمیندار اخبار کا قاری" *MT Output:* "Reader of the fiery newspaper Zamindar." *Human Translation:* "A regular reader of the fiery Urdu daily Zamindar." Here, MT omits the crucial cultural label "Urdu daily," reducing the context and identity of the publication. Additionally, some CAT tools wrongly treated "Zamindar" as a personal name rather than a newspaper title.

Example 4:

Source Urdu: "کیا انہیں ڈبل روٹی کے بجائے بلڈی انڈین چپاتی تو زہر مار نہیں کرنا پڑے گی؟" *MT rendered it literally as:* "Would they have to eat bloody Indian chapati instead of bread?" The human version — "What, would they be forced to eat poisonous bloody Indian chapattis instead of bread?" — maintains the satire and cultural contempt embedded in the phrase. The MT/CAT versions fail to capture the exaggerated cultural disdain that is both humorous and politically charged.

Example 5:

Source Urdu: "اس کی محبوبہ ہندوستانی بن گئی اور وہ پاکستانی" *MT:* "His beloved became Indian and he became Pakistani." *Human:* "So that his beloved remained Indian while he became Pakistani." This example illustrates how MT failed to mark the contrastive implication and underlying partition trauma, reducing it to a factual statement.

Such patterns reflect how MT/CAT systems are limited in their cultural encoding capabilities, often lacking the ability to interpret figurative language or culturally specific connotations without human intervention (Díaz Cintas & Remael, 2007; Gaspari, 2006).

4.3. Emotional and Stylistic Fidelity

This category analyzed the emotional and rhetorical depth preserved in translations, especially in areas involving satire, absurdity, irony, and character-specific dialogue. Literary language often depends on stylistic expressiveness, rhythmic delivery, and character voice, which MT and CAT tools repeatedly failed to emulate.

Example 6:

MT/CAT: “He ran naked in the garden.”

Human Translation: “He stripped off all his clothes, gave them to a guard, and ran in the garden stark naked.”

Here, the MT/CAT version loses the dramatic build-up and absurd humor of the human translation. The scene becomes flat and lacks the emotional tone needed to convey the character's mental state.

Example 7:

Source Urdu: "اوپر دی گڑ گڑ دی انیکس دی بے دھیانا دی منگ دی دال آف ٹوبہ ٹیک سنگھ اینڈ" پاکستان

MT rendered the nonsense phrase literally without rhythm or intensity, while the human version — “Upri gur gur di annexe di be-dhiyana mang di daal of di Toba Tek Singh and Pakistan!” — preserves both the phonetic rhythm and emotional climax. This type of speech requires deep contextual and stylistic judgment that MT/CAT tools cannot simulate.

Example 8:

The final scream — “سورج نکلنے سے پہلے ساکت و صامت بٹن سنگھ کے حلق سے ایک فلک” — is translated by MT as “A blood-curdling scream came from Bishan Singh’s throat.” While vivid, it lacks the buildup and emotional weight of the human version: “He was quiet all night, but just before sunrise he screamed.” The human translation preserves contrast and narrative timing that magnifies emotional impact.

These examples affirm the consistent failure of MT/CAT to render emotional pacing, satire, and symbolic resonance all of which are critical to Manto’s work (House, 2015; Nida & Taber, 1982).

5. Result

The translation of *Toba Tek Singh* largely succeeds in conveying the core message of the source text, particularly the confusion and chaos experienced by the asylum inmates in response to the Partition of British India and the subsequent creation of Pakistan. The socio-political trauma is consistently reflected through both the narrative structure and character dialogue, enabling readers to grasp the historical and emotional implications. However, a detailed analysis across lexical/syntactic, cultural/contextual, and emotional/stylistic domains reveals that while human translations preserved nuance and tone, MT and CAT outputs displayed varied degrees of fidelity. Culturally embedded references such as the “Urdu daily Zamindar” or communal idioms like “Pakistan Zindabad” were often inadequately rendered by MT systems, leading to diminished

contextual relevance. Conversely, human translations retained cultural specificity, preserving the characters' linguistic style and sociocultural context, which is vital for reader comprehension and engagement (Díaz Cintas & Remael, 2007). From a linguistic standpoint, human translations maintained syntactic coherence and used natural grammatical structures that reflected the tone of the original Urdu narrative. In contrast, MT tools demonstrated inconsistency, often simplifying or misrepresenting temporality, clause structure, or idiomatic language (Koehn, 2020; Pym, 2010). For example, the MT output "mad people" in place of "lunatics" reduced the formality and diluted the socio-institutional nuance conveyed in the human version. The emotional depth of the narrative, ranging from dark satire to profound despair, was captured more effectively in human translations. The nonsensical yet emotionally charged phrases spoken by characters like Bishan Singh were rhythmically and phonetically preserved in human renditions, whereas MT outputs translated them literally, stripping them of both dramatic and stylistic value (House, 2015; Nida & Taber, 1982). Additionally, character integrity was upheld in human translations. For example, the scholarly Muslim lunatic, the melancholic radio engineer, and the lawyer tormented by lost love were distinctly portrayed through their dialogue and behavioral patterns. These elements were flattened or homogenized in MT/CAT versions due to the tools' limited ability to infer emotional undertones or character-specific language use. In summary, while the overall narrative and key messages were retained, machine-generated translations were prone to structural simplification, cultural dislocation, and emotional flattening. The human translation, by contrast, demonstrated a balanced integration of linguistic precision, cultural depth, and stylistic richness essential elements for preserving the literary and historical integrity of Manto's work.

6. Conclusion

The application of Equivalence and Fidelity Theory in the translation of *Toba Tek Singh* underscores its relevance in achieving semantic and pragmatic accuracy. This study demonstrates that a nuanced approach one that preserves both the literal and emotional essence of the source text is critical for translating culturally and historically embedded literary narratives. By prioritizing equivalence, the human translation successfully bridges linguistic and cultural divides, allowing English readers to experience the text as authentically as its original Urdu-speaking audience.

The comparative analysis revealed that machine-generated outputs, though efficient, often faltered in maintaining narrative depth, figurative meaning, and syntactic intricacy. In contrast, the human translation effectively preserved tone, character voice, satire, and contextual resonance elements integral to Saadat Hasan Manto's style. Idiomatic expressions and culturally sensitive phrases, often mistranslated by MT/CAT

tools, were successfully adapted in the human version to retain both intelligibility and emotional texture.

Moreover, the human translator's ability to differentiate characters through distinct lexical choices and preserve the shifting tones from absurdity and satire to despair and political critique highlights the importance of translator intuition. The delicate emotional progression experienced by characters like Bishan Singh is rendered with stylistic fidelity, affirming the translator's deep understanding of the narrative's socio-political and psychological dimensions.

In essence, this study validates that Equivalence Theory, when applied effectively, can ensure both accuracy and cultural authenticity, safeguarding the literary and emotional impact of the source text.

6.1. Future Work

Future studies should pursue more granular textual analysis to verify consistency in maintaining equivalence throughout longer narratives or across multiple works by the same author. Particular attention should be paid to tone shifts, character consistency, and narrative pacing, with the aim of refining translation quality through iterative review.

A deeper investigation into cultural nuances, historical references, and idiomatic expressions can further enhance the authenticity of translated texts. This could include the incorporation of footnotes or endnotes for unfamiliar cultural references to aid reader comprehension without diluting the original content.

Researchers may also benefit from conducting comparative analyses of other Partition-era texts, both translated and untranslated, to explore recurring challenges and successful strategies. A cross-linguistic approach, comparing Urdu-English translations with Hindi-English or Punjabi-English, may also offer broader insights into how cultural proximity influences translation fidelity.

Engaging bilingual focus groups or native Urdu-speaking participants to evaluate readability, clarity, and emotional resonance can serve as a robust tool for translator feedback. Their input may guide revisions and inform future projects aimed at enhancing the accessibility of Urdu literary works in global contexts.

Additionally, technological integration should be explored. The use of machine learning models that incorporate human-corrected translations could help improve MT/CAT tools for literary applications. Collaborations between linguists and software developers may result in AI systems that better recognize satire, irony, and cultural references.

Lastly, developing training modules and workshops on Equivalence Theory and cultural translation strategies will benefit future translators. These programs could focus on genre-specific techniques and offer simulated projects using real-world texts to improve practical competence.

By addressing these directions, future research and practice can move toward more sophisticated, context-aware translation methodologies, ensuring that translated literature remains not only accurate but also emotionally and culturally resonant for a global audience.

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