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Legal Translator in the Age of AI: Towards Human-AI Collaboration

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Abstract :

Legal translation plays a vital role in legal studies by enabling access to legal texts and facilitating communication across different legal systems. With the rapid development of artificial intelligence (AI), translation practices have been significantly transformed, as AI tools enhance efficiency and reduce time and costs. However, legal translation remains complex and sensitive due to the need to account for specialized legal terminology, differences between legal systems, and contextual nuances. This article examines how AI can support human legal translators while maintaining accuracy and legal contextual understanding, first explaining the basic concepts of legal translation and then exploring the practical applications of AI in this field.

Keywords: Legal Translation; Legal Translator; Artificial Intelligence; Applications.

Introduction:

Legal translation is one of the principal fields that plays a significant role in legal studies. It enables researchers and professionals to access legal documents and facilitates the exchange of legal information across different languages and jurisdictions. Legal translators, therefore, perform a crucial function in ensuring accuracy, clarity, and equivalence between legal systems.

With the emergence of artificial intelligence (AI) and the widespread use of AI applications that have permeated nearly all aspects of modern life, translation—like many other fields—has undergone a remarkable transformation. AI-powered translation tools are now widely used across various domains, reshaping translation practices. Professional translators and other users increasingly rely on these technologies in their daily work to improve efficiency, save time, and reduce costs.

However, legal translation remains one of the most sensitive and complex fields. Translators and users of AI applications may face significant challenges due to legal nuances, differences between legal systems, and contextual variations, all of which demand a high level of accuracy, expertise, and deep understanding of context.

This raises a central research question: **How can AI support human translators while maintaining accuracy and contextual legal understanding?**

To address this question, this article will be divided into two sections: The first examines the conceptual framework of legal translation, while the second explores the application framework for AI in this field.

The First Topic: Conceptual Framework of Legal Translation

This part aims to address the definition of legal translation and its key aspects, while also defining legal translators, with particular emphasis on their qualifications, competences, and the challenges they encounter.

First Requirement: What is Legal Translation?

Legal translation represents a major domain within the broader field of translation. The literature in this area has mainly addressed its historical development, definitions, as well as key aspects.

First Section: Definition of Legal Translation

The history of legal translation dates back to ancient times, with the first documented reference recorded in 1271 B.C. in Egypt, when the Egyptian–Hittite peace treaty was translated (from Akkadian into Egyptian). During this early period, literacy was rare, and translation was primarily restricted to such treaties. A significant evolution in legal translation occurred in the 6th century A.D. with the translation of Emperor Justinian’s *Corpus Iuris Civilis* into Greek.

Between the 7th and 13th centuries, the Arabic-speaking world witnessed a surge in the translation of important works, including legal texts. As empires expanded their territories and ruled over diverse linguistic and cultural groups, translation and interpretation became indispensable for legal administration, diplomacy, and governance. Despite its long history and undeniable importance, research on the historical development of legal translation remains limited, with notable contributions from scholars such as Gémard (1982), Sarcevic (1997), Peñarroja (2000), and Cao (2007).¹

Legal translation is widely regarded as a complex and challenging task due to the inherent nature of law and legal language. Its complexity is further compounded by the need to bridge two distinct languages and legal systems in the translation process. Key challenges in legal translation stem from systemic differences in law, as well as linguistic and cultural divergences, all of which are closely interrelated.²

According to literature, legal translation is defined by Šarčević (1997) as “special-purpose communication between specialists, excluding communication between lawyers and non-lawyers.” She further emphasizes that legal translation involves all the subtypes of legal texts that are used in various legal settings, whether a court, a national or international organization, a law book, a legal report, a birth certificate, a contract, or many others. Similarly, Cao (2010) defines legal translation as “a type of specialist or technical translation, a kind of translational activity that involves special language use, that is, language for special purpose (LSP) in the context of law or language for legal purpose (LLP)’’³. More recently, Hanem (2015) highlights that legal translation is deeply influenced by the culture of each language, making it more than just a simple transfer of text from the source language (SL) to the target language (TL).⁴

In short, legal translation is the process of accurately rendering legal texts and documents—such as contracts, wills, laws, and regulations—from a source language (SL) into a target language (TL), while taking into account both legal and cultural differences.

Second Section: Aspects of Legal Translation

Legal translation encompasses three main aspects:⁵

First- Language Proficiency: It involves translating between two different languages that may have distinct structures, expressions, and cultural nuances. For example, Arabic and English differ significantly in sentence structure and word usage.

Second- Legal Expertise: Legal translation requires a deep understanding of legal systems, precise legal concepts, and accurate terminology to ensure clarity and correctness across different legal contexts.

Third-Translation Skills: Like other specialized fields, legal translation involves applying various translation methods and strategies.

In essence, legal translation integrates advanced language mastery, comprehensive legal understanding, and translation technique knowledge, making it a highly complex and demanding discipline.

Second Requirement: What is legal Translator?

Legal translators play a crucial role in rendering legal texts across languages. Practicing this profession requires specific qualifications and competences, while also involving a range of practical challenges.

First Section: Definition of Legal Translator

A legal translator is defined by ISO (20771: 2020) as a person who possesses the qualifications and competences necessary to translate content in a legal specialist field, in other words, to translate legal texts.⁶ The standard also recognizes two specialized types of legal translators:

- **Authorized Legal Translators:** Officially appointed by a court or government body.
- **Lawyer-Linguists:** Also known in some jurisdictions as Jurilinguists, are professionals with both legal and linguistic backgrounds who offer legislative linguistic advice in certain jurisdictions.

Second Section: Legal Translator Qualifications and Competences

The ISO (20771:2020) standard sets clear requirements and competences for legal translators to ensure high-quality translation.⁷

First: Core Qualifications

- A tertiary education degree in translation or another field.
- Five years of full-time legal translation experience.
- Three years of full-time legal translation experience, in addition to other qualifications:
 - ✓ A postgraduate degree in law (if the translator lacks a legal background).
 - ✓ Certification from a state-recognized professional body.

Authorized translators are exempt from these requirements if they are legally recognized as official legal translators under national laws.

Second: Core Competences:

- **Translation Competence:** The ability to accurately translate legal texts while maintaining meaning and precision.
- **Linguistic & Textual Competence:** The ability to comprehend the source language (SL) and target language (TL), fluently express ideas in the target language (TL), and apply legal terminology, phraseology, and text conventions correctly.
- **Legal-Cultural Competence:** The ability to understand legal systems, concepts, and cultural differences between SL and TL jurisdictions.
- **Specialist Legal Field Competence:** The ability to interpret legal content correctly and produce translations (TT : Target Text) that align with legal conventions.
- **Research & Information Processing Competence:** The ability to find legal knowledge, source documents, and terminology, and to assess the reliability of information.
- **Technical Competence:** The ability to work with CAT (Computer-Assisted Translation) tools, workflow management systems, terminology databases, IT tools, and templates for efficient legal translation.

Thus, legal translators must acquire appropriate academic qualifications and professional experience, along with essential competences, including linguistic accuracy, legal and cultural knowledge, specialized legal expertise, research skills, and technical proficiency, in order to ensure high-quality and reliable legal translation.

Third Section: Challenges Faced by Legal Translators

The challenges in legal translation primarily arise from four key areas of knowledge gaps.⁸

First- Legal Terminology: Translators may lack familiarity with legal terminology, register, collocations, or specialized units of meaning, which can affect accuracy and reader expectations.

Second-Text Structure: Translators lack understanding of the textual characteristics of legal documents, including their legal branch, genre, and function, which are crucial for precise translation.

Third- Context Awareness: Translators lack recognition of the key agents involved, such as courts, officials, and applicable laws, which is essential for ensuring contextual accuracy.

Fourth- Legal Consequences: Translators lack awareness of the potential legal consequences of the translation, as certain texts may require specific responses, actions, or legal considerations.

Accordingly, these challenges highlight the need for advanced translation tools to ensure accuracy, contextual understanding, and legal compliance, thereby enabling legal translators to produce high-quality legal translations.

The Second Topic: Application Framework for AI in Legal Translation

This part aims to examine the role of AI in legal translation, its positive and negative impacts, and the necessity of collaboration between AI and human translators through the use of AI-driven tools.

First Requirement:What is Artificial Intelligence?

Artificial Intelligence plays a significant role in many fields, including translation. To understand its relevance to legal translation, it is necessary to first define AI, then explore its use in legal translation, and finally examine its impact on translation process.

First Section: Definition of Artificial Intelligence

The term “*Artificial Intelligence*” (AI) was first coined by John McCarthy in 1956, who defined it as “the science and engineering of making intelligent machines.”⁹ According to *The New International Webster’s Comprehensive Dictionary of the English Language*, AI can be described in several ways.¹⁰ First,

it is a field of study within computer science concerned with developing computers capable of engaging in human-like thought processes such as learning, reasoning, and self-correction. It also refers to the concept that machines can be improved to assume certain capabilities normally associated with human intelligence, including learning, adaptation, and self-correction. In a broader sense, AI represents the extension of human intelligence through the use of computers, much like mechanical tools in the past extended physical power. In a narrower sense, it is the study of techniques aimed at using computers more effectively through improved programming methods.

Over time, these definitions have evolved in response to rapid technological advancements. Today, most modern definitions converge on the idea that “AI is imitating intelligent human behavior”, which is regarded as one of the strongest and the most comprehensive definitions. Another widely accepted definition states that “AI is the study of computers performing tasks that would be considered to require intelligence if carried out by human”.¹¹

The construction of artificial intelligence requires four essential elements, which together enable its practical application in different fields. They are as follows :¹²

First- Knowledge: The primary objective of humans and the foundation of AI systems such as expert systems and fuzzy computing, encompassing knowledge representation, cognitive reasoning, and knowledge application and acquisition.

Second- Data: Collections of facts and observations that form the basis of artificial intelligence and support its development through computational intelligence methods, such as evolutionary and neural computing.

Third- Algorithms: They represent the “soft power” of AI, providing comprehensive and accurate solutions to complex problems; they include deep learning and genetic algorithms.

Fourth- Computing Power: It represents “hard power,” enabling machines to convert complex mathematical expressions into clear formulas.

In essence, Artificial intelligence (AI) refers to the development of computer systems capable of performing tasks that normally require human intelligence, such as learning, reasoning, and problem-solving. It relies on the combination of data, knowledge, algorithms, and computing power to process information and carry out complex tasks efficiently.

Second Section: Use of AI in Translation

Throughout human history, translation has been a fundamental part of human communication, playing a key role in different areas such as religion and education. With the ongoing technological advancements and the emergence of artificial intelligence (AI), machine translation has become a major part of this field. AI in translation refers to the use of algorithms that translate texts through machine learning and neural networks. The translation models available today are the outcome of several stages of development in artificial intelligence research.

The history of AI translation has witnessed several key milestones. In the 1950s and 1960s, rule-based systems were developed, highlighted by the Georgetown-IBM experiment (1954), which demonstrated the practical potential of machine translation. During the 1970s and 1980s, research in statistical machine translation (SMT) expanded, providing new AI approaches compared to earlier ones. The 1990s and 2000s brought significant improvements in translation quality, as SMT produced smoother and more natural results. In 2006, AI-based translation tools, such as Google Translate, became commercially available. Finally, in 2016, Google shifted from SMT to neural machine translation using the Transformer model, marking a major advancement in AI-driven translation technology.¹³

AI translation has several types, each serving a specific purpose to improve the translation process:¹⁴

First- Natural Language Processing (NLP): This AI helps computers understand and process human language. NLP analyzes grammar, sentence structure, and meaning to produce more accurate translations.

Second- Machine Learning: AI enables computers to learn from data and improve their performance over time. Machine learning is used to build translation models that can handle different languages.

Third- Neural Machine Translation (NMT): This type of AI uses neural networks to translate texts. NMT is one of the most advanced translation technologies, providing high accuracy and the ability to improve automatically and adapt over time.

In brief, AI translation, which leverages algorithms, machine learning, and neural networks to automatically render texts, has transformed the field by enhancing accuracy, efficiency, and adaptability, with different types including

Natural Language Processing (NLP), Machine Learning, as well as Neural Machine Translation (NMT), the most advanced one.

Third Section : Impact of AI on Legal translation

Research studies highlight the impact of AI on translation processes in terms of speed, precision, quality, and user trust, both positively and negatively.¹⁵

First- Impact of AI on Speed: AI tools, such as ChatGPT, can translate text significantly faster than humans, giving students and professionals more time to refine and improve their translations. They provide instant translations, enabling users to translate in real-time while engaging in conversation. ChatGPT can execute translations quickly while ensuring high accuracy. It also possesses learning and recognition capabilities, allowing it to process large amounts of linguistic data and maintain coherence and consistency in the translated text.

Second- Impact of AI on Translation Precision: AI-powered translation has advanced through a better understanding of idiomatic expressions, context, and subtleties. AI systems can perform tasks more quickly and accurately while maintaining a formal writing style. However, human translators are still essential to address AI's limitations, as they can recognize logical structures and connotations. ChatGPT, for instance, is praised for its speed, precision, and ability to preserve the style and meaning of the original text, but it can still lack understanding of linguistic context and nuances, leading to concerns about reliability. Studies indicate that human translation is superior due to its ability to accurately convey intended meaning and achieve cultural sensitivity.

Third- Impact of AI on Quality: AI translations are often considered better than human translations due to their pragmatic approach and consistent use of formalized language and terminology. Research shows that in many cases, AI translations can match the quality of human translations. However, studies estimate that AI could replace human translators by 0.38%, as it still struggles to fully capture the intended meaning of the source text, which may lead to misunderstanding or confusion.

Fourth- Impact on Trust in Utilizing AI: AI reduces employees' workload by translating and understanding complex language. It improves translation, answers translation-related questions, manages terminology, and offers additional functions. Despite these advancements, translation remains a highly valuable and creative linguistic skill for human translators.

Ultimately, AI enhances legal translation by improving speed, precision, and efficiency; however, it still lacks contextual understanding, making human translators indispensable for ensuring accuracy, cultural sensitivity, and trust.

Second Requirement: Collaboration between AI- Powered tools and Human legal Translators

The collaboration between AI-powered tools and human legal translators is becoming increasingly important in modern translation practices. This involves different ways in which AI supports human translators as well as various applications designed to assist legal translation tasks.

First Section: Ways AI supports Human Legal Translators

AI and human expertise together improve translation quality and efficiency. Instead of replacing human translators, AI should be regarded as a supportive tool that assists their work. The combination of human translators and AI-powered translation tools can take place in the following ways:¹⁶

First- Post-Editing AI Translations: Human translators can refine and improve AI-generated translations by reviewing and correcting errors to ensure high-quality results. This process speeds up translation while maintaining accuracy and clarity.

Second- Using AI for Consistency: AI-driven translation memory and terminology tools assist human translators in ensuring uniformity across large documents. By storing past translations and standardized terms, these tools enable translators to reuse content, enhancing efficiency and maintaining consistency.

Third-AI-Assisted Pre-Translation: AI can assist with initial translation tasks, such as breaking down large texts, identifying key terms, and generating draft translations. Human translators then refine these drafts to ensure accuracy, quality, and cultural relevance.

Thus, collaboration between AI and human translators enhances both efficiency and consistency. While AI supports drafts and terminology, human expertise remains essential—particularly for legal documents—to ensure accuracy, cultural sensitivity, and compliance with legal standards.

Second Section: AI applications to Support Human Legal Translators

The primary AI-powered tools used in legal translation include ChatGPT and Gemini, both of which are widely utilized by professionals, including legal

experts, alongside other specialized AI tools designed specifically for legal translation.

First- ChatGPT: Developed by OpenAI in 2022, Chat GPT is a powerful AI tool widely used in the legal industry for its advanced language processing abilities. It helps streamline tasks such as drafting legal documents, conducting research, analyzing contracts, and translating legal texts, making it a valuable resource for solo lawyers, corporate legal teams, and law firms.¹⁷

Second- Gemini: Developed by Google DeepMind in 2023, Gemini is an advanced machine translation (MT) model that improves neural machine translation (NMT) through multimodal decoding, using text, graphics, and audio for more accurate translations. It is especially good at understanding cultural nuances, idiomatic expressions, and complex meanings. While Google is strong in general language models, Gemini performs better in certain languages, including South Levantine Arabic, Romanian, and Mesopotamian Arabic.¹⁸

Third- DeepL: Developed by DeepL GmbH, a German company, and launched in 2017. DeepL is an AI-powered tool that enhances legal and professional translations by ensuring accuracy, consistency, and compliance in over 30 languages. It maintains document integrity, preserves formatting, and ensures precise terminology, making global communication more efficient.¹⁹

Fourth- Smartcat: Developed by Smart, Inc., a company founded in 2016. Smartcat is an AI-powered legal translation platform that ensures high accuracy, faster delivery, and cost-effectiveness. It supports over 80 file formats, increases translation volume, and integrates professional translators for expert review. By combining AI and human expertise, Smartcat streamlines legal translations for efficiency and compliance.²⁰

Fifth- MachineTranslation.com: Developed by an Italian company “Temedes” and launched in 2020. It offers an AI-driven legal translation service designed for law firms, multinational corporations, and in-house legal teams. Supporting over 240 languages, it delivers fast, accurate, and secure translations for wide range of legal documents, including court documents, intellectual property filings, contracts, and agreements.²¹

Sixth- Bering Lab: Founded in 2020, Bering Lab is an AI-driven legal translation company that leverages advanced AI, big data, and neural networks to deliver high-quality translations. A network of legal linguists reviews translations to ensure accuracy, while robust security measures maintain confidentiality. These features make BeringLab a reliable solution for legal professionals.²²

Conclusion:

Legal translation is a highly complex discipline that requires advanced language proficiency, a deep understanding of legal systems, and strong translation techniques. Legal translators must therefore possess solid academic qualifications and professional experience, as well as essential competences such as linguistic accuracy, legal and cultural awareness, specialized legal expertise, research skills, and technical proficiency. These requirements reflect the demanding nature of legal translation and highlight the importance of reliable tools that support translators in producing precise and contextually appropriate legal texts.

In the era of artificial intelligence, the emergence of AI-powered translation applications such as ChatGPT, Gemini, and DeepL, among others, has significantly transformed the field by improving speed, efficiency, and consistency. Nevertheless, despite these technological advancements, AI-powered tools still cannot fully capture contextual and legal nuances. For this reason, human translators remain indispensable, particularly in the legal domain, where accuracy, cultural sensitivity, and compliance with legal standards are crucial. Consequently, an effective collaboration between AI tools and human legal translators represents the most optimal approach, combining technological efficiency with human expertise. Hence, legal translators should remain updated on emerging AI tools and applications that can effectively support and complement their professional work.

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