

LEGAL TERMINOLOGY TRANSLATION: HUMANS VS ALGORITHMS

Nicoleta BAGHICI

MA, Lecturer

"Alecu Russo" State University of Balti, Republic of Moldova

ORCID: <https://orcid.org/0000-0002-6654-7397>

Abstract: *The translation of legal terminology represents one of the most challenging areas of specialized translation, requiring not only linguistic competence but also deep understanding of legal systems, cultural nuances, and the intended legal effect of documents. Within the fast advancement of Neural Machine Translation (NMT) and Large Language Models (LLMs), the question arises: can algorithms replace human legal translators? This article examines the complexities of legal language, compares human and machine translation approaches, identifies the strengths and weaknesses of each, and proposes a hybrid model as the most effective solution for legal translation in the contemporary digital landscape. The article argues that while algorithms excel at speed and consistency, only human translators possess the semantic, pragmatic, and juridical competence necessary to ensure absolute precision in legal documents.*

Keywords: *legal terminology, legal translation, machine translation, Neural Machine Translation, human translation, legal linguistics, hybrid intelligence.*

Legal language is not ordinary language. It is a specialized discourse characterized by archaisms, intricate syntax, Latin phrases, and a degree of precision that tolerates no ambiguity. As Mellinkoff [5, p. 45] famously observed, “*legal language is a language of precision, not of clarity.*” This precision becomes particularly critical when legal texts must be translated from one language to another, crossing not only linguistic boundaries but also systemic boundaries between different legal traditions.

The stakes are high. A single mistranslated word in a contract can lead to financial loss measured in millions. An incorrectly translated term in a criminal proceeding can result in wrongful conviction. For immigrants, refugees, and non-native speakers, inaccurate legal translations can mean the difference between justice and injustice.

In recent years, the rapid evolution of Neural Machine Translation (NMT) and Large Language Models (LLMs) has transformed the translation industry. Tools such as *Google Translate*, *DeepL*, and *Microsoft Translator* now produce translations that are increasingly fluent and context-aware. This has led to a fundamental question: can algorithms replace human legal translators?

This article addresses this question by examining the nature of legal language, comparing human and algorithmic approaches to legal translation, analyzing the strengths and weaknesses of each, and proposing a hybrid model for the future of legal translation.

Legal language differs from general language in several fundamental respects. These differences make legal translation uniquely challenging.

Latin phrases. Legal discourse retains numerous Latin expressions that have no direct equivalent in many modern languages. Terms such as *habeas corpus*, *force majeure*, *res ipsa loquitur*, and *pro bono* carry specific legal meanings that cannot be derived from their Latin roots alone.

Complex syntax. Legal sentences are notoriously long and complex, often containing multiple subordinate clauses, conditional phrases, and nested exceptions. A single sentence in a contract or statute may run for several hundred words.

System-specific concepts. Legal concepts are embedded within particular legal systems. A term such as tort (*common law*) has no exact equivalent in civil law systems, which use delict or other concepts. Translating between common law and civil law requires not just linguistic transfer but conceptual adaptation.

Precision over clarity. In legal language, precision takes precedence over clarity. A single word can change the entire meaning of a contract, statute, or judicial opinion. As Tiersma [8, p.56] notes, “*legal drafters often sacrifice readability for the sake of precision.*”

Legal terminology refers to the specialized vocabulary used in the legal field. It includes terms related to laws, contracts, court proceedings, legal documents, and legal institutions.

Examples of legal terms:

Plaintiff – the party who initiates a lawsuit;

Defendant – the party accused or sued;

Tort – a civil wrong causing harm;

Habeas corpus – the right to challenge unlawful detention;

Force majeure – unforeseeable circumstances preventing contract performance;

Alibi – evidence that the accused was elsewhere when a crime was committed;

Circumstantial evidence – evidence that implies a fact but does not directly prove it.

The defining characteristic of legal terminology is that precision is essential. A single word can change the meaning of a contract or law. Errors in legal translation can lead to financial loss, wrongful conviction, breach of contract, or miscarriages of justice.

Legal translation occupies a special position within translation studies for three reasons.

First, the linguistic challenge. Legal discourse is characterized by archaisms (words no longer used in everyday speech), intricate syntax, and polysemy (words with multiple meanings). Terms often carry "hidden" meanings that only legal specialists can decode [2, p. 78].

Second, the systemic challenge. Legal translation is not merely translation between languages but translation between legal systems. A translator working between English and Romanian must navigate the differences between common law (*England, US*) and civil law (*France, Romania, Moldova*). Concepts in one system may have no equivalent in the other [4. p. 365].

Third, the justice imperative. Where language meets justice, accuracy is not optional. Cross-border agreements, EU legislation, and international treaties require accurate

translation to function properly. Immigrants, refugees, and non-native speakers need accurate legal information to access justice. A wrong translation creates ambiguity, leading to disputes, litigation, and injustice.

Human legal translation is performed by trained professionals who are often lawyers or linguists specialized in law. The human translator functions as a legal expert + linguist + cultural mediator [4. p.360].

Human translation involves:

- Deep understanding of legal systems (*common law vs civil la*).
- Knowledge of legal terminology in both source and target languages.
- Ability to interpret context, intent, and cultural nuances.
- Understanding of the intended legal effect of a document.

Human translators provide semantic and pragmatic nuance that algorithms cannot yet reproduce. They understand not just the words of a legal text but its purpose, its intended legal effect, and its place within a broader legal framework.

Advantages of human translation:

Table 1. Key Advantages of Human Translation in Legal Contexts

Advantage	Explanation
Functional equivalence	Humans can find equivalents between different legal systems (e.g., <i>tort</i> → <i>delict</i>)
Contextual understanding	Humans interpret ambiguous terms based on context, legislative purpose, and legal doctrine
Cultural competence	Humans understand the cultural assumptions embedded in legal texts
Legal reasoning	Humans understand the logical structure of legal arguments

Despite their expertise, human translators have limitations:

-Time-consuming. Human translation is significantly slower than automated methods. A single page of legal text may take an hour or more to translate accurately.

-Cost. Human legal translation is expensive, particularly for large volumes of text. Law firms and corporations may pay hundreds of euros per page for certified legal translations.

-Inconsistency. Different translators may use different terms for the same concept, leading to inconsistency across documents. This is particularly problematic for large projects involving multiple translators.

-Availability. Experts in certain language pairs (e.g., Romanian-Japanese) are scarce. Finding qualified legal translators for rare language combinations can be difficult.

-Fatigue. Human error increases with long documents. A contract of several hundred pages or a voluminous judgment may contain errors introduced by translator fatigue.

Machine Translation (MT) refers to automated translation using software and algorithms. Three major approaches have evolved over time.

Rule-based MT (RBMT). The earliest approach, RBMT uses linguistic rules (grammar, syntax, lexicon) to translate text. This approach is less common today because it requires extensive manual rule-writing and produces rigid translations [7, p.112].

Statistical MT (SMT). SMT analyzes large bilingual corpora (text databases) to identify statistical patterns between source and target languages. The system learns probabilities of word and phrase correspondences.

Neural Machine Translation (NMT). NMT uses artificial neural networks to learn translation patterns from massive datasets. Unlike earlier approaches, NMT processes entire sentences as wholes rather than word by word. This produces more fluent, context-aware translations. Modern systems such as *Google Translate*, *DeepL*, and *Microsoft Translator* are based on NMT.

Modern translation increasingly relies on Large Language Models (LLMs) that process billions of words to predict linguistic patterns. These algorithms excel at maintaining terminology consistency across thousands of pages and operate at speeds unreachable by humans [3, p.28].

Legal translators (*both human and machine*) rely on specialized resources.

Corpora (*large text collections*):

EUR-Lex – EU legal documents in all official languages;

JURE – EU case law database;

National legislation databases; (e.g., *Romanian Official Gazette*)

Computer-Assisted Translation (CAT) tools:

SDL Trados, memoQ, WordFast – store translations in translation memories for consistency

Terminology databases:

IATE (InterActive Terminology for Europe) – EU terminology database;

Termium – Canadian legal and administrative terms;

Machine Translation engines:

Google Translate, DeepL, Microsoft Translator

Table 2. Advantages of Machine Translation

Advantage	Explanation
Speed	MT translates thousands of words per second
Cost	MT is significantly cheaper than human translation
Consistency	MT always translates the same term the same way
Availability	MT is available 24/7 for any language pair

Advantage	Explanation
Volume handling	MT can process millions of words without fatigue

Despite their impressive capabilities, algorithms have fundamental limitations for legal translation:

- Hallucinations. LLMs may invent plausible-sounding legal terms that do not exist in the target jurisdiction. An algorithm might produce a term that looks and sounds like legal terminology but has no legal meaning or effect [1, p. 55].

- Lack of reasoning. Algorithms do not understand the underlying logic of a law; they only predict the next word based on statistical patterns. They cannot engage in legal reasoning, interpret legislative intent, or adapt concepts between legal systems.
- Confidentiality. Feeding sensitive legal documents into public AI models poses massive data privacy risks. Confidential contracts, privileged communications, and classified documents cannot be safely processed by cloud-based translation services.

- Loss of functional equivalence. Algorithms often prioritize fluency over legal accuracy, producing translations that are "close" to the original but legally invalid. A human translator understands that functional equivalence (the same legal effect) is more important than literal equivalence [6, p.89].

- System-blindness. Algorithms do not know whether the target audience operates under common law or civil law. A translation suitable for a US court may be meaningless or misleading in a Moldovan court.

Legal translation from English to Romanian requires strict functional equivalence. Algorithms often prioritize fluency over legal accuracy, leading to “close” but legally invalid translations. A human translator must adapt between legal systems - common law (*England, US*) and civil law (*Romania, Moldova*).

Example: The English term consideration (*a core concept in contract law*) has no direct equivalent in Moldovan civil law. A literal translation would be meaningless. A human translator must understand that Romanian contract law does not require consideration; instead, it requires *cauză* (*cause*) and *obiect* (*object*). The algorithm, unaware of this systemic difference, may produce a misleading translation.

Similarly, translation from Romanian to English requires knowledge of the target legal system. The Romanian term *prescripție* can refer to both extinction of rights (*civil law*) and limitation of actions (*procedural law*). The translator must choose between limitation period, statute of limitations, or prescription depending on the context and the target jurisdiction (*US or UK*).

Table 3. Human Translation vs Machine Translation

Aspect	Human Translation	Machine Translation
Speed	Slow (pages per hour)	Fast (thousands of words per second)

Aspect	Human Translation	Machine Translation
Cost	High	Low
Consistency	Variable across translators	Perfect consistency
Legal reasoning	Yes (understands logic of law)	No (only predicts words)
System adaptation	Yes (common law ↔ civil law)	No (system-blind)
Confidentiality	Safe (professional obligations)	Risk (cloud-based processing)
Fatigue	Yes (errors increase over time)	No
Availability	Limited for rare language pairs	Universal
Hallucinations	No	Yes (invents non-existent terms)
Functional equivalence	Yes	No (prioritizes fluency)

The evidence suggests that neither humans alone nor algorithms alone are sufficient for legal translation. The most effective model is not “*Humans vs Machines*” but “*Humans and Machines Together*” - a hybrid approach often called *Human- in-the-Loop*.

As one legal translation expert observed: “*Algorithms translate words. Humans translate meaning, intent, and law.*”

Table 4. Hybrid Translation Model

Layer	Tool	Function
Draft	Machine Translation (NMT)	Produce a rough draft or gist translation for large volumes
Consistency	CAT Tools (Trados, memoQ)	Ensure terminology consistency across documents

Layer	Tool	Function
Review & Finalize	Human Legal Expert	Perform Machine Translation Post-Editing (MTPE), verify legal accuracy, adapt between legal systems

This model prioritizes accuracy over speed. The algorithm handles volume and consistency; the human ensures precision and legal validity. MTPE (Machine Translation Post-Editing) refers to the process of editing machine-generated translations to achieve publishable quality. For legal texts, this requires full post-editing (human review of every sentence) rather than light post-editing (*correcting only major errors*).

The MTPE process for legal translation includes:

- Verifying terminology against legal dictionaries and databases (LATE, Termium).*
- Checking for hallucinations (invented terms).*
- Adapting concepts to the target legal system.*
- Ensuring functional equivalence, not literal equivalence.*
- Preserving the legal effect of the original document.*

Law firms, corporations, and government agencies must be cautious about feeding sensitive legal documents into public AI models. Solutions include:

- Running AI models on private servers.*
- Encrypted translation services – enterprise versions of Google Translate and DeepL.*
- Human-only workflows - for highly sensitive documents.*

In most jurisdictions, courts and government agencies require certified translations for legal documents. Only human translators can provide certified translations, as they can attest under oath to the accuracy and completeness of the translation. Machine-generated translations, regardless of quality, cannot be certified and are therefore inadmissible in many legal proceedings.

Beyond confidentiality, legal translation raises additional ethical concerns:

- Attorney-client privilege. The use of public LLMs may violate attorney-client privilege if lawyers input confidential client information.
- Bias. AI generated translations may introduce bias, particularly in immigration or asylum cases where a single word can determine an individual's fate.
- Professional negligence. Excessive dependence on machine translation without human review may constitute professional negligence. Legal professionals have an ethical obligation to verify the accuracy of any translation used in legal proceedings, regardless of whether it was produced by a human or an algorithm.

A notable real world example occurred in a 2019 Canadian immigration case where a machine translation of a Romanian birth certificate mistranslated the term *divorțat* (*divorced*) as *annulled*, leading to a six-month delay in processing and additional legal fees

of over \$5,000 CAD. The error was only discovered when a human legal translator reviewed the document.¹

Looking ahead, several developments may reshape legal translation:

- AI models developed exclusively for legal work, using only legal datasets for training (*e.g., CoCounsel and Harvey AI*), are emerging as replacements for general purpose language models.
- Retrieval-Augmented Generation (RAG) systems can now cross-reference legal databases during translation, reducing hallucinations.
- Private LLMs are making confidential legal translation more viable for law firms and government agencies.

However, even the most advanced systems still require human oversight for final legal validity. As technology continues to evolve, the legal profession must adapt. But the fundamental principle remains: accuracy must always prevail over speed.

In **conclusion**, the translation of legal terminology is not merely a linguistic exercise. It is an act of legal reasoning, cultural mediation, and systemic adaptation. The stakes are high: errors can lead to financial loss, wrongful conviction, breach of contract, and miscarriages of justice.

Humans bring to legal translation deep understanding of legal systems, ability to interpret context and intent, competence in functional equivalence across common law and civil law, and professional judgment about legal effect.

Algorithms bring speed, low cost, perfect consistency, availability for any language pair, and ability to process massive volumes without fatigue.

Neither is sufficient alone. The future of legal translation lies in hybrid intelligence - *Human-in-the-Loop* systems where AI handles volume and consistency, while legal experts perform Machine Translation Post-Editing to ensure absolute precision.

As technology continues to evolve, the legal profession must adapt. But the fundamental principle remains: accuracy must always prevail over speed. In the words of a leading legal translation scholar, "Algorithms translate words. Humans translate meaning, intent, and law" [4, p.378].

The question is not "*Humans vs Algorithms*" but rather "*How can humans and algorithms work together to achieve justice through accurate legal translation?*"

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