# LEGAL TRANSLATION AND COURTROOM RHETORIC

Article



DOI: 10.17803/2713-0533.2024.4.30.810-842

# Subtitling English Legal Acronyms into Arabic: Human vs Machine

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**Abstract:** The development of artificial intelligence (AI) and machine translation (MT) technologies made the process of translation easier. The study examines the translation strategies used by Netflix, Google Translate (GT), ChatGPT (GPT), and Gemini (GEM) to render 30 English legal acronyms into Arabic. Adopting the taxonomy suggested by Al-Hamly and Farghal to translate reduced forms, the analysis showed that every translator (human, MT, and AI) uses different strategies to render the acronyms into Arabic. The findings showed that the majority of the English legal acronyms were unpacked and translated literally "Translation Alone Unpacking." GPT employed this strategy the most at 50 %, followed by Netflix and GT at 26.6 % each and GEM at 13.3 %. The second most frequently used translation strategy is "Cultural Substitution" that was utilized by Netflix (40 %), followed by GPT (23.3 %), and GEM and GT at 16.6 % each. The analysis showed that GT has more cases of mistranslation than the other investigated systems. The study concludes that artificial intelligence tools have advanced significantly and are now almost as good as humans. Therefore, when translating legal acronyms, combining machine translation with human intervention will likely improve accuracy and cultural sensitivity while saving time, cost, and effort.

*Keywords*: English; Arabic; Legal translation; Acronyms; Machine Translation; Google Translate; Artificial Intelligence; ChatGPT; Gemini

**Acknowledgements:** This research received grant no. (56/2023) from the Arab Observatory for Translation (ALECSO affiliate), which is supported by the Literature, Publishing & Translation Commission in Saudi Arabia.

*Cite as:* Haider, A.S. and Alkhatib, R., (2024). Subtitling English Legal Acronyms into Arabic: Human vs Machine. *Kutafin Law Review*, 11(4), pp. 810–842, doi: 10.17803/2713-0533.2024.4.30.810-842

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# I. Background of the Study

Translation facilitates communication by allowing people from diverse backgrounds to exchange information and overcome cultural and linguistic boundaries. (Nida ana Taber, 1974, p. 12) argued that "Translating consists in reproducing in the receptor language the closest natural equivalent of the source-language message, first in terms of meaning and secondly in terms of style." In our increasingly interconnected world, translation bridges the linguistic divides and enhances mutual understanding.

Audiovisual translation (AVT) is a new field of translation arising from the significant explosion of multimedia content and technological advancements (Haider and Shohaibar, 2024; Saed et al., 2024; Saideen et al., 2024). AVT entails converting the spoken and written components of audiovisual AV materials, such as series, movies, television shows, and video games, to different languages. AVT converts verbal and nonverbal elements of AV materials from one language to another (Chiaro, 2012).

The term "machine translation" (MT), which was initially used in the 1950s, describes the process of translating between natural languages. Because MT systems are quick and inexpensive, many people use them frequently even though they may not be as accurate as professional translators (Hadla et al., 2014). The accuracy of MT depends on the words' selection and the system's overall output. Dealing with semantic, syntactic, morphological, and other grammatical complexities makes the translation process more challenging. However, these complexities become further complicated between languages, such as English and Arabic, which have asymmetries and a wide range of cultural, linguistic, and systematic dissimilarities (Oladosu et al., 2016).

English and Arabic legal languages are intricate due to the complicated structure of legal expressions and the substantial distinctions between the legal, cultural, historical, and religious systems. English legal language is based on its common law norms. In contrast, Islamic law, or Sharia, influences the Arabic legal language, incorporating religious doctrines and cultural practices unique to Muslim societies (Weld-Ali et al., 2023). Due to this divergence, distinct legal concepts and terminologies emerge, often with no direct equivalent in the other language. Conciliating these differences necessitates linguistic proficiency and a thorough understanding of the fundamental principles of both legal systems.

Legal translators face many difficulties when translating from one legal language into the legal vocabulary of the target language, particularly when translating between a language pair like Arabic and English (Šarčević, 1997, p. 235) says, "Because of the inherent incongruency of the terminology of different legal systems, legal translators cannot be expected to use natural equivalents of the target legal system that are identical with their source terms at the conceptual level."

Acronyms form an integral part and hold an invaluable place in language owing to their prominence and dynamism. Several text types use acronyms for brevity euphony and to entice readers to learn what the letters stand for (Newmark, 1987). They frequently use acronyms

to shorten the names of government agencies, military branches, and organizations. Therefore, there is a need for shorter names due to the recent centuries' rapid advancements in science and technology. When translating legal acronyms from English to Arabic, acronyms provide a special challenge. There are significant differences between the two languages' phonetic and grammatical structures. It is critical to recognize the difficulties that come with acronyms. Their nature may expose them to ambiguity, with some acronyms representing multiple things or being regarded as technical or specialized (Zahariev, 2004).

This study investigates the strategies used in subtitling legal acronyms from four English series into Arabic, streaming on Netflix, by compiling a parallel corpus of English script and its Arabic translation. In addition, it compares the strategies utilized by professional subtitlers, MT, and AI services in rendering legal acronyms to determine whether MT and AI can render legal acronyms appropriately into Arabic.

This study attempts to answer the following two research questions:

**Q1:** How do human Netflix subtitlers compare to MT Google Translate and AI systems like Gemini and ChatGPT in subtitling legal acronyms into Arabic?

**Q2:** What are the differences in the frequency of translation strategies used by humans, MT Google Translate, and AI systems Gemini and ChatGPT in rendering English legal acronyms into Arabic?

It is worth noting that this manuscript is part of a larger, funded research project on the subtitling of legal expressions between English and Arabic (Alkhatib and Haider, 2024).

#### II. Literature Review

This section is two-fold. The first part reviews the theoretical background relevant to AVT, legal language, and acronyms. The second part discusses some empirical studies related to the topic under investigation.

#### II.1. Theoretical Framework

This section delves into AVT, explaining its definition, different types, and restrictions. The following subsection discusses legal language, the differences between the Arabic and English legal systems, and the legal acronyms.

#### II.1.1. Audiovisual Translation

Screen translation is distinct from print translation. Books, newspapers, and other written products have been intended to be read. Print translations may include pictures, photographs, graphs, and diagrams to illustrate or supplement the verbal content. Conversely, screen products are characterized as completely AV, such as films, TV series and serials, sitcoms, and documentaries. The terms "media translation," "multimedia translation," and "screen translation" are among the interconnected terms that include AVT. All these terms refer to the interlingual transfer of audio and visual elements (Chaume, 2018).

AVT is the wide umbrella that includes several types, with subtitling being the most common. On the other hand, subtitling is defined by Shuttleworth and Cowie (1997, p. 161) as "the process of providing synchronized captions for film and television dialogue." Synchronization is regarded as one of the most important features in AVT, and it is essential when subtitling because the translated text or audio must coincide with the original dialogue's timing. When translating colloquialisms, humor, and cultural allusions, AVT must be culturally adaptive to the target audience. To ensure that translations fit within time and screen constraints, AVT must also preserve the original content's visual and aural coherence. In order to make a message understandable and relatable to people of different languages and cultural backgrounds, translators must strike a balance between accuracy and creativity. This is why their work demands accuracy.

# II.1.2. Legal Language

Legal terminology is regarded as an essential component of legal discourse and is used to assess translators' competence and ensure the accuracy of translated legal texts (Alwazna, 2019). Translation can be challenging in many areas, but legal translation is particularly difficult. Arabic and English legal languages are renowned for their extreme formality and precision. It requires precise terminology to remove ambiguity, which is essential to prevent even small translation errors from potentially disastrous legal outcomes.

The fundamental distinction between the two legal systems is found in their roots. Common Law is the tradition of English legal systems, which mainly rely on precedent from earlier court rulings. On the other hand, Arabic legal systems are mostly founded on interpretations of the law and religious law Sharia. Situations arise where legal concepts in one system may not have a direct equivalent in another due to this fundamental difference. Mellinkoff (1963, p. 3) names the language used in legal texts as "the language of law." According to Tiersma (2000), legal language deviates significantly from everyday speech, unlike the technical language used in any other profession, while still adhering to English's general rules.

Among the various types of translation (commercial, technical, literary, media, etc.), legal translation is a subset. Idioms, phrases, and expressions are all part of legal language or the study of legal terminology. Depending on its functional categories, this legal language has a variety of writing styles, including academic legal writing, juridical writing, and legislative writing. Academic legal writing refers to the legal terminology used in law courses, essays, and academic publications. Legislative reports deal with legal papers, conventions, and parliamentary activity, whereas juridical writing deals with the language of court decisions (Šarcevic, 2000). All aspects of the meaning are attempted to be achieved and limited in the legal document. It should be precise, succinct, and unambiguous to prevent misunderstandings.

Professional translators face numerous challenges when attempting to find a comparable equivalent in the English legal system. Some translators' unfamiliarity with translation theories and strategies results in problems and errors in translation. When translating legal documents from Arabic to English, many significant challenges arise. The first impediment is terminology. Legal terms such as "habeas corpus" may not have a direct translation in Arabic. The translator must find a culturally appropriate term that accurately conveys the same legal concept. Sentence structure is also a challenge. Arabic legal documents tend to be more verbose and ornate than English legalese, which is typically concise. A skilled translator is required to accurately translate this style while maintaining clarity in the TL. Finally, cultural context is essential. Legal systems are deeply rooted in a culture's traditions and values.

# II.1.3. Acronyms

English acronyms are vital components of our contemporary communication as they provide a practical and effective means of condensing difficult words and phrases (Grange and Bloom, 2000). These acronyms are pronounced as single words rather than individual letters, and they are created by combining the first letters of the words that make up a longer phrase (Harley, 2004). The acronyms found in the selected series and movies have a notable connection to fields like finance, economics, administration, and criminality. The fact that these series and movies primarily focus on financial matters and crime detection makes this connection more obvious.

Acronyms are distinguished by their brevity and efficiency, acting as condensed versions of phrases or series of words, with each letter representing a component of the original term. They are frequently used to simplify complex or lengthy expressions, making communication more efficient and convenient. Acronyms frequently gain widespread recognition and adoption, particularly in technology, government, and healthcare (e.g., NASA, NATO, and MRI). They can vary in formation, sometimes using the initial letters (e.g., FBI for Federal Bureau of Investigation).

#### II.1.4. Machine Translation

Translation is one of the many areas of life that has been profoundly impacted by globalization. The need for efficient translation techniques increased as media and communication expanded internationally, giving rise to AVT. With the introduction of new features and technologies, AVT signaled a change from antiquated, static translation techniques to more contemporary, dynamic ones. With this shift, multimedia content like movies, TV series, and online videos could be translated and made available to a worldwide viewership. The translation process has undergone even more revolutions with the introduction of MT and the development of artificial intelligence (AI) over time (Akasheh et al., 2024). MT is defined as "the process that utilizes computer software to translate text from one natural language to another" (Alawneh and

Sembok, 2011, p. 343). These technologies have greatly improved the speed and accuracy of translations by introducing automated, effective, and frequently real-time translation capabilities. This evolution shows how technology is continuing to reshape and advance the field of translation, reflecting the ongoing transformation of translation practices in response to our globalized world.

The AI revolution in translation studies has dramatically altered our understanding and approach to language mediation. Language analysis, translation theory, and cross-cultural communication have all seen new horizons opened up by powerful machine learning algorithms. AI-driven audio and video content subtitles are now created using advanced machine learning and natural language processing NLP techniques. These technologies enable AI to analyze a wide range of data inputs, including audio, video, spoken words, sign language, and paralinguistic elements, producing precise subtitles with precise timing. MT has emerged as a cornerstone in translation, utilizing computational algorithms and AI to automatically convert verbal and nonverbal elements from a source language SL to a target language TL.

Using computational algorithms, MT significantly accelerates the translation process by automatically translating text from an ST to a TT. This translation system originated in the 1950s (Hutchins, 2005, pp. 501–511). Initially, it was used to provide raw output based on a statistical analysis of the submitted source text ST to give a basic comprehension of the ST. MT systems were designed to replace humans, however this approach did not work. Because of the many errors resulting from lexical and syntactic ambiguity in the translation output, MT developers eventually lost interest in employing MT systems (Juan, 1994).

Computer-assisted translation (CAT), which recognizes the necessity of a human translator to examine and revise the translations produced by this kind of computer-based software, was developed in response to MT's failure. Neural machine translation (NMT), rule-based machine translation (RBMT), and statistical machine translation SMT are the three categories into which MT systems can be divided.

GT switched from the SMT to the NMT system in 2016. An artificial neural network is used by the NMT system to forecast the probability of a variety of words; often, entire sentences are represented in a single integrated model. This system does not require large amounts of space memory. In NMT models, deep learning and representation learning are employed.

# II.2. Empirical Studies

The current subsection provides an overview of some previous studies related to the main topic of the study. Translating legal documents was extensively investigated due to its complexity, even for professionals. Alshehab and Rababah (2020) examined the translations of 20 students of Jadara University in Jordan to recognize the problems in translating legal terms from English into Arabic. To gather information, they employed a test consisting of 194 legal English sentences. After evaluating the data using a content analysis methodology, they calculated the frequency and proportion of lexical errors produced by translation students. The findings showed that the largest percentages of errors were legal in adverbs, followed by coupling, polysemy, and homonymy.

El-Farahaty (2016) argued that the asymmetry between Arabic and English poses a number of linguistic, cultural, and systemic difficulties for legal translators. The researcher aimed to identify the most prevalent issues with translating legal materials between Arabic and English. The study found that the translator should be able to determine the precise meaning of frequent terms in a legal context. Translators should examine comparable works and seek advice from experts. When it comes to technical terms, they could try to think about the lexical items instead of translating them directly or using specialized dictionaries. It is important for translators to either paraphrase or find a roughly equivalent expression in the target language when translating archaic terms. There are many different legal interpretations for abstract terms, which make them quite intricate. Because of this, the legal translator should interpret them literally and refrain from trying to make them clear, even if doing so creates an ambiguous text. The translation of

religious and cultural concepts in documents could be accomplished by translators using methods such as "expansion, adaptation, transposition, and structure shift.

Fakhouri and Daragemeh (2008) examined the significance of pragmatic and functional elements in legal translation. Nine versions of the examined legal documents — which included leases, employment contracts, and real estate sales — were produced after three of them were translated by skilled and experienced translators. After getting the nine translations, a comparative analysis has been done to reveal the strategies and approaches each translator used to render the most challenging legal parts. The application of Speech Act theory to the analysis of regulatory act translation was also explored in this study. The researchers pointed out the importance of incorporating pragmatic and functional factors in translation, emphasizing that effective communication is the foundation of legal translation. The findings showed that legal jargon translation spans a continuum from literal to dynamic translation. The literal translation is appropriate for contextindependent technical terminology, but context-dependent terms need context-specific techniques. The results also showed that simplifying doublets, triplets, and stylistically synonymous binominals is advised. For legal formulations, the literal translation is useless. Hence, functional equivalents should be used. The study also showed that contracts can have redundant references removed or altered without losing meaning.

After the revolution of MT systems, many scholars geared their research toward it. Wiesmann (2019) examined MT's legal document translation capabilities alongside translation pedagogy. The researcher assessed DeepL Translator and MateCat by translating many legal documents without using translation memory. The assessment considered the TT's readability, significance, and coherence with the original content. The results did not support increased post-editing of machine-translated legal papers during training. This indicates that improved techniques, more robust legal knowledge, and an awareness of the differences between machine and human translation in translation training are necessary.

Concerning acronyms, Abdul-Razzag (2009) argued that advancements and knowledge in all fields of life have led to the appearance of many terms used to designate various concepts and discoveries. The necessity of condensing large names and terms of concepts into smaller ones becomes apparent because using them in their entirety leads to difficulties, disruptions, and wastage of time and energy when speaking, writing, and printing. The researcher concluded that there are some methods to translate the acronyms of international news agencies into Arabic: you can either show the Arabic abbreviated form as a word or the English abbreviated form letter by letter. Acronyms for global satellite television can be translated into Arabic in two ways: by indicating the lexical meaning and by indicating the English abbreviated form letter by letter. Acronyms from world newspapers can be translated into Arabic in two ways: by indicating both the lexical meaning and an Arabic transliteration of the English form. Acronyms of the United Nations and other world organizations can be translated into Arabic in three ways: by indicating the lexical meaning, the English abbreviated form letter by letter, and the Arabic abbreviated form as a word. The researcher notices that both translation and transliteration can be used to deal with acronyms.

#### III. Sources and Methods

This study is qualitative and quantitative in nature; therefore, this section focuses on the methods and apporaches used in this study as well as on the approaches to materials and data collection.

The significant variations in linguistic patterns, cultural contexts, and legal structures make transferring information from English into Arabic challenging. As Germanic, English has relatively simple syntax and grammatical rules, while Semitic Arabic has complex morphological patterns and a highly inflected grammatical system. To maintain meaning and nuance, this discrepancy requires cautious handling. Furthermore, the cultural backgrounds of Arabic- and English-speaking communities differ greatly, which affects how certain expressions are understood and applied. It may be necessary for the translator to find

culturally appropriate translations or explanations for expressions that are colloquial or culturally specific in Arabic when they don't have direct equivalents in English.

Arabic has fewer acronyms and initialisms than English despite the fact that they are widely used there. Arabic acronyms emerged relatively recently due to globalization and contact with other foreign languages, particularly English, through media radio, TV, newspapers, social media, trade, science, and technology. Native Arabic speakers create acronyms in their own unique and spontaneous way (Al-Jarf, 2021). Arabic acronyms, like English acronyms, are made up of the first letters of longer phrases or compound nouns, such as the names of organizations, companies, industries, trade names, businesses, educational institutions, government agencies, and more. They are utilized as well in medicine, technology, social media, politics, economics, and the common language. Although acronyms are used in Arabic, they are generally less common than in English. This makes the task of translating English acronyms into Arabic engaging. Dealing with specialized fields, such as legal acronyms, adds another level of complexity. Here, the stark disparities between the legal systems are important. Whereas Arabic legal systems heavily incorporate Sharia Law, English legal systems frequently rely on Common Law. These underlying differences can make translating legal acronyms especially difficult.

The current study primarily concentrates on television series aired in English on Netflix and has subtitles in Arabic. The study dives into four English series based on judicial and legal themes: "How to Get Away with Murder," "Suits," "The Judge," and "The Lincoln Lawyer," all of which use legal terms heavily. The researchers retrieved the subtitles of each season's top five most-watched episodes on the platform.

Google Translate (GT) facilitates communication between speakers of an astounding variety of languages by bridging language barriers. This free service covers spoken conversations, written text, and web pages. There are many free MT systems available online. Nonetheless, GT is the most widely utilized and well-liked one (Aiken and Balan, 2011). GT keeps improving its accuracy in translating nuances of human

languages (Al-Salman and Haider, 2024). Despite its shortcomings, GT is invaluable for individuals navigating a multilingual world.

The AI revolution has upended the translation field due to globalization and the increased need for AV content. According to Tate, Doroudi, Ritchie, Xu, and Warschauer (2023), ChatGPT (GPT) demonstrated a significant ability to generate responses and translate between languages as it has been trained on enormous amounts of data, which enabled it to comprehend and create translations and texts with remarkable accuracy. It has been proven that GPT is able to assist in learning foreign languages (Yan, 2023).

Gemini (GEM), a new AI designed and developed by the Google subsidiary DeepMind, was released to overcome highly complex tasks (Farghal and Haider, 2024). This new AI design encompasses Gemini Ultra, Gemini Pro, and Gemini Nano. All these models were trained extensively on large data on multimodal and multilingual data, including data from books, images, audio, video, and code (Buscemi and Proverbio, 2024).

This study analyzes the translation strategies employed by human, MT, and AI systems when encountering legal acronyms from English into Arabic. The researchers used the approach suggested by Al-Hamly and Farghal (2013) to analyze the strategies used to translate the legal acronyms into Arabic. Seven strategies could be employed in the subtitling, mainly:

- (1) borrowing,
- (2) translation using common terms unpacking,
- (3) translation + acronym,
- (4) Arabic generic word + borrowing,
- (5) borrowing + acronym,
- (6) translation + borrowing, and
- (7) Cultural Substitution as listed in Table 1.

It should be noted that the researchers added some strategies as observed, mainly "Explicitation," "Explicitation Unpacking + Omission," "Cultural Substitution + Borrowing," "Explicitation + Borrowing," and "Transliteration."

Table 1. Strategies Used for Translating Acronyms

No.	Strategy	Explanation	English Example	Arabic Translation
1	Unpacking + Omission	The English source term is simply translated into Arabic while removing part of it	LAPD	سولجناً سول
2	Borrowing Alone	The English term is borrowed and written using Arabic alphabet	CIA	السي آي إيه
3	Cultural Substitution	The reduced form is translated using culturally equivalent elements in the target language	DA	ماعل يعدملا
4	Explicitation	Making implicit information explicit in the target text	ID	ةيو هل اققاطب
5	Mistranslation	This can lead to inaccurate information and confusion	AI	AI ةي لودل اوف عل instead of Artificial Intelligence
6	Translation Alone Unpacking	The English source term is translated into Arabic full form in translation	WHO	ةحصلا ةمظنم ةيملاعلا
7	Translation + Borrowing	The English term/phrase is both translated and borrowed	CIA	تارباخملا قلاكو CIA قيزكرملا
8	Cultural substitution + borrowing	The reduced form is translated using culturally equivalent elements in the target language, and the term is borrowed	IRS	بئارضّلاً قرّعاد IRS
9	Explicitation + Borrowing	making implicit information explicit in the target text while preserving the borrowed acronym in the target text	DUI	تحت قداي قال لوحكار ريثات DUI
10	Transliteration	Translating text between writing systems while trying to keep the original sounds as much as possible	НІРАА	ابيه

### IV. Analysis and Findings

This section is both qualitative and quantitative in nature. The first part, quantitative, lists the strategies and their frequencies; it goes into detail about the most commonly used strategies by the services under investigation. The second part is qualitative, examining Netflix, GPT, Google Translate, and GEM's strategies for translating legal acronyms into Arabic.

# IV.1. Quantitative Analysis of Acronyms

The current subsection aims to highlight the strategies used along with their frequencies. Additionally, it investigates the most commonly employed strategies and percentages by humans, MT, and AI. This quantitative analysis is designed to facilitate detecting any percentages of mistranslations. Drawing on the data provided in Table 1, Table 2 lists the strategies used to render each acronym.

Table 2. Strategies in Rendering English Acronyms

No.	Term	Acronym	Netflix	GT	GPT	GEM
1	Chief Executive Officer	CEO	3	3	3	3
2	District Attorney	DA	3	2	3	3
3	Deoxyribonucleic Acid	DNA	4	4	4	4
4	Federal Bureau of Investigation	FBI	1	6	6	6
5	Assistant District Attorney	ADA	3	5	3	3
6	Transportation Security	TSA	5	6	5	5
	Administration		_		_	_
7	Initial Public Offering	IPO	3	6	3	3
8	Medical Examiner	ME	3	2	3	3
9	Emergency Receipt	ER	6	6	6	6
10	Immigration and Customs	ICE	6	2	6	7
	Enforcement					
11	Driving While Intoxicated	DWI	6	5	6	7
12	Law School Admission Test	LSAT	6	2	6	7
13	Department of Justice	DOJ	3	3	3	3
14	Securities and Exchange Commission	SEC	3	3	3	8

15	Food and Drug Administration	FDA	6	7	6	7
			-		_	
16	Temporary Restraining Orders	TRO	3	2	6	8
17	Limited Liability Company	LLC	6	6	6	6
18	Chief Operating Officer	COO	3	3	1	5
19	Health Insurance Portability	HIPAA	1	2	10	7
	and Accountability Act					
20	Internal Revenue Service	IRS	3	3	6	8
21	Gunshot Residue	GSR	2	2	6	7
22	Driving Under the Influence	DUI	4	5	4	9
23	Bureau of Alcohol, Tobacco,	ATF	4	2	6	6
	Firearms and Explosives					
24	Global Positioning System	GPS	3	7	6	7
25	Los Angeles Police Department	LAPD	1	1	1	7
26	Bachelor's Degree/Doctor	BS/PhD	1	1	1	1
	of Philosophy					
27	Massachusetts Institute	MIT	2	6	6	7
	of Technology					
28	As Soon As Possible	ASAP	3	6	6	7
29	Identification	ID	6	4	4	7
30	Drug Enforcement Administration	DEA	6	6	6	7

The "Translation Alone Unpacking" strategy is the most commonly used, accounting for 29.1 % of the translations. This indicates direct Arabic equivalents for acronyms and highlights a deliberate attempt to preserve their legal status. The "cultural substitution" strategy comes in second place, accounting for 24.1 %, and it entails replacing a concept or expression of the source culture with one that is familiar and appropriate in the target culture. Moreover, the "Translation + Borrowing" strategy comes in third place, accounting for 11.6 % of the investigated acronyms. This approach considers the possibility that some viewers may not be aware of the acronym's direct equivalent.

The fourth commonly used strategy is "Borrowing Alone," which applies to 8.3 % of the cases, and it appears noticeably more frequently in translations produced by GT. However, it is crucial to highlight that using legal terms may not be the best option, especially considering how complex the legal system is for Arab audiences. The

"Unpacking +omission" strategy also comes in fourth place, accounting for 8.3 % of cases. This combines translating the acronym into its Arabic equivalent but, at the same time, removing parts of the acronym. Explicitation strategy comes in fifth place, being employed in 6.6 % of the instances. It makes implicit information explicit in the TT.

The "Cultural Substitution + Borrowing" and "Explicitation + Borrowing" strategies have been used to a limited range of 3.3 % and 1.6 %, respectively. The "Cultural Substitution + Borrowing" strategy aims to combine translating a source term into a term that is culturally related to the target audience's culture and language while also borrowing the acronym in the TL. The "Explicitation + Borrowing" strategy involves making the acronym more explicit to the target audience while providing them with a foreign acronym. Notably, a 5.8 % mistranslation rate was observed, primarily in translations generated by GT. The last strategy is transliteration, which has been used only once by GPT to render one acronym, HIPAA.

Table 2 shows how MT, AI, and Netflix translators employ various translation strategies to handle acronyms. GT employed the "Translation Alone Unpacking" strategy 50 %, suggesting that it can effectively preserve the legality of acronyms for its audience. By comparison, the percentages for Netflix, GPT, and GEM demonstrate 26.6 %, 26.6 %, and 13.3 %, respectively. This implies that these translators translate acronyms in a way that strikes a balance between literal translation and simplified language, keeping in mind that their audience is non-legal experts.

By employing it, Netflix favors the cultural substitution strategy the most (40 %). This indicates the human ability to consider the targeted audience's culture and preferences. Following Netflix, GPT also applies this strategy at 23.3 %, surpassing GEM at 16.6 % and GT at 16.6 %.

GEM prefers the "Translation + Borrowing" strategy, accounting for 40 %. Following GEM, GT used it only at 6.6 %. It should be noted that Netflix and GEM never used this strategy, considering their time and space limitations and preference for applying other strategies.

GT prioritizes using the "Borrowing Alone" strategy, accounting for 26.6 %. It should be noted that GT as MT might not understand legal

acronyms; therefore, it left the acronym as it is for the target audience. Following GT, Netflix used this strategy only at 6.6 %, and GPT at 3.3 %. GEM never used this strategy.

Netflix used the "Unpacking + Omission" strategy, which accounted for 13.3 % of the translation. This approach was chosen to address the need for simplified acronyms so the target audience could understand them better. However, omission is a delicate process that can reduce understanding if used excessively or incorrectly. GPT also employed this strategy in 10 % of cases, followed by GT at 6.6 %. GEM showed less preference for this strategy, applying it only at 3.3 %.

Considering the target audience and prioritizing their experience on the Netflix platform, Netflix translators opted for the "Explicitation" strategy to explain the implicit ST expressions at 10 %. GT and GPT employed this strategy at 6.6 %. However, GEM only used it in 3.3 % of its translations.

Notably, GEM was the only service that applied the "Cultural Substitution + Borrowing" strategy, accounting for 13.3 %. In contrast, Netflix, GPT, and GT did not use this method. As for "Explicitation + Borrowing," GEM only used this strategy at 3.3 %. Netflix, GPT, and GT show no preference for using it to render English legal acronyms into Arabic.

Through quantitative analysis of the acronyms, cases of mistranslation (23.33 %) were investigated mainly in GT translations at 10 %, followed by GEM at 6.6 % and Netflix and GT at 3.3 % per each.

Acknowledging the human element inherent in Netflix's translations and distinguishing it from AI and MT systems is imperative. AI websites like GPT and GEM coexist with MT systems like GT. Interestingly, the accuracy comparison shows that MT systems like GT mistranslated more words when rendering acronyms than AI, like GEM and GPT. Additionally, Netflix translators skillfully manage subtitling restrictions with a human touch, exhibiting a keen understanding of time and space constraints. Because it recognizes that it may impact the viewing experience, Netflix employs the cultural substitution strategy more than machine-driven approaches.

# IV.2. Qualitative Analysis of Acronyms

As Table 2 shows, some acronyms were consistently translated using the same strategy, whereas others used two, three, or even four strategies. For instance, Netflix, GT, GPT, and GEM used a consistent approach when rendering acronyms such as DOJ, DNA, and LLC. The Department of Justice DOJ has consistently been rendered into Arabic as كال فرازو, preserving the organization's official and acknowledged title in the TL.

Some acronyms were translated using two different strategies: DA, SEC, and FBI. The phrase تاصروبال قاروال قاروال المالية على which is recognized as the canonical Arabic equivalent of the acronym SEC, is produced by Netflix translators, GT, and GPT that consistently employ "Cultural Substitution" strategy. On the other hand, GEM included the "Cultural Substitution+ Borrowing" strategy in its translation. It translated the term using the cultural substitution and also enclosed the original English acronym in parenthesis, resulting in قاروال المالية على المالية على

After analyzing Netflix translations, it is obvious that their translators successfully rendered the acronyms to their audience. Netflix translators mostly used the "cultural substitution" strategy to render the acronym, as Table 3 shows.

Strategy	Frequency		Examples
	1.1.1	ST	TT
Translation Alone / Unpacking	8	DEA	تاردخمل ةحفاكم قرئاد
Cultural Substitution	12	CEO	يذيفنتلا ريدملا
		IRS	بئارضلا قرئاد
		DA	ماعل ايعدملا
		ASAP	روفىلا ىلع
		SEC	ةيلاملا قاوالا ةئي، تاصروبلاو
			تاصروبلاو
Borrowing Alone	2	MIT	يت ي آ ماٍ

Table 3. Translating English Acronyms by Netflix

Unpacking + Omission	4	BA, PhD	ەاروتىكىدل او <sub>ب</sub> س <i>وي</i> رول اكىب
Explicitation	3	DUI	برشل ريثأت تحت قدايقلا
Mistranslation	1	TSA	ةحايسلا نما ةرادا

Cultural substitution is the strategy Netflix uses the most, forming 40% of the instances. For example, CEO, DA, and IRS have been translated as ريدمل المعالم المعا

The "Translation Alone / Unpacking" strategy is Netflix's second most used strategy. It aims to render the acronym by the established equivalent in the TL; hence, Netflix translators are conscious that their audiences are mostly Arab. This strategy is applied eight times. For example, DEA, ER, and ICE were rendered directly into Arabic as قراد المحال المحا

Netflix used the "Unpacking + Omission" strategy in rendering 4 out of 30 acronyms. For instance, the acronyms BA and PhD were unpacked to the target audience while removing some parts of the acronym; therefore, it was translated as فاروتكدل و بس ويرول الكب. This method ensures that viewers can easily understand the educational qualifications discussed without understanding specific English abbreviations. The selective omission aids in streamlining the information, making it more accessible and relevant to the intended audience, thus improving their overall viewing experience.

As for "Explicitation," Netflix employed it to render three instances presenting 10 % of the acronyms. For instance, the acronym DUI was rendered into Arabic by using explicitation in clarifying the type of influence as عنافي قال عنافي المعالمة . This strategy provides a clear and detailed explanation of what DUI means, allowing the audience to understand the term's context and severity better. Netflix guarantees that viewers will not be confused about the intended meaning. To ensure that the intended message is accurately and

understandably conveyed, this strategy helps bridge linguistic and cultural gaps. With its diverse global audience in mind, Netflix strives to provide relatable and approachable content, reflected in explicit content.

As for the strategy of "Borrowing Alone," Netflix rendered only one acronym applying this approach; therefore, MIT was rendered as |  $\varphi$  in Arabic. The rendition of this acronym as |  $\varphi$  in might not be understandable by the majority of the viewers, although a few might recognize the term. For the audience to gain a deeper comprehension, it becomes imperative that the institution's name be thoroughly unpacked during the allotted screen time. Thus, prioritizing "Borrowing Alone" over the viewer's experience may hinder the understanding and enjoyment of the AV product.

Due to the high standards of professionalism, Netflix demands from its translators, barely one mistranslation was detected when rendering the acronym TSA. While TSA refers to Transportation Security Administration, rendering it into Arabic as قرادا shifts the meaning from transportation into tourism.

Table 4 shows how Google Translate rendered the investigated acronyms.

Stuatogy	Ewagnanay			Examples
Strategy	Frequency	No.	ST	TT
Translation Alone /	8	1	ASAP	ن كم تقو عرسا يف
Unpacking		2	ER	ئر اوطلا ةروتاف
		3	LLC	ةدودحم ةيلوؤسم تاذ ةكرش
Borrowing Alone	8	4	ME	ME
		5	ICE	ICE
		6	ATF	ATF
Unpacking +	2	7	LAPD	سول جن أسول قطرش
Omission		8	BA, PhD	ەاروتكدلار ,سويرولاكبلا ةجرد
Translation +	2	9	FDA	FDA ريقاق على او ةي ذغال ا قراد
Borrowing				
Explicitation	2	10	ID	ةيو مل اقق اطب
Cultural Substitution	5	11	IRS	بئارضلا ةحلصم
Mistranslation	3	12	DUI	ةديحولا ةيوملا ققيثو

Table 4. Translating English Acronyms by GT

According to Table 4, GT succeeded in rendering eight acronyms into their established equivalent in Arabic, such as LLC تَوْدَىم تَاذَ قَالُورِ شُرَّ عَلَى اللهُ عَلَى اللهُ

Another strategy GT used in rendering the acronyms was "Borrowing Alone." This strategy was opted for eight times in rendering the acronyms. GT's attempt to use obscure legal acronyms has not proven successful. Since most viewers will find it difficult to understand these acronyms, the communication breaks down rather than gets easier. This emphasizes how crucial it is to select vocabulary that is understandable and well-known to a wider audience in order to facilitate effective and clear communication. Borrowing the following acronyms, ME, ICE, and ATF, for the Arab audience, who are watching the series for entertainment reasons could definitely interrupt their viewing experience. On some occasions, the audience might feel uncomfortable, which might lead to impressions of the translator's adequacy.

GT adopted the "Cultural Substitution" strategy in rendering CEO and IRS. This approach renders the meaning of the acronym using another cultural equivalent in the TL. IRS can be directly translated as another cultural equivalent in the TL. IRS can be directly translated as in Arabic. This abbreviation is only associated with the United States, where it designates the regulatory authority responsible for tax collection and compliance with tax laws.

According to Table 4, GT employed the "Unpacking + Omission" strategy in rendering LAPD, BA, and PhD. These acronyms were unpacked in Arabic, and some parts of the acronyms were removed. This strategy simplifies the delivery, making translations easier to comprehend and more accessible to the audience by ensuring that important information is conveyed without unnecessary complexity. This strategy considers the space limitations by removing parts that might not affect the viewer's experience.

The "Translation + Borrowing" strategy, which combines borrowed acronyms with unpacked translations to make foreign terms more familiar to the target audience, does not consider screen space constraints. For example, the acronym FDA was translated as قي ذغ أل ا قر ادا و بين الله ب

TL, ensuring the audience understands the acronym while becoming acquainted with the original term. However, dual presentation can be inconvenient, especially in situations with limited space, potentially resulting in cluttered and less readable text on the screen.

GT used the "Explicitation" strategy twice, aiming to improve clarity by elaborating on acronyms. For example, "ID" was translated as غور الله فق identity card to ensure that the audience understands it refers to the physical card itself. This strategy provides explicit information that may not be immediately apparent from the acronym alone, improving comprehension and reducing ambiguity. Expanding acronyms into more descriptive terms aids in conveying the precise meaning, ensuring that the target audience understands the term's context and significance. While explicitation improves clarity, it can also result in longer translations, which may not be appropriate for contexts where brevity is required.

While rendering some legal acronyms, GT could not overcome the legal barrier and could not decode the legal significance. Hence, four acronyms were mistranslated, which might mislead the audience into false information and incorrect understanding of the scenes. For instance, mistranslating DUI as قدي حول المقيوف instead of لو حكال لله عنه المعالمة would distort the entire meaning and the understanding of the scene by producing an unrelated translation.

GPT has quickly become a go-to resource for many translators, revolutionizing the translation industry in a short span. GPT, as an AI, opted mostly for "Translation Alone Using Common Terms Unpacking" when rendering the acronyms. Table 5 shows how ChatGPT rendered the investigated acronyms.

Strategy	Frequency		E	Examples
	1 1	No.	ST	TT
Translation Alone /	15	1	ASAP	ن كىم تقو عرسا يف
Unpacking		2	GPS	عقاوملا ديدحت ماظن
		3	FDA	ءاودلاو ءاذغلا ةرادإ

Table 5. Translating English Acronyms by GPT

Cultural Substitution	7	4	IPO	اخاتتاب
		5	ME	يعرشلا بطلا بيبط
Unpacking + Omission	1	6	COO	يسيئرلا ريدملا
Explicitation	3	7	DNA	يوونلا ضمحلا
		8	DUI	ريثأت تحت ةدايقال
				لو حكلا
Transliteration	1	10	HIPAA	ابيه
Mistranslation	1	11	TSA	يباقنلا نمألا قرادإ

In rendering 15 acronyms to their established equivalents in Arabic, GPT successfully maintained the legal and formal features of the acronyms to the target audience. For instance, the acronyms ASAP, GPS, and FDA were translated to their standard equivalent in Arabic as a المولال على المولال المولال

GPT used the "Cultural Substitution" strategy in rendering seven acronyms, mainly IPO and ME, as. عرش ال بطل المبيبط بالتناكال By using terms that the audience is more familiar with within their own linguistic and cultural context; this method improves comprehension and relevance. The exact meaning or connotations of the original term may be slightly modified, yet cultural substitution increases accessibility and understanding.

GPT used the "Unpacking + Omission" strategy only once to render the acronym COO into Arabic. This strategy delivers the intended meaning to the audience while removing parts of the acronym as. الرياد GPT guarantees that the audience grasps the role's primary function without using the word "operating," which may be unneeded when conveying the main idea in Arabic. This strategy focuses on the most significant component of the acronym, making the translation easier to comprehend to the target audience. It improves understanding by streamlining the term while minimizing the potential confusion resulting from a direct, literal translation of the entire acronym. This method is especially effective at ensuring that the translated term is concise, easy to understand, and fits seamlessly into the Arabic-speaking audience's linguistic and cultural contexts.

GPT used the "Transliteration" strategy for transforming the acronym "HIPAA" into Arabic as البيء. It maintains the sounds of the ST expression in the TT while using the TL writing system. While this strategy saves space and keeps the text concise, it may sacrifice some level of audience comprehension. The "Transliteration" strategy may prevent complete comprehension unless the audience is familiar with the original acronym.

A mistranslation occurred when GPT translated "TSA" into Arabic as والمالية المالية المالية المالية المالية للمالية المالية للمالية المالية ا

Stuatogy	Evaguanav			Examples
Strategy	Frequency	No.	ST	TT
Translation Alone /	4	1	ATF	غبتلاو لوحكا ةحفاكم ققرف تارجفتمال قيران المادوة عندار المادوة المادوة عندال المادوة
Unpacking				تارجفتملاو ةيرانلا ةحلسالاو
		2	ER	ئر اوطلا ةروتاف
Cultural Substitution	5	3	ADA	ماعل يعدمل دعاسم
		4	ME	يعرشلا بيبطلا
Translation +	12	5	MIT	اي جولون كتلل ستسوشتاس ام ده عم
borrowing				MIT"
		6	ICE	ICE. كرام جلاو ةرجملا ةلاكو
Explicitation +	1	7	DUI	DUI لوحكلا ريثأت تحت قدايقلا
Borrowing				
Unpacking +	1	8	BA,	ةاروتكدلاو سويرولاكب
Omission			PhD	
Explicitation	1	9	DNA	يوونلا ضمحلا
Cultural	4	10	IRS	يوونلا ضمحلا IRS بئارضلا ةرئاد
Substitution +				
Borrowing				
Mistranslation	2	11	TSA	ة حايسل انما قرادإ

Table 6. Translating English Acronyms by GEM

Translation Alone / Unpacking" to translate four acronyms into Arabic, including "ATF" and "ER." The acronyms were directly translated into Arabic and broken down into more descriptive terms to improve comprehension. For instance, "ATF," was translated as تارجفتها الوقى المنافعة عند المنافعة المنافعة عند المنافعة ال

GEM's translations demonstrate the strategy of "Cultural Substitution" in five instances, such as the translation of the acronym "ADA" into Arabic as الله على الله على الله على "This strategy entails replacing the original term with a culturally equivalent term in the TL, ensuring that the translation is linguistically correct, culturally relevant, and understandable to the intended audience. Using cultural substitution, GEM effectively adapts the translation to the target audience's cultural and linguistic norms, improving comprehension and ensuring the translated text remains culturally relevant. This strategy enables GEM to deliver translations that are not only accurate but also culturally sensitive, resulting in improved communication and engagement with the Arabic-speaking audience.

GEM primarily used the "Translation + Borrowing" strategy to translate 12 acronyms, including "ICE" and "ATF," putting both the translated term and the original acronym in parentheses to avoid potential mistranslations and help the target audience become familiar with foreign expressions. While this approach ensures accuracy and cultural sensitivity, it may result in longer text on the screen, potentially causing clutter once the meaning has been adequately conveyed through translation. Despite this limitation, the strategy effectively balances accuracy, clarity, and cultural sensitivity, thereby increasing the effectiveness of the translated content. GEM used the explicitation + borrowing strategy in translating the acronym DUI into Arabic as "DUI لوحكال رىڭات تحت قداى قال." This strategy explicitly specifies the type of influence involved (alcohol), giving the audience more context and clarity. Second, by putting the original acronym in parentheses, GEM ensures that the audience recognizes and becomes familiar with it, avoiding any potential confusion or mistranslation. This strategy enhances the understanding while exposing the audience to foreign terms and acronyms, resulting in clearer and more accurate communication.

Additionally, GEM used the "Cultural Substitution + Borrowing" strategy to translate four acronyms, including بئارض المقرعاد IRS." This approach involves substituting the original term with a culturally equivalent term in the TL, such as بئارض المقرعاد," while also including the original acronym in parentheses. By doing so, GEM ensures that the translation is culturally relevant and understandable to the audience

while also introducing them to the foreign acronym for ease of recognition. This strategy improves comprehension and audience engagement by matching the translation to the cultural context of the target audience while retaining the original term for reference and recognition.

The "Unpacking + Omission" strategy was used to translate the acronyms "BA" and "PhD" into Arabic as قاروتكدل and تاروتكدل. This method entails unpacking the acronyms into their full or more descriptive forms while removing any parts that may be redundant or less important for understanding in the TL. In this case, the full forms of "BA" and "PhD" were used to convey the educational qualifications they represent, but the specific fields or disciplines associated with these degrees were left out. By simplifying the translations in this way, GEM ensures clarity and accessibility for the audience, allowing them to understand the essential meaning conveyed by the acronyms without unnecessary complexity or detail.

GEM used "Explicitation" to translate the acronym "DNA" into Arabic as المحرون المناه "This method entails expanding the acronym into its full and descriptive form to ensure the audience's clarity and understanding. This strategy is especially useful for technical or specialized terms such as DNA, where providing the full term improves comprehension, particularly for those unfamiliar with the abbreviation.

The thorough investigation exposes the subtle differences in translation approaches and their corresponding frequency in the Arabic translation of English legal acronyms. Moreover, it clarifies an important observation: Three of the acronyms are mistranslated by GT. Remarkably, GPT utilizes the "Translation Alone Unpacking" more

frequently than any other service 50 %, with Netflix and GT closely behind. Crucially, the analysis highlights the various approaches that were used: some acronyms can be translated using just one strategy, while others need to be translated using up to four different strategies. This sheds light on the complexities and subtleties of the translation process, highlighting the necessity of thorough thought and assessment to produce accurate and efficient translations.

#### V. Conclusion

This study investigated the strategies used in translating English legal acronyms from four English series into Arabic by four services, mainly Netflix, GT, GPT 4, and GEM. The researchers provided a quantitative and qualitative analysis of the strategies and detected any mistranslations along with their percentages.

The results indicate that Netflix takes into account the target audience and considers their viewing experience by prioritizing the "Cultural Substitution" strategy. Employing cultural substitution brings the AV content closer, makes it more relatable, and avoids any mistranslations that might break down the comprehension. GPT primarily utilized "Translation Alone/Unpacking" the most. This demonstrates their preference for directly translating the legal acronyms without omissions or additions. As for GT, the analysis revealed that it opted for the borrowing alone strategy most frequently. Borrowing the legal acronyms as they are to the target audience without unpacking the meaning or explanation would hinder the target audience's understanding when dealing with acronyms, particularly the specialized acronyms as legal. Utilizing the borrowing alone strategy might indicate Google's deficiency in recognizing the legal. Consequently, it rendered the acronyms as they are to the target audience. Hence, this borrowing alone strategy is due to its deficiency in understanding and decoding the acronym. The results showed that GT has a higher incidence of mistranslations than the other services investigated. GEM's translation is characterized by its efforts to explain the acronyms and prioritize explicitation over time and space limitations. This finding is supported by the strategies that GEM employed. GEM utilized the translation + borrowing strategy to render a good number of cases. This strategy

guarantees the target audience's understanding but does not abide by the spotting limitations.

Translating legal language between two different legal systems and cultures is complicated; however, it becomes more complicated when rendering legal acronyms. Therefore, improving the precision and efficacy of translating legal acronyms from English into Arabic is required by adopting different translation approaches incorporating both "Translation Alone" and "Cultural Substitution." By applying these strategies, acronyms will be easily understood by the intended audience and more culturally related. Furthermore, to enhance the quality of the translations, it is advisable to involve legal experts in the process to offer crucial insights that would upgrade the subtleties.

Adopting a comprehensive translation approach for legal acronyms carries valuable consequences for communicating and understanding legal acronyms in Arabic-speaking countries. These strategies can lessen misunderstandings and improve the clarity of legal proceedings by improving the accessibility and understandability of legal documents. Additionally, it emphasizes how crucial cultural sensitivity is to legal translations, promoting improved intercultural communication and collaboration. Arabic-speaking populations may benefit from improved legal practices and a rise in confidence in the legal system as a result.

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