Evaluating MateCat Translation of Performative Verbs in Legal Texts Into Arabic: The UN Charter as a Corpus

تقييم ترجمة مَيْت كات للأفعال الإنجازية في النصوص القانونية: دراسة تحليلية لنماذج من ميثاق الأمم المتحدة

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Abstract:

Many studies have highlighted the possibilities and limitations of using translation technology tools in the professional context. An ever-increasing body of literature also explored the use of these technologies to translate specialized texts, raising many issues, particularly the disparities between the human and automated translation of specialized discourse. To further investigate this problem, this study discusses the quality of Machine Translation of legal texts. It assesses MateCat's output of performative acts within legal texts from English to Arabic. Furthermore, it highlights the importance of using Translation Technology to work on specialized texts and how these tools help maintain consistency. For the sake of this paper, the researchers adopted the UN Charter and its official translation as a corpus, comparing it with the 'MateCat' output. Results of data analysis revealed that the MateCat translation tool can handle complex performative structures effectively and produces translations with appropriate context. However, the nature of legal text still necessitates human intervention, whether light or deep post-editing, regardless of the tool used in the translation process.

Keywords: Machine Translation; MateCat; Speech Acts; Performatives; Legal Text; UN Charter.

ملخص:

تسعى هذه الدراسة إلى تقييم مخرجات " مَيْت كات" الناتجة عن ترجمة الأفعال الإنجازية ضمن النصوص القانونية من اللغة الإنجليزية العربية، باعتبارها نصوصاً متخصصة ذات طبيعة إنجازية. كما تتعرض أيضا إلى التحديات التي يواجهها المترجم عند الاستعانة بها كأداة مساعدة للترجمة. وقد اعتمد الباحثان على المنهج الوصفي التحليلي مع تبنى ميثاق الأمم المتحدة وترجمته الرسمية مدونة للدراسة، بغية المقارنة بين ترجمة " مَيْت كات" والترجمة البشرية. ولعل أهم النتائج المتوصل إليها من الدراسة أن أداة "مَيْت كات" المعززة بنظام للترجمة الآلية، قادرة على ترجمة النصوص المتخصصة المتضمنة تراكيب نحوية معقدة كالأفعال الإنجازية لتمكنها من توليد سياقات مناسبة ضمن النص القانوني، بالرغم من وجود بعض الهفوات والمزالق. وعلى الرغم من ذلك لايمكن الجزم بانعدام الحاجة إلى تدخل المترجم البشري نظراً لطبيعة النص القانوني سواء أكان ذلك من خلال التحرير البعدي الجزئي أو الإجمالي.

كلمات مفتاحية: الترجمة الآلية، مَيْت كات، أفعال الخطاب، الأفعال الإنجازية، النص القانوني، ميثاق الأمم المتحدة.

1. Introduction

Machine translation has recently been integrated as a translation aid and applied to different types of texts, such as medical, literary, Etc. This technology has become increasingly popular as an efficient tool to streamline the translation process, and translators find it more effective than doing the task from scratch. 'MateCat,' which stands for (Machine Translation Enhanced Computer Assisted Translation), is one of these tools that has gained ground among professionals. It has proved successful in conveying the correct meaning and ideas when translating specialized texts.

Considering the nature of legal texts, precision and clarity are paramount. Any deviation in meaning or mistranslation may create significant difficulties in transferring the right message. In addition, these texts will be more challenging when they include performatives, which carry out legal effects and consequences. Translators encounter significant challenges in maintaining accuracy and high-quality translation within a time limit when translating such text types. Therefore, they recourse to CAT and MT tools to assist them in translation and increase their productivity.

Although research on the human translation of legal documents is longstanding, incorporating tools such as MateCat to help translate legal texts has yet to receive much attention. Therefore, evaluating its ability to translate performative acts included in legal texts is a research problem that requires more attention. There is a considerable body of research on the pivotal role of machine translation, the challenges caused by speech acts' content in translation, and the significant role of performative verbs in legal texts. Thus, we built on some of the existing literature to evaluate the output of MateCat as an online translation program in translating performative verbs from English to Arabic, using the parallel corpus of the UN Charter as a case study. Our findings might raise awareness among professional translators of the effectiveness of integrating MateCat in translating specialized texts, particularly legal ones.

To address this research problem, our starting hypothesis is that performative acts in legal documents present a more significant challenge for translators using MateCat due to the specific linguistic structures that may lack direct equivalents in the target language.

To prove or refute this assumption, researchers will evaluate and compare the translation of legal performative acts that may pose a challenge to MateCat as a machine translation tool. Since the study is limited to translating legal text with an application on the UN Charter, the results may not be generalized to all types of legal texts and other text types. The evaluation process focused on the performance of MateCat as MT in translating performative acts without translation memory, excluding other speech acts in legal text.

In our endeavour to study this problem, we divided our paper into two sections. The first provides insights for understanding the nature and characteristics of legal texts and performative acts in Austin's theory. The second section covers the CAT Tool's essence, significance, and core features. The practical section is devoted to evaluating the output of machine translation of performative verbs included in The UN Charter from English to Arabic and comparing it with the original translation. An analysis of the errors contained therein shall follow to develop a set of recommendations in the conclusion of this study.

2. Methodology

To achieve the purpose of this study, discourse analysis is utilized as a qualitative approach. The application of this analysis is intended to evaluate the ability of MateCat to translate ten legal performative speech acts from English to Arabic found in the UN Charter published in 1945 with its official translation. Since it concerns legal translation, the UN Charter's official translation, available on the UN website at https://www.un.org/ar/about-us/un-charter/full-text was used. The collected data were translated and classified according to J. Austin's classification of performative acts. MateCat's translation output is afterwards compared to the original human translation texts based on specific criteria.

3. Research Questions

The study seeks to address the following questions:

RQ1. What challenges do translators encounter when using MateCat as a computer-assisted translation tool in translating legal performative verbs? Moreover, how does the tool recognize these verbs?

RQ2. To what extent would translators rely on MateCat in translating legal texts? Is it effective in conveying the intended meaning, or does it need further human post-editing?

RQ3. What kind of assistance can MateCat provide to legal translators?

4. An Overview of 'MateCat'

Machine Translation (MT) refers to the use of software to automatically translate text or speech from one language into another. The process is fully automated, which distinguishes it from related forms, such as Machine-Aided Human Translation (MAHT), Human-Aided Machine Translation (HAMT), and Computer-Aided Translation (CAT) (Liu et al., 2015). This concept of Machine Translation first appeared in 1949, during the Second World War, when Warren Weaver submitted a project to bring the idea to life. Machine Translation is defined by Hutchins and Somers (1992) as "computerized systems responsible for the production of translations from one natural language to another, with or without human assistance." The researchers considered the automated translation process the core of machine translation.

As stated above, this study shall evaluate a recent CAT tool system integrating machine translation, namely "MateCat", which Federrico M. (2014) considered the best available open-source platform. T this end, we will first introduce the tool, its features, and its components, and then discuss the challenges that its integration raises, mainly when used to render legal texts marked by the presence of a performative force into Arabic, and translating legal content is both linguistically and legally challenging, as noted by Cao.(2007: 5)

4.1 What is MateCat?

Machine Translation and Computer-Assisted Translation tool 'MateCat' is a software developed by FBK Trento, the University of Edinburgh, the Université du Maine, and the language provider Translated Srl. It is used by companies, translators, managers of translation projects, and enterprises to facilitate their workflow and improve their performance, thereby increasing their productivity. 'MateCat' first appeared in 2011 and was later developed and launched in 2014. It is a web-based, open-source, computer-assisted translation tool that integrates translation memory, databases, concordancers, and machine translation. It can translate texts from different domains and manage several document formats with text editors (Federico et al., 2014). In this tool, using Machine Translation engine suggestions to complement Translation Memory matches has been proven to increase translator productivity (Federico et al., 2012; Green et al., 2013; Läubli et al., 2013).

4.2 Building a Project: How to Use Matecat?

The strategy used in this tool depends on Moses-based Server, an open-source statistical machine translation system that uses a phrase-based approach to translate texts. This server enables MateCat to customize specific domains such as legal, medical, etc., which can be trained on its terminology to produce more accurate translations. The translation process begins by creating a project in which you upload documents and specify the direction of the translation. Following an analysis of the document's content, this phase provides a statistical analysis of the words to be translated. It stands out as a free tool because it allows one to work individually or as a team. If the translated document is long, it can be divided into files assigned to different translators or team members or even translated at different times. Another feature is its ability to transfer documents to another device through TMX files. The XLIFF documents can be translated offline using SDL Trados or OmegaT, for example, breaking down the content of the original texts into smaller segments that can be translated and stored in memory to use as a fuzzy match for future translation (Matecat Support Team, 2014). https://guides.matecat.com/translating-offline.

Fig.1. MateCat: Building Projects
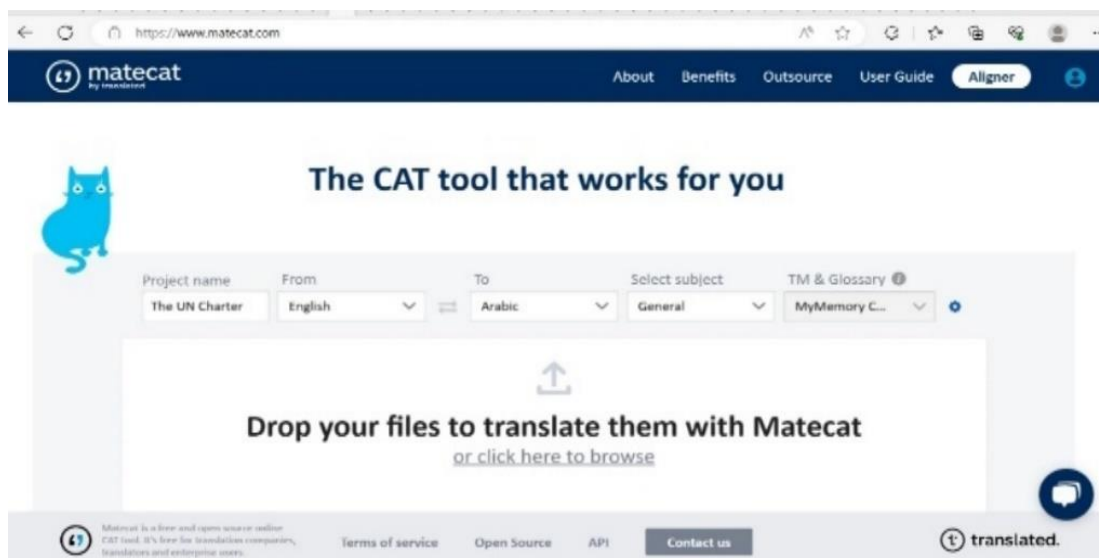
In a study conducted at the University of Edinburgh in 2014, researchers considered MateCat the best open-source platform that positively affects the human post-editing process. Another monumental idea was conceived by Nicola Bertoldi et al. (2013), who fully integrated MateCat to translate excerpts derived from a user manual for the software, which pertains to the legal domain. They afterward measured the actual impact and productivity of cache-based online adaptation for MT. In conclusion, the study confirmed that cache-based transformation can be used to develop the ability and increase the quality of automatic machine translation (MT) suggestions. It also showed a correlation between the success of adapting the cache-based system and the reputation rate of the texts that need to be translated.

In a recent study, R. Bououden and S. Kohil (2022) compared the effectiveness of MateCat and Google Translate in translating scientific text from English to Arabic. The main focus was introducing MateCat as a Machine Translation Enhanced Computer Assisted Translation program and how it works. The study used a descriptive approach to compare the performance of MatCat and Google Translate. The research addressed various issues in machine translation, such as text format, punctuation, idea structure, spelling, vocabulary, and translation quality. The analysis showed that MT-enhanced MateCat had better translation quality than stand-alone Google Translate.

5. Legal Language and Speech Acts

Legal language is explicitly used for lawful purposes that may take time for the general public to comprehend. This means that many technical terminologies exist in this field. For example, the terms found in legislative texts differ from those of contracts. Thus, according to Heikki Mattila (2006), the terms used depend on the branch of law they relate to. Moreover, the degree to which different countries and periods possess certain characteristic features also varies, which may be distinguished from the ordinary language.

Thereupon, translators should have a deep understanding of the law language since it integrates performative features into its nature, which adds to the difficulties of understanding the subject matter of the source text.

As Killmann (2014) claimed, we must acknowledge the significance of Machine Translation systems, particularly in transferring meaning from one language to another. According to him, legal texts can be classified as one of the most complex and specialized texts that may include a pragmatic sense that needs more concentration. Therefore, the diversity of legal texts and their different features may create a significant challenge to Machine Translation that needs to be addressed to improve accuracy and effectiveness. Within these types, other challenges affect the translation process, whether human or automatic. These are identified by Matthiesn (2017: 44-6) as the syntactic complexity, such as sentence style, structure, and number of clause elements, as well as intricate modifiers. Other constraints include dealing with pragmatic contexts and referential ambiguity, such as implicature and speech acts, particularly performative verbs, and the diversity of phraseology in this type of text.

In the context of legal texts, recognizing the existence of performative verbs is essential. This is because legal rights and obligations are often created or modified through these acts, such as contracts, agreements, and legal obligations. Because translating legal content is the most intriguing and challenging, the variations involved, both linguistic and legal, must be understood to achieve accurate task performance (Cao, 2007:5).

Cao (2007:6) assumes that "legal translation involves law, so such translation conveys not only linguistic issues but also legal impact and consequence." This means that legal translators must prioritize the source text's meaning and intent while ensuring the translation is legally valid and enforceable in the target country. In addition to that, they must also be aware of the consequences of errors or mistranslations in legal texts. Therefore, Cao considers translating legal texts a practice that overlaps with legal, language, and translation theories. Thus, it is a must for legal translators to have a good background in the nature of law and legal language to ensure that texts are translated accurately. Translators who do not understand legal systems, principles, and procedures may struggle to deliver the meaning accurately.

One of the features of legal texts that can be considered a particular aspect is performative verbs, as they are used to express actions through language. Their translation needs a thorough understanding of the system and the language being translated. Based on the above discussion, the researchers assume that using the MateCat tool requires re-evaluating the output, mainly when translating legal performative verbs because of pragmatic meaning, which has nothing to do with applying post-editing. This assumption will be confirmed or refuted throughout this study to assess the performance of the MT software evaluated in this study.

Based on the above, it is evident that "One of the most spectacular functions of legal language is achieving justice using language" (Heikki, Mattila, 2006: 31). This means that the primary purpose of legal language is to bring about justice, which can be achieved through speech acts characterized by their legal effects. This remarkable function allows for ease in communicating legal meanings, ideas, and concepts. Ultimately, this helps to ensure fairness and equality in the legal system.

With reference to speech acts theory, Heikki and Mattila (2006) state that human language serves as a means of communication to transmit people's behaviors and ideas and as a medium through which actions are performed.

From the standpoint of legal order, speech acts have essential functions, such as ensuring justice, protecting individual rights, and promoting social stability. At the same time, the language of the law constitutes the means to communicate speech acts. Furthermore, in a legal context, language is used to create legal actions, such as creating a contract, making a will, or passing a law. It is highly specialized and often used to create precise legal meanings specific to particular contexts. For example, legal language may create a legal obligation, such as a contract between two parties. Therefore, when utilizing MT in translating legal text, it is essential to consider the performative force of the source text. Legal translation requires not only conveying the explicit meaning of the words but also capturing their intended legal effects and implications to avoid misinterpretation and legal consequences. Thus, to ensure the accuracy of the target text, it might be necessary to enlist the help of legal translators alongside the use of MT.

6. Speech Acts and Performative Force

The notion of pragmatics is based on a set of concepts, principles, and theories, the most prominent of which is the speech act theory. This theory attempts to analyze the underlying or implicit meaning of words and then structure them as manipulated by participants in communication. A literature review on speech-act verbs shows that most contributions discussed speech-act translation in different fields. However, the concept of performative acts and how to convey their meaning within legal texts need to be discussed more from a translation point of view. This concept suggests that human communication is based on the

performance of utterances, such as making a suggestion, warning, apologizing, promising, asking a question, commanding, or requesting.

The original theory of performative speech acts was based on William J. L. lectures from American philosopher J. Austin at Harvard University in 1955. Published in 1962, they were later translated into different languages. In this collection, William thoroughly explains performative acts, which his student J. Searle (1968) further developed.

According to J. Austin (1962), words are not only used to say things but also to do things; in this case, we consider the performative force of these utterances.

The idea of performatives as speaking acts, is, then, applied in various related ways and constructs, just as the term imperative or command is derived from the common verb perform with the term act: it indicates that the issuing of an utterance is acting. In other words, the doing of the word is the doing of the action (Ibid, 1962:6). In a similar spirit to that of Austin, Searle (1968; 407) concluded that meaning "can be explained in terms of the rules governing their use in performing various speech acts, e.g., asserting, commanding, exclaiming, promising, questioning, requesting, and warning.". He also states that some elocutionary acts work as illocutionary acts; their elocutionary meaning determines their illocutionary force. Performative verbs are considered the names of actions that are performed.

In the same vein, Malmkiaer (2002) describes performative acts as tasks carried out entirely or partially by expressing something, such as making a promise. On the other hand, he considers that non-performative verbs , such as 'walk' and 'address' represent actions that are not dependent on speech.

Similarly, Richard Nodquist (2020) points out that speech acts reflect purpose; hence, a performative verb, also known as a speech verb or performative utterance, is an action that expresses intent or invitation. It can be a promise, an apology, a prediction, a forbid, a pledge, a request, a warning, a recommendation, a prohibition, a demand, or a proclaimed verb.

Leech (2014;75) considers interpersonal meaning a primary concern of pragmatics. This view originates in Arabic rhetoric. Arab rhetoricians have consistently supported this idea and classified interpersonal function into two subsystems, i.e., constative and performative utterances. The latter is considered that although the second system cannot be judged as true or false; however, it refers to acts requested to be done, fulfilled, or about to be fulfilled, as pointed out by Qasim and Dib (2002:282).

In this system, we distinguish requestive performatives from non-requestive performative sentences. Requestive performative stands for those utterances that require the fulfillment of an action that is not available at the time of the requirement. This system includes several utterance, such as interrogatives, negations, imperatives, prohibition, warnings, etc (Tammam, 1994:244). As

Muhammed Haje Al Saraf argues (2010), there are similarities between what J. Austin and his student Searle presented and what the Arabs presented in the past, particularly the issues of constative and performatives that branch from Semantics. This aligns with Messaoud Sahraoui's (2010:1) opinion, who claims that speech verbs are included in semantics, which means tracking the characteristics of speech structure in the statement.

Along the same lines, Yusaf Tghazawi (2010:125) indicates that Arab scholars who are interested in studying speech acts distinguished between sentences in terms of their intensity and adjustment, as well as what results from them in different meaning, corresponding to the performative force in the contemporary Western concept. Thus, the performing force is the compound linguistic verb of the sentence.

Performative acts (also known as illocutionary acts) were classified by J. Austin (1962: 151-152) into five main categories:

• Verdictives: These acts, such as an estimate, reckoning, or assessment, are typically performed by a jury or arbitrator.

• Exercitives: These actions are used to express judgment or opinion or the authority to exercise certain powers, such as to declare, announce, excommunicate, bless, fire, appoint, approve, suggest, request, command, beg, nationalize, accept, vote, order, urge, advise, warn.

• Commissives, which comprise verbs like commit, refute, treat, offer, and guarantee conduct, are intended to bind speakers to maintain a particular behavior typified by promising or undertaking.

• Behabitives: This category relates to social behavior, and it includes actions like apologizing, thanking, expressing sympathy, congratulating, commending, challenging, criticizing, complaining, and applauding.

• Assertives: In this category, the speaker's points of view are expressed through illocutionary behaviors, such as assurance, admission, conclusion, promotion, boasting, acknowledgment, swearing, and suggestion.

This distinction is based on several principles that enable speakers to distinguish between utterances and their force, including the context in which utterance can occur and the speaker's intention. In summary, Austin's theory of performative language suggests that speakers can convey meaning implicitly through indirect language, making it a more powerful tool than explicit language.

7. Data Collection and Analysis

As mentioned earlier, data for the current study were drawn from a legal corpus of the UN Charter available on the organization's website with its original translation. It includes 111 Articles organized into 19 chapters, which outline the purpose and principles of the organization. In this Charter, several performative verbs serve as mandates for guiding the organization to achieve its goals. However,

the meaning of some of these acts may need more clarity and could be challenging to interpret, leading to discrepancies in their understanding and application. This section analyses how performative acts' meanings are translated into Arabic using MateCat as a free machine translation tool, then compares this tool's output to human translation. Although the Charter contains several performative acts, the main focus was on only 10 of them. The identification of these acts was centered around two criteria: the speaker's intent and contextual appropriateness because these are uttered by an authorized organization based on J. Austin's classification.

Within The UN Charter, the distribution of the various performative acts for the chosen utterances could be represented as follows:

Table 1: Different Classifications of Performative Acts

NO.	The Verb	Types of Performative Act	The ST Meaning
1.	To maintain	Commissive	Promise
2.	Undertake	Commissives	Comply with commitment and promise
3.	Shall promote	Compressive	Signaling commitment
4.	Agree to accept	Commissive	Commitment
5.	Shall refrain	Commissive	Commitment
6.	May recommend	Verdicative	Authoritative
7.	Shall determine	Verdicative	Authoritative and declaration
8.	Remaine	Verdicative	Declaration
9.	May take	Behaibitives	Acknowledging
10	Determined to save	Commissive	Decision or commitment

Table (1) displays various categories of performative acts along with their intended meanings, all of which are included in the excerpts analyzed for this study. These categories include behaibitives, verdicatives, and commissives, each conveying a distinct meaning explicitly expressed with an intention and the authority to do so.

7.1 Analysis of Categories of Performative Acts Included in the UN Charter

In this section, data analysis comprises three tables categorized into source text, human translation, and MateCat translation. Each table represents various types of performative acts, with the second table focusing on commissive acts. The third and fourth tables showcase data related to veridicatives and behavioral performative acts, respectively.

Table 2: MateCate Translation of *Comissive Performative Acts*

NO.	The Source text (ST)	Human Translation (HT)	MateCat Translation (MT)
1.	**Promise : Article 1** The Purposes of the United Nations are: 1. *To maintain international peace and security*, and to that end: to take effective collective measures for the prevention and removal of threats to the peace, and for the suppression of acts of aggression or other breaches of the peace, and to bring about by peaceful means…etc	مقاصد الأمم المتحدة 1.حفظ السلم والأمن الدولي، وتحقيقاً لهذه الغاية تتخذ الهيئة التدابير المشتركة الفعّالة لمنع الأسباب التي تهدد السلم ولإزالتها، وتقمع أعمال العدوان وغيرها من وجوه الإخلال بالسلم، وتتذرّع بالوسائل السلمية…	تتمثل مقاصد الأمم المتحدة فيما يلي 1.الحفاظ على السلام والأمن الدولي، وتحقيقًا لهذه الغاية تقوم الأمم المتحدة باتخاذ التدابير المشتركة الفعالة لمنع الأسباب التي تهدد السلام ومنع أعمال العدوان وغيرها من وجوه الإخلال بالسلام، وتحقيق ذلك بالوسائل السلمية …
2.	**Shall promote: Article 55, P11** The United *Nations shall promote* higher standards of living, full employment, and conditions of economic and social progress and development; solutions of international economic, social…etc.	*تعمل الأمم المتحده على:تحقيق* مستوي أعلى للمعيشة وتوفير أسباب الاستخدام المتصل لكل فرد والنهوض بعوامل التطور والتقدم الأقتصادي والأجتماعي ، تيسير الحلول للمشاكل الدوليه الاقتصادية والاجتماعية	*تعمل الأمم المتحدة على:تحقيق* مستوى أعلى للمعيشة وتوفير أسباب الاستخدام المتصل لكل فرد والنهوض بعوامل التطور والتقدم الاقتصادي والاجتماعي؛…
3.	**Undertake: Article 94, P19** 1. Each Member of the United Nations *undertakes* to comply with the decision of the International Court of Justice in any case to which it is a party.	*يتعهد كل عضو من أعضاء* "الأمم المتحدة" أن ينزل على حكم محكمة العدل الدولية في أية قضية يكون طرفاً فيها.	*يتعهد كل عضو في* الأمم المتحدة للامتثال لقرار المحكمة الدولية محكمة العدل في أي قضية تكون فيها*أيّة حفلة؟*

Table (2) presents MateCat's translation of the commissive performative acts. This table also compares the original translation of these acts as a reference translation. The three Acts were '*to determine,* ' *shall promote,*' and *undertake"*.Overall, comparing the translation of MateCat to the reference shows a striking similitude with the human translation; the intended meaning of the commissive acts was successfully rendered. For instance, the commissive act '*to maintain peace and security,*' as translated by MateCat to ' الحفاظ على السلام والأمن الدولي,' differs in meaning from the human translation 'حفظ السلم والأمن الدولي,' in that it can be considered a general concept that refers to broader goals. At the same time, the expression ' حفظ السلم والأمن الدولي ' focuses on the specific procedures taken by the International Community to achieve their goals. In both translations, the United Nations is pledging to maintain international peace and security and will take action in the case of the treaty.

While in Article 55, the performative act "*shall promote*" is not only described as promoting a higher standard of living but also acting towards achieving and improving the quality of life. In this case, the United Nations is committed to taking steps forward to acquire and improve the standard of living. Comparing MateCat's output to human translation and the original phrase "Shall promote" shows that MateCat rendered the exact meaning, as achieving a higher standard of living is the primary goal concerning the efforts of the United Nations members to maintain the use of resources.

"*تعمل الأمم المتحدة على:(أ) تحقيق مستوى* أعلى للمعيشة وتوفير أسباب الاستخدام المتصل لكل فرد '...

In general, MateCat translation accurately conveys the intended meaning of the source text and captures the essence of the UN's speech, which consents to achieve a higher standard of living.

In the third extract, the translation of the compressive act "*undertake*" as 'يتعهد كل عضو في الأمم المتحدة للامتثال لقرار المحكمة الدولية محكمة العدل في أي قضية' refers to the commitment of every member of the UN to comply with the decisions of the International Court of Justice to achieve their goals, which is also highlighted in the human translation. However, what makes the rest of the sentence unclear is the mistranslation of the word 'party' as '-*أّية حفلة فيها*أي قضية تكون ,' which does not serve the context and consequently affects the meaning of the whole statement. Although both translations differ in terms of the decision's emphasis, the emphasis of MateCat translation is on compliance with the ICJ decisions in cases involving international relations. Conversely, in the human translation'. يتعهد كل عضو من أعضاء "الأمم المتحدة" أن ينزل على حكم محكمة العدل الدولية في أية قضية' the emphasis is on the implementation of the ICJ judgments when a member of the UN is a party to the case. Thus, the translation of the performative act is characterized by diversity in meaning in general, regardless of the structure of the sentence or mistranslation. Though MateCat's translation has a different system, in addition to

some misspellings from the original, it maintains the same sense. Consequently, it cannot be regarded as accurate as the reference translation.

Table (3): MateCat's Translation of the Verdicative and Behabitive Performative Acts

NO.	The Source text (ST)	Human Translation (HT)	MateCate Translation (MT)
4.	<u>**Authority: Article 39, P9**</u> The Security Council *shall determine* the existence of any *threat* to the peace, breach of the peace, or act of aggression. It shall <u>make recommendations</u> or *decide what measures shall be taken* in accordance with Articles 41 and 42 to maintain peace…etc.	يقرر مجلس الأمن ما إذا كان قد وقع *تهديد للسلم أو إخلال به* أو كان ما وقع عملاً من أعمال العدوان، <u>ويقدم في ذلك توصياته أو يقرر ما يجب اتخاذه</u> من التدابير طبقاً لأحكام المادتين 41 و42 لحفظ السلم...	"يقرر مجلس الأمن ما إذا *كان وقع تهديد للسلم أو اخلال به* أو كان ما وقع عملا من أعمال العدوان ويقدم توصياته أو يقرر ما يجب اتخاذه من التدابير طبقا لأحكام المادتين 41و 43 لحفظ السلم
5.	<u>**Declaration: Article 111, p21**</u> The present Charter, of which the Chinese, French, Russian, English, and Spanish texts are equally authentic, <u>shall remain deposited in</u> the archives of the Government of the United States of America. Duly certified copies <u>shall be transmitted</u> by that Government to the Governments of the other signatory states.	وضع هذا الميثاق بلغات خمس هي *الصينية والفرنسية والروسية والإنجليزية والأسبانية، وهي لغاته الرسمية على وجه السواء . ويظل الميثاق* <u>مودعاً في محفوظات حكومة الولايات المتحدة الأمريكية، وتبلغ</u> *هذه الحكومة حكومات الدول الأخرى الموقعة عليه صوراً معتمدة منه.ومصادقا لما تقدم وقع مندوبو حكومات "الأمم المتحدة" على هذا الميثاق.*	*يظل هذا الميثاق، الذي تتساوى* نصوصه الصينية والفرنسية والروسية والإنكليزية والإسبانية فـي الحجيـة، مودعـاً فـي محفوظـات حكومـة الولايـات المتحدة الأمريكية. <u>وتحيـل تلـك الحكومـة نسـخا</u> مصدقة منها حسب الأصول إلى حكومات الدول الموقعة الأخرى

6.	**Authoritative: Article 36, P8** 1. The Security _Council may,_ at any stage of a dispute of the nature referred to in Article 33 or of a situation of like nature,_____ _recommend_ appropriate procedures or methods of adjustment.	_لمجلس الأمن في أية_ مرحلة من مراحل نزاع من النوع المشار إليه في المادة 33 أو موقف شبيه _به أن_ يوصي بمـا يـراه ملائمـاً مـن الإجراءات وطرق التسوية...	1- يجوز لمجلس الأمن، في أي مرحلة مـن مراحـل نـزاع مـن النوع المشار إليه في المـادة 33 أو في حالة ذات طبيعة مماثلة، أن يوصـي بـإجراءات أو طـرق تسوية مناسبة...
7.	**Acknowledging: Article 42, P9** _Should the Security Council consider_ that measures provided for in Article 41 would be inadequate or have proved inadequate, _it may take such action_ by air, sea, or land forces as necessary to maintain or restore international peace and security.	_إذا رأى مجلـس الأمـن_ أن التـدابير المنصوص عليها في المـادة 41 لا تفي بالغرض أو ثبت أنها لم تف به، _جـاز لـه أن يتخـذ بطريـق القـوات الجويـة والبحريـة والبريـة مـن الأعمال ما يلزم_ لحفظ السلم والأمن الدولي أو لإعادته إلى نصابه.	_إذا رأى مجلس الأمن_ أن التدابير المنصوص عليها في المـادة 41 غيـر كافيـة أو ثبـت أنها غيـر كافيـة، جـاز لـه أن يتخـذ عـن طريق القوات الجوية أو البحرية أو البريـة مـا قـد يلـزم مـن إجراءات لصـون السلـم والأمـن الدوليين أو استعادتهما.

Table (3) above shows the translation of verdicative and behabitive acts in Articles 36, 39, 42, and 111. The first excerpt contains several verdicative speech acts in the form of authority and declaration by utilizing the modal verb '_shall_', which indicates the obligation and refers to what the Council expects to do. In comparison to the human translation provided by the UN, the MateCat translation of the two actions "_shall determine_" and "_shall make a recommendation_" as " يقرر ويقدم توصياته" and " مجلس الأمن" is satisfactory. Both translations imply that the Security Council has the power to assess and come to conclusions regarding the issues of threat or make recommendations. To better achieve the writer's objectives, the second excerpt provides the translation of verdicative performative acts mentioned in article 111, in which the phrase "shall remain" appears as:

"يظل هذا الميثاق، الذي تتسـاوى نصوصـه الصـينية والفرنسية والروسية والإنكليزيـة والإسبانية في الحجية، مودعاً في محفوظات حكومة الولايات المتحدة الأمريكية"

Although the performative act 'يظل ' preceded the sentence's subject, its meaning was delivered as stated in the original language. As for the human translation, the translator intended to introduce and postpone the entire phrase to

ensure that the message was effectively communicated as one unit ‘ ويظل الميثاق مودعاً’. This translation can be viewed as accurate because of the translator's ability to transfer the meaning of the ST proficiently. Similarly, MateCat translation of this act as‘يظل الميثاق مودعاً’ can be considered accurate too; the performative act " shall remain" was effectively translated in Arabic ‘ويظل الميثاق مودعاً’. However, this translation does not explicitly emphasize that languages are treated on the same footing. Instead, it only specifies the deposit location for the UN Charter.

All in All, the difference between these translations lies in emphasizing certain words. Human translation is more accurate in highlighting the equal importance and status of Chinese, French, Russian, English, and Spanish as the official languages in which the Charter is written. It also explicitly mentions where the Charter is deposited. On the other hand, although MateCat's translation highlights this, it does not explicitly emphasize the equal status of the five languages.

The third act is '*may recommend*' found in Article 36. The difference between the two translations of this performative lies in that the human translation of the source text ' may recomended' as ' " من مراحل نزاع من أية مرحلة في _لمجلس الأمن_ It. النوع المشار إليه في المادة 33 أو موقف شبيه به _أن يوصي_ بما يراه ملائماً من الإجراءات وطرق التسوية signifies that it is not mandatory to issue a recommendation. Security Council should make recommendations at any stage of a conflict covered by Article 33 or a comparable situation. It conveys the meaning of the original text in that it emphasizes the authority of the Security Council to make recommendations regarding any procedure taken as a settlement method during any conflicts.

On the other hand, in translation proposed by MateCat ' في أي ،_يجوز لمجلس الأمن_ مرحلة من مراحل نزاع من النوع المشار إليه في المادة 33 أو في حالة ذات طبيعة مماثلة، _أن يوصي_ بإجراءات أو طرق تسوية مناسبة'' the word "may" here indicates permission. It implies that the Security Council has the permission to recommend appropriate settlement procedures at any time during a conflict referred to in Article 33 or a similar situation if necessary. The strategy used is a word-for-word translation.

The fourth translation sample relates to 'behabitive acts' contained in Article 42, MateCat translation provided a decision on the actions that the United Nations Security Council can take. It conveys the same meaning as human translation. However, there are slight differences in words that can affect the interpretation. "إذا رأى مجلس الأمن أن التدابير المنصوص عليها في المادة 41 غير كافية أو ثبت أنها غير كافية، جاز له أن يتخذ عن طريق القوات الجوية . It means that it is permissible for the Security Council to take what is necessary or any action through any force, for example, the Air Force, if the procedures stipulated in Article 41 are insufficient or proven inadequate. One can say that the meaning of the performative act is conveyed using the common expression ''جاز له أن يتخذ", – which is equivalent to the exact phrase.

Table 4: Comparing the Effectiveness of MateCat Output of Commissive Acts

NO.	The original text (ST)	Human Translation (HT)	MateCate Translation (MT)
8.	**Commitment: Article 25, p 7** The Members of the United Nations *agree to accept* and carry out the decisions of the Security Council in accordance with the present Charter.	*يتعهد أعضاء "الأمم المتحدة" بقبول* وتنفيذها وفق هذا قرارات مجلس الأمن.	*يتعهد أعضاء الأمم المتحدة بقبول* قرارات مجلس الأمن وتنفيذها وفق هذا الميثاق.
9.	**Commitment: Article 2, P3** 4. All Members *shall refrain* in their international relations from the threat or use of force against the territorial integrity or political independence of any state or in any other manner inconsistent with the Purposes of the United Nations.	*ويمتنع أعضاء الهيئة* جميعاً في علاقاتهم **الدولية عن التهديد** باستعمال القوة أو استخدامها ضد سلامة الأراضي أو الاستقلال السياسي لأية دولة أو على أي وجه آخر لا يتفق ومقاصد "الأمم المتحدة.."	*يجب أن يمتنع أعضاء المنظمة جميعا* في علاقاتهم الدولية **عن التهديد** باستخدام القوة أو استخدامها ضد سلامة الأراضي أو الاستقلال السياسي لأية دولة، أو على أي وجه آخر لا يتفق مع مقاصد الأمم المتحدة.
10.	WE THE PEOPLES OF THE UNITED NATIONS *DETERMINED* *to save* succeeding generations from the scourge of war, which twice in our lifetime has brought untold sorrow to mankind……	نحن شعوب الأمم المتحدة *وقد آلينا على أنفسنا أن* ننقذ الأجيال المقبلة من ويلات الحرب التي في خلال جيل واحد جلبت على الإنسانية مرتين أحزانا يعجز عنها الوصف.	**"نحن شعوب الأمم المتحدة." حازم** لإنقاذ الأجيال القادمة من ويلات الحرب، التي تضاعفت مرتين في حياتنا جلبت الحزن الذي لا يوصف للبشرية، …

Table (4) includes the translation of commissive acts. In Article 25, the act performative is 'accept agree to,' but the force ascribed to the speech act is commitment. It seems that MateCat successfully delivers the meaning of the Source Text into Arabic, even though the phrase "يتعهد أعضاء "الأمم المتحدة" بقبول" is repeated in the reference translation and put between quotation marks.

In Article 2, the performative act 'shall refrain' is translated to Arabic with a slight difference in meaning. Comparing MateCat's output with human translation shows that the difference between the two translations lies in words used to refer to the organization and the body, as well as the use of the verb " يجب (should). This أن يمتنع أعضاء االمنظمة جميعا في علاقاتهم الدولية عن التهديد باستخدام القوة " indicates an obligation for the members to abstain or refrain from such behavior. On the other hand, ("يمتنع أعضاء الهيئة جميعاً في علاقاتهم الدولية عن التهديد باستعمال القوة." refrain) which is translated to 'يمتنع' conveys the same idea of refraining for such behavior. It is essential to note that there are slight differences between the two translations. However, the one generated by MateCat accurately conveys the original Article's intended meaning.

The last excerpt is taken from the preamble of the Charter. The translation provided by MateCat as

نحن شعوب الأمم المتحد ة حازم لإنقاذ الأجيال القادمة".

only partially conveys the intended meaning of the source text. In general, the phrase 'determined to save' is used to express a strong commitment and protect future generations " حازم" does not make sense compared to the human suggestion وقد آلينا على أنفسنا'. This translation suggests a sense of commitment and responsibility that the UN people have willingly assumed to save a succeeding generation. However, the word 'حازم' is one of the synonyms used in Arabic. Within this context, it does not convey the meaning; it is a literal translation of the source phrase.

8. Results

The first research question this study addresses is the challenges translators using MateCat may encounter when translating legal performative acts. In Tables 1, 2, and 3, we presented and analyzed the translation of four performative acts: commissive, dispositional, behavioral, and directive. The recognition of these acts by MateCat was good and confirms its ability to capture the structure and semantic relationships of these acts or phrases, which makes the translation of some Articles of the UN Charter seem natural and fluent. However, to convey the meaning, the output requires light post-editing to correct a few grammatical errors, such as spelling, incorrect word usage, and punctuation. Additionally, it is necessary to note that the consistency of the terminology was achieved.

All the technical terms are related consistently to the context, except for one word with an unrelated meaning and outside the context. One can say that MateCat performs well (Answer to Q2).

The third research question was about the kind of contribution provided by MateCat in translating specialized texts. One of these contributions is its ability to handle complex performative acts. It relies on linguistic models and logarithms to

accurately convey these unique structures and maintain their syntactic and semantic integrity.

In general, the results of the evaluation of MateCat vs. human translation show a correspondence between the performance of MateCat in translating legal performative acts and the original translation. However, it is often recognized that legal texts may be more complex or that other structures make it challenging to convey their meaning. Overall, whatever the tool used in the translation process, the nature of legal text requires human intervention, whether light or deep post-editing.

9. Conclusion

Based on the hypothesis that performative acts cause challenges to MateCat machine translation, particularly in translating legal text, the assumption is refuted or disproved after evaluating the translation of 10 different performative acts. Although there are specific issues with MateCat translation, one must recognize the advantages of this software since it handles the complex performative structure more effectively. Therefore, this enables the tool to produce good translations with appropriate context. Additionally, this technology can significantly enhance translators' productivity and save time, making it an attractive option for them to develop memory for their specialists and organize their workflow in related domains. Thus, by integrating translation memory, concordancers, and databases with machine translation, the tool's capability would be significantly enhanced, and its integration would make a difference. In general, because the input will be more significant in the future and the memory capacity will be bigger, MateCat challenges may be minimized.

In conclusion, although there may be specific challenges with the MateCat Machine Translation tool with performative acts in legal texts, MateCat demonstrates its effectiveness in handling complex performative structures and producing translations with appropriate context. Additionally, this technology offers advantages in enhancing translator productivity and saving time, making it an attractive option for translators to incorporate into their workflow.

10. References

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