

Neural Machine Translations of Thai Culturally Specific Items into English: Audiovisual Text Experimented

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Article information	Abstract
Article history: Received: 3 Apr 2025 Last revised: 10 Aug 2026 Accepted: 19 Aug 2026 Available online: 24 Aug 2026	<i>This study investigates the efficiency of three Neural Machine Translation (NMT) tools—Google Translate, Microsoft Bing, and Amazon Translate—in rendering culturally specific items (CSIs) at both lexical and sentential levels. Five CSIs, mae ya nang (แม่ย่านาง), lek lai (เหล็กไหล), ruesi (ฤๅษี), pha yan (ผ้ายันต์) and palat khik (ปลัดขิก), from a selected Thai commercial, were categorised by Katan’s ‘Triad of Culture’ framework. A synthesised typology based on Dickins’s conceptual grid was employed to analyse the translation procedures of each NMT service. The FAR model proposed by Pedersen is employed to assess the subtitle quality. The selected segment of an audiovisual text from a Thai auto insurance commercial was input into the NMT services to evaluate their ability to enhance translation efficiency and quality. The findings revealed that the technical cultural frame predominantly influenced the NMT services, resulting in the focus on linguistic transfer over interpretation. At the lexical level, the NMT tools employed an exoticising strategy, resulting in the translations that were primarily oriented towards the source culture and the source language. At the sentential level, the performance of NMT systems deteriorated, with several mistranslations identified, though omission errors were not present. The outputs also lacked fluency, necessitating post-editing. Despite literature suggesting improvements in NMT output quality, these NMT engines have yet to significantly impact professional translation for the Thai-English language pair. For low-resource languages such as Thai, the role of the human translator remains indispensable and cannot be fully replicated by current machine translation systems.</i>
Keywords: Machine translation Neural machine translation Culturally specific items Translation and culture Audiovisual translation	

INTRODUCTION

‘Pad Thai’ (ผัดไทย) has become the most popular Thai dish among international consumers. Its transliterated form into English is presented in menus, online recipes, TV shows, such as *This Morning* on ITV channel in the UK (ITVX, 2023), and established dictionaries including Merriam-Webster (n.d.-b) and Oxford Learners’ Dictionaries. It seems a consensus has been reached: this Thai dish should exist in the English language in its transcribed form. When its cultural foreignness is distinctly signalled, is there still a need for it to be translated? If we input ผัดไทย (*Pad Thai*), what will a software produce? When Google Translate was used, this fully automatic machine translation system produced ‘Pad Thai’. The output revealed that

the Thai word *Pad Thai* has been naturalized; it has been adapted to the pronunciation of the English language. What about other much less concrete cultural elements? How are they translated into English through a computer using software?

The focus of this study is the analysis of the translations of culturally specific items (CSIs) in a Thai commercial by machine translation (MT). MT is the translation performed by a computer, without human intervention in the process (Forcada, 2010). In this process, a software designed specifically for the translation task is used for the translation of a text written in the source language (SL) which produces another text in the target language (TL) (Bowker & Fisher, 2010; Forcada, 2010). The resulting TL translation is called raw translation (Forcada, 2010, p. 215). The raw translation may involve some human intervention during pre- or post-editing stage (Bowker & Fisher, 2010; Forcada, 2010). MT engines before the nineties were rule-based or knowledge-based (Forcada, 2010, p. 218). Morphological analysers, grammatical rules and dictionaries were programmed in these engines. Since the beginning of the nineties, MT programs have relied on corpora of bilingual texts by learning how to translate from them (Forcada, 2010). This translation machine paradigm is also called statistical MT (Forcada, 2017, p. 291).

The current landscape of machine translation encompasses three primary approaches, rule-based machine translation, corpus-based machine translation, and neural machine translation (NMT). NMT, which is based on artificial neural networks, is trained on huge corpora of pairs of source-language segments and their translations (Forcada, 2017, p. 292). Three NMT tools, Google Translate, Microsoft Bing and Amazon Translate, were chosen for the experiment in this study because they had been made easily and freely available and even accessible via mobile devices. All three applications also supported the Thai–English language pair unlike many other NMT services, such as DeepL (n.d.), that have historically supported fewer Asian languages than their competitors. Montes Sánchez (2025) compared the English translations of Spanish restaurant menus produced by Google Translate and DeepL, highlighting differences in translation techniques and in their impact on intelligibility and cultural adequacy. This focus is particularly relevant because Spanish has been one of the first seven European languages supported by DeepL since its launch in 2017 (Wyndham, 2021).

Google Translate has developed its own NMT practical system since 2016 (Montes Sánchez, 2025, p. 3) and can support 134 languages today (Google Cloud, n.d.). Also released in 2016 (Microsoft Translator, 2018), Microsoft Bing’s NMT model can currently support 136 languages (Microsoft, n.d.). Another NMT service for translating texts is Amazon Translate, which was introduced in 2017 (Walker, 2017), and can now support translation between 75 languages (Amazon Web Services, n.d.). As the challenges and limitations of MT have been extensively discussed, MT systems have been continuously reprogrammed in response to these critiques, resulting in the emergence of a new machine translation paradigm. Rather than breaking an input sentence into a set of words and phrases and mapping each to a word or phrase in the target language, neural networks consider the whole input sentence when generating the output sentence (Schoening, 2023). In other words, based on this assertion, NMT translates one whole sentence at a time, not phrase by phrase. Another assertion is that NMT engines

examine broader contexts to facilitate the selection of the most appropriate translation for the target language (Schoening, 2023). If this is the case, their impact on translator productivity when used as a starting point for a post-editing job will be significant.

This study aims to evaluate whether artificial neural networks can enhance the efficiency and quality of machine translation methods and their outputs. Although several studies have examined the translations of CSIs in the Thai–English language pair, few have focused specifically on machine translation. Existing work has primarily addressed CSIs in human translation. Roekmongkhonwit (2006) examined strategies used in translating Thai CSIs in a guidebook, while Pinmanee (2018) discussed strategies for translating CSIs related to Thai superstitions and beliefs. Masong and Chakorn (2023) investigated the translation of CSIs in two Thai literary texts into English, and O'Donnell (2024) explored the institutional translation of CSIs in community-based tourism e-brochures. In the area of AVT for this language pair, Winnarong (2025) examined the translation of Thai colour terms in English subtitles. Although numerous studies have investigated Google Translate, research specifically focusing on the Thai–English language pair remains limited. Tongpoon-Patanasorn and Griffith (2020), for example, evaluated Google Translate's efficiency and quality in translating academic excerpts, without addressing elements embedded in or bound by source culture(s). Wongseree's (2021) study examined the use of technology by human translators. Translators-in-training were asked to translate 27 Thai CSIs into English, and the findings showed that 8% of participants used Google Translate to help them complete the task, without making explicit the relationship between the MT raw outputs and the translation procedures they employed. By contrast, studies on Microsoft Bing (Almahasees, 2018) and Amazon Translate (Zhiyotova et al., 2020) do not delve into the Thai–English language pair. For these reasons, these three NMT services were selected for the experiment in this study. Evaluating their raw outputs at the lexical and sentential levels will help illuminate the translation capabilities of NMT for Thai–English CSIs.

LITERATURE REVIEW

Culturally specific items defined

In addressing how to translate specific aspects of culture, many scholars propose different terms. Beginning with Ivir in 1987 who offers translation procedures for the translation of 'unmatched elements of culture' (Ivir, 1987, p. 37), he elaborates on the existence of cultural gaps but does not provide a definition of the term. In 1988, Newmark proposes procedures for the translation of 'cultural words' and defines 'culture' as "the way of life and its manifestations that are peculiar to a community that uses a particular language as its means of expression" (Newmark, 1988, p. 94). In the beginning of the new century, Hervey and Higgins (2002, p. 21) provide the term 'culturally relevant features' to refer to features that are specific to the source language and the source culture. Other terms used are 'extralinguistic culture-bound reference' (ECR), which is defined by Pedersen (2008, p. 102) as an expression referring to an entity outside language which a person may not know, even if that person knows the language in question, and 'culture-bound terms' or 'culturemes' used

by Katan (2009b, p. 79) to mean “formalised, socially, and juridically embedded phenomena that exist in a particular form or function in only one of the two cultures being compared”. The term that has been widely adopted is ‘culturally specific items’ (CSIs) as proposed by Dickins (2012). Dickins (2012, p. 43) defines CSIs as words or phrases in a source language that are specific to that source culture and convey cultural meanings unique to that context.

All the terms and definitions point to the lack of asymmetry through the use of words such as ‘unmatched’ and ‘gap’, which is a central problem in translation in general. The kind of asymmetry in discussion is caused by the elements embedded in or bound by ‘culture’. This study adopts the term ‘culturally specific items’ (CSIs) to denote cultural elements. Dickins’s definition is selected for analysis as his study on CSIs provides the most comprehensive framework available. While Katan (2004, 2009a, 2009b) discusses culture in translation at length, he does not propose any typology for translating CSIs. Instead, he references Kwieciński’s (2001) classification of four groups of translation procedures, which summarise influential typologies, including that of Newmark (Katan, 2009b, pp. 80–81). Furthermore, Pedersen (2008) addresses strategies that are specifically tailored for subtitling, which represents a distinct domain within translation studies, characterised by its unique set of challenges.

Dickins synthesizes three influential typologies that include seven procedures by Ivir (1987), seven procedures by Newmark¹ (1988), and seven procedures proposed by Hervey and Higgins (2002). Given the overlapping nature of these three influential procedures, Dickins’s synthesis provides a unified conceptual framework. His categorisation, which features more coherently defined categories, can be considered a new model of translation procedures for culturally specific items. However, the complex nature of Dickins’s conceptual grid does not lend itself to the analysis of CSIs in this study. Guided by Dickins’s conceptual framework, the author will synthesize the typologies of Ivir, Newmark, and Hervey and Higgins for the present study. Before the synthesis is delved into, the author will first introduce the aspects of culture significant to the understanding of culturally bound items.

Triad of culture

Katan (2004) views translation as a form of communication and translators as cultural mediators. He adapts Edward T. Hall’s (1959) iceberg model, termed the ‘Triad of Culture’, which categorises aspects of culture into three levels, technical, formal, and informal, to serve as hierarchical frameworks.

The tip of the iceberg is the first cultural frame and the language signs at this technical level have a clear referential function (Katan, 2009a, p. 70). Technical culture is scientific, analysable and can be taught (Katan, 2004, p. 45). Music, art, food and drink, dress, architecture, institutions and visible behaviour belong to the technical level. The second level of culture, or formal culture, is characterised by concepts of normality and appropriacy, which are seldom formally taught, therefore, the area is under the visible part of the iceberg (Katan, 2009a).

¹ Newmark (1988) proposes 17 procedures, of which some serve as provisional solutions while others exhibit overlap with one another.

People are not aware of the conventions surrounding the routines of life, but awareness is prompt when the convention is openly disregarded (Katan, 2004). Some examples at this level are rituals and customs. The third level of culture is termed by Hall as ‘informal’ or ‘out of awareness’ where there are unquestioned core values and beliefs without formal guides to practice (Katan, 2009a, p. 72). People respond to out-of-awareness culture emotionally and also identify with it (Katan, 2004, p. 46). Action, communication, environment, time, space, power, individualism, competitiveness, structure and thinking are categorised as informal culture.

Katan (2009b) states that the level of culture that influences the translator the most will determine the extent of the translator’s intervention in translation. By intervention, he means “interpret and manipulate rather than operate a purely linguistic transfer” (Katan, 2009b, p. 79). He asserts that professional translators are generally more interested in the technical culture because of its visibility while translation scholars focus more on formal and informal culture (Katan, 2009b).

CSIs in the chosen Thai commercial will be categorised according to the iceberg model. Machine translation models are primarily designed for linguistic transfer. By distinguishing the cultural level to which each CSI belongs, the capability of NMT tools to interpret the meanings of CSIs at different levels can also be evaluated.

METHODOLOGY

Sample

The 3.38-minute commercial ‘Saksit di krap’² (ศักดิ์สิทธิ์คือครับ), meaning ‘Magical powers are real!’, produced by Nam Seng Insurance (นำสินประกันภัย) and published on YouTube in 2022, was selected for the experiment in this study. Other commercials, such as those by Roojai Insurance (Roojai, 2024), MSIG Insurance (2023), and Prakantidloh (ประกันติดล้อ) (Prakantidloh, 2024), do not feature CSIs. In addition, a commercial by Ngern Tid Lor (เงินติดล้อ) (Ngern Tid Lor, 2018) contains only one CSI, *kuman thong* (กุมารทอง). In contrast, the selected commercial contains multiple CSIs that can be categorised across all three cultural levels.

The chosen commercial opens with a male driver exiting his sedan after a collision, while a male motorcycle rider lies injured by the roadside. The driver, relieved that he is unharmed, begins to thank the talismans in his car, which then appear in human form and converse with him, claiming their combined magical powers have kept him safe.

To examine how NMT services render CSIs at the lexical level, only those found between 2.34 and 3.06 minutes were input into the three NMT tools, and the raw translations were then evaluated. Second, the transcription of voice-over between 2.34–3.06 minutes was input into Google Translate, Microsoft Bing and Amazon Translate. The aim of this study was to

² The romanisation used in this paper is that of the Royal Institute of Thailand. The system makes no distinction between long and short vowel forms and tones are not represented.

determine whether these artificial neural networks could accurately take into account the entire context of the source sentence to facilitate improved translations. The raw outputs at the lexical and sentential levels would indicate whether NMT could build context from each word of the source text to determine the appropriate words for generating the next target word. The transcription of the voice-over serves as the source text (ST), while the accompanying Thai translation provided by the researcher is referred to as the target text (TT). The researcher acts as the subtitler, adhering to a professional subtitling standard, specifically Netflix's English Timed Text Style Guide, as YouTube's subtitling standards are less clear and less detailed. The italicised words in Table 1 denote CSIs.

Table 1
The transcription of voice-over between 2.34–3.06 minutes and a human-generated English Subtitle

ST	TT
เคยสงสัยไหมครับ	Have you ever asked yourself this?
สิ่งศักดิ์สิทธิ์คุ้มครองคน	If these talismans protect you,
แล้วใครคุ้มครองรถ	then who is protecting your car?
ประกันไหมครับ	Your auto insurance policy is.
เพราะแม่อ่านวงเนี้ย	Because <i>the female guardian spirit</i> ,
ท่านจ่ายค่าซ่อมรถให้มนุษย์ไม่ได้ นะครับ	she can't pay for your car repairs.
หรือเหล็กไหลก็จ่ายค่ารักษาให้คุณไม่ได้เช่นกัน	<i>The metal talisman</i> can't pay medical expenses for the third party.
จะฤๅษี ผ้ายันต์ หรือปลัดขิก	Be it <i>the sorcerous ascetic</i> , <i>the incantation cloth, the phallic amulet</i> , ³
ท่านก็มาเคาะประตูข้างและทำสิริทใหม่ให้คุณไม่ได้เหมือนกัน	neither can push dents out of car doors or fix paint scratches.

Synthesised typology

The three most influential typologies by Hervey and Higgins (2002), Ivir (1987) and Newmark (1988) are synthesised by the author. A detailed explanation of each translation procedure can be found in the Appendix. The synthesised procedures include borrowing (Ivir, 1987), literal translation (Ivir, 1987), definition (Ivir, 1987), descriptive equivalent (Newmark, 1988), functional equivalent (Newmark, 1988), communicative translation (Hervey & Higgins, 2002), cultural equivalent (Newmark, 1988), and cultural transplantation (Hervey & Higgins, 2002).

³ The grammatically correct translation is 'the incantation cloth or the phallic amulet'; however, this rendering exceeds Netflix's character limitation per line, necessitating the omission of the word 'or'.

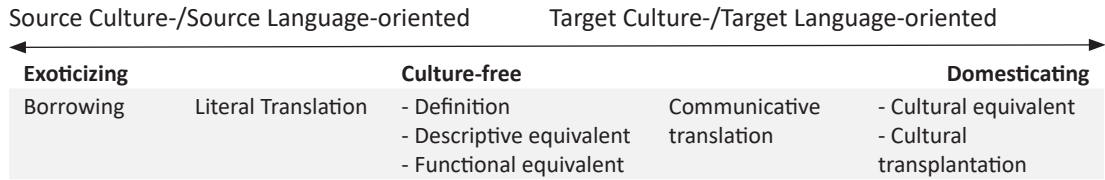


Figure 1 Synthesised typology for CSI translations (adapted from Dickins, 2012, p. 45)

The raw translations by the NMT services will be analysed using this synthesised typology. The first procedure, ‘borrowing’, is situated at the far left of the cline, Source Culture-/Source Language-oriented or ‘exoticising’ and the last two translation procedures ‘cultural equivalent’ and ‘cultural transplantation’ are sited at the far right of the cline ‘Target Culture-/Target Language-oriented or ‘domesticating’ (See Figure 1). Dickins broadly adopts the popular usage of foreignisation and domestication by Venuti (2008). However, Venuti differentiates between ‘exoticising’ and ‘foreignising’; he states clearly that exoticising is not the same as foreignising. Exoticising translation produces a translation effect indicating a superficial cultural difference with reference to specific features of foreign culture and the retention of foreign place names, proper names and odd foreign words (Venuti, 2008, p. 160). In contrast, foreignising translation admits ethnodeviant and potentially revising literary canons in the translating language. The foreignising translation signals linguistic and cultural differences of the foreign text. It also performs a work of cultural restoration by using a discursive strategy deviating from established discourses, for example, employing dense archaism as opposed to transparency depending on current standard usage (Venuti, 2008, p. 125). Theoretically speaking, the lexical output or the translation of CSIs produced by NMT services reflects ‘exoticising’ translation practices, unless humans direct the process to produce archaism. In Figure 1, the term ‘exoticising’ replaces Dickins’s chosen term ‘foreignising’.

The three translation procedures ‘definition’, ‘functional equivalent’ and ‘descriptive equivalent’ are in the middle of the cline, considered as ‘culture-neutral’, though not at the same degree. Based on the author’s own appraisal, the only procedure that can ensure a culture-free translation is ‘functional equivalent’ as translators who provide ‘definition’ or employ ‘descriptive equivalent’ procedure can elaborate on or include the specificity of the source culture. For instance, the translator defines ‘sabai’ as ‘upper cloth worn by Thai brides and/or bridesmaids in engagement ceremonies’. When the word ‘Thai’ is included, this translation is no longer culture-neutral. The procedures ‘cultural equivalent’ and ‘cultural transplantation’ have the potential to erase linguistic and cultural differences of the foreign word, thus representing the domestication strategy that reduces the foreign text to the receiving culture’s values (Venuti, 2008, p. 15).

Error classification

Pedersen (2017) proposes a generalised model for assessing quality in interlingual subtitling called the FAR model. He explains that this model, which is based on error analysis, looks at “renderings of languages that are not ‘near’ you (your own) but ‘far’ from you (foreign)” (Pedersen, 2017, p. 217). The subtitle quality is assessed in three areas: functional equivalence, acceptability and readability as follows:

1. Functional equivalence is divided into semantic errors, which cause misunderstandings and stylistic errors which only cause nuisance (Pedersen, 2017, pp. 218–219). The aim is to discern if the subtitles convey speaker meaning.
2. Acceptability is divided into grammar errors, spelling errors and idiomaticity errors (Pedersen, 2017, pp. 220–221). In this area, the subtitles are judged whether they sound correct and natural in the target language.
3. Readability issues relate to errors of segmentation and spotting, punctuation and reading speed and line length (Pedersen, 2017, pp. 221–224). If the subtitles can be read in a fluent and non-intrusive way, readability issues are unlikely to be detected.

Pedersen (2017, p. 220) states that the assessment of error severity depends on the specific guidelines used to inform the model. In this study, the Netflix's English Timed Text Style Guide is adopted, as previously explained. The two areas of the FAR model—functional equivalence and acceptability—are applied to the analysis of raw translations at the lexical and sentential levels. Since this is not a reception study, the application of readability area is not pertinent, as no subtitles were inserted and no participants were recruited to view the clip.

FINDINGS

Categorisation of CSIs

All five CSIs *mae ya nang* (แม่ย่านาง), *lek lai* (เหล็กไหล), *ruesi* (ฤๅษี), *pha yan* (ผ้ายันต์) and *palat khik* (ปลัดขิก) are expressions referring to entities outside language which a person may not know, even if that person knows the language in question. The Thai people, whose mother tongue is Thai, who do not believe in magical powers, are likely to lack knowledge of talismans.

The first CSI *mae ya nang* (แม่ย่านาง) originated from the traditional way of daily commute in Siam⁴/Thailand. It is believed that *mae ya nang* or the female guardian spirit inhabits the prow of a boat. Since the use of motor vehicles has replaced waterborne transport, instead of the boat prow the abode of *mae ya nang* then becomes the space above the dashboard or the glove compartment (Silpa-Mag.com, 2022). To worship *mae ya nang*, garlands and three strips of cloth in three different colours are hung on and/or tied around the rear-view mirror in the belief that *mae ya nang* would protect the driver on the road (Silpa-Mag.com, 2022).

The second CSI *lek lai* (เหล็กไหล) is a fetish. It is believed that *lek lai* is a piece of white metal dotted all over seemingly of candle drips (Nimmanhemmin, 1999, p. 7217). It can be found in the ceilings of caves located in tropical rainforests. A learned person must first use a candle to burn the metal, then chant a magical incantation and concentrate on severing the *lek lai* from the cave ceiling. It is believed that weapons will not be able to penetrate the skin of those who possess this fetish (Nimmanhemmin, 1999).

⁴ The former name of Thailand which was used until 1939.

The third CSI in discussion is *ruesi* (ฤๅษี). In the Royal Institute Thai Dictionary B.E. 2554, this word is defined as “an ascetic whose existence can be traced back before the Buddhist era began, who gives up the lifestyle of a layperson and seeks peace in self-discipline and abstention from all forms of indulgence” (The Royal Institute, n.d.-a). Those who worship *ruesi* believe that these ascetics have magical powers: they can put themselves in a meditative trance; they can predict the future; they can see into human beings’ and animals’ past, present and future lives; and they have magic spells and incantations to protect themselves (Phongphaibun, 1999, pp. 6717, 6721). It should be noted that there is no mention of ‘magic powers’ in the definition in the aforementioned Thai dictionary. Those who believe in superstition, worship both the figurine of *ruesi*, and the human *ruesi*. To the worshippers, having the figurine inside their cars is a safeguard against possible danger.

The fourth CSI is *pha yan* (ผ้ายันต์) and in the Royal Institute Thai Dictionary B.E. 2554, the word *yan* (ยันต์) is defined as “a square or a design of numbers, alphabets or pictures inscribed onto cloth, human skin, wood or metal, considered to be a talisman” (The Royal Institute, n.d.-b). The occultist aspect is referenced in its definition in the authoritative Thai dictionary, in line with the practice of the character in the commercial who treats *pha yan* as such.

The last CSI in the audiovisual text is *palat khik* (ปลัดขิก). Nimmanhemin (1999, p. 3606) describes *palat khik* as a phallus, typically crafted from wood. The large-sized *palat khik* is used in rain-beckoning ceremonies or sacrificial rituals aimed at ensuring a successful farming season while the small-sized *palat khik* serves as a protective ward for young males (Nimmanhemin, 1999). There are many different methods for transforming *palat khik* into amulets as learned persons have their own set of invocations and incantations. Some phallic amulets can be used to induce love, and some can be used to ward off danger (Nimmanhemin, 1999). Intharawut (1999, pp. 7500–7501) concludes that phallic worship has existed across all civilisations and cultures for as long as we can trace, as evidenced by phallus-shaped objects found among ancient peoples in Asia and Europe. These objects have represented fertility and served as symbols intended to bring good luck and prosperity.

Categorising these CSIs into the level of culture they belong to is a challenging task. At first glance, these five CSIs represent technical culture. These items can only be analysed to determine what materials they are made from. They are visible but their potency cannot be scientifically proven. On a different cultural frame, for those who worship talismans, the magical potency of these items is invisible. They revere these items because they believe in their magical power; thus, these talismans can represent informal culture. The magical potency of these items derives from incantations and invocations. The correct steps in the rituals where incantations and invocations are chanted imbue these items with magical potency, hence, these CSIs also represent formal culture.

Essentially, to non-believers of talismans, items such as *mae ya nang*, *lek lai*, *ruesi*, *pha yan*, and *palat khik*, are seen as concrete objects that do not warrant worship. At this technical level, they are visible, comparable to the tip of the iceberg. Furthermore, for those who do not subscribe to superstitions, incantations and invocations are merely chanted during rituals to persuade talisman worshippers of the items’ worth. On the contrary, for talisman

worshippers, these items are considered semi-visible; to bestow magical powers upon them, incantations and invocations must be chanted during rituals, which exemplify the second level of culture (or formal culture). For the worshippers, as long as rituals are conducted and given that they cannot verify whether the correct incantations and invocations are chanted, they must believe that these five items are potent and possess invisible magical powers that can protect them. The combination of rituals and the potency of the items position these talismans within the semi-visible part of the iceberg as rituals are observable while the potency remains unseen. For practitioners of superstition, the five items, which belong to the third level of culture, are believed to possess some magical powers that are unseeable. The worshippers' faith in the items' magical potency evokes an emotional response to this informal culture. It is irrelevant to them that the items' potency cannot be scientifically validated; the act of possessing and worshipping these five talismans provides them with peace of mind, as they believe that these talismans protect them from danger. In summary, the presence or the absence of superstitious beliefs and practices determines the cultural level to which these CSIs belong. For non-believers or non-practitioners, these CSIs represent culture at the technical level; for believers or practitioners, they embody both formal and informal cultures.

NMT outputs

The CSIs and the transcription of voice-over between 2.34–3.06 minutes were input into Google Translate, Microsoft Bing and Amazon Translate on 19 May 2024. At the lexical level (See Table 2), for the CSI *mae ya nang* (แม่ย่านาง), Google Translate (GT) and Amazon Translate (AT) used the translation procedure 'borrowing' while Microsoft Bing (MB) opted for 'word-for-word translation'. In rendering *lek lai* (เหล็กไหล), GT employed 'borrowing' whereas MB and AT adopted 'literal translation', however, the rendering 'Steel flow' is ungrammatical; if 'Steel' is the subject, the verb must be 'flows'. All three NMT services translated *ruesi* (ฤๅษี) as 'hermit', thereby using 'literal translation'. GT utilised 'borrowing' and 'literal translation' to translate the fourth CSI *pha yan* (ผ้ายันต์) while MB made use of 'functional equivalent' and AT 'descriptive equivalent'. The translation 'Talisman fabric' by MB specifies the function of the fabric. The translation 'Felt fabric' by AT misrepresents *pha yan* because cotton fabric is commonly used to produce *pha yan* (Ketphromphon, 1992, p. 4063). In translating the last CSI *palat khik* (ปลัดขิก), GT opted for 'descriptive equivalent' as its translation (small wooden image of penis) places emphasis on the physicality of the CSI. MB employed 'literal translation' and 'omission' since *palat* (ปลัด) is literally translated as 'bailiff' while the word *khik* (ขิก) is omitted. Dickins (2012, p. 56) explains that 'omission' is a cultural translation procedure that involves problem avoidance. By not attempting to find an equivalent for the source text word or phrase, the problem of what an appropriate equivalence might be is avoided. He further adds that 'omission' can be considered a form of domesticating translation, as it removes references to the foreign element in the target text. The NMT service that did not omit this last CSI but ended up with a mistranslation is AT.

In summary, at the lexical level, GT predominantly favoured 'borrowing', while MB preferred a 'word-for-word translation' procedure, which conflicts with the principles of NMT and AT also leaned towards 'borrowing', though not as frequently as GT.

Based on the FAR model, all transliterated terms in the functional equivalence area can be classified as semantic errors. Although they retain some connection to the original meaning, they render viewers' understanding of the terms effectively nil. CSIs that are translated literally can be classified as minor semantic errors, as they convey what is said but do not fully communicate what is meant. In terms of severity, the mistranslations of *palat khik* and the word-for-word translation of the CSI *mae ya nang* can be classified as serious semantic equivalence errors, as they may confuse viewers and lead to plot misunderstandings. In terms of acceptability, the translation of *lek lai* as 'steel flow' is considered a 'grammar error', making the subtitle slightly difficult to understand.

Table 2
Raw translations at the lexical level by Google Translate, Microsoft Bing and Amazon Translate

CSIs	GT	MB	AT
<i>mae ya nang</i> (แม่ย่านาง)	Mae Yanang	Mother, grandmother, Mrs.	Mae Ya Nang
<i>lek lai</i> (เหล็กไหล)	Leklai	Steel flow	Flowing steel
<i>ruesi</i> (ฤๅษี)	hermit	hermit	hermit
<i>pha yan</i> (ผ้ายันต์)	Yantra Cloth	Talisman fabric	Felt fabric
<i>palat khik</i> (ปลัดขิก)	small wooden image of penis	Bailiff	Bridesmaids

At the lexical level, most raw translations were source culture- and source language-oriented and the translation procedures used by the NMT engines reflected an exoticising translation strategy. The rendering 'Yantra Cloth', produced by GT, represented its attempt to trace the Sanskrit root of the Thai word 'yan', signalling a sense of foreignness. The raw translations 'Hermit' and 'felt fabric' were culture-free but the occult aspect was lost in these renderings. It can be said that the mistranslations 'Bailiff' and 'Bridesmaids' were an erasure of the linguistic and cultural differences. The transliterated forms 'Mae Yanang' and 'Mae Ya Nang' by GT and AT and the word-for-word translation 'Mother, grandmother, Mrs.' by MB were semantically anomalous. The practice in question diverged from the foreignising strategy outlined by Venuti (2008). However, the retention of foreign odd words puts pressure on the English language to acknowledge the linguistic and cultural differences inherent in the foreign text. The presence of these linguistic peculiarities has the potential to remind the audience that a cultural other is being manifested.

Based on the iceberg model, GT categorised all five CSIs at the technical level, describing them referentially when it could. The mistranslations by MB and AT reflected their inability to categorise some CSIs at any cultural level. MB, however, categorised one CSI at the formal and informal levels, rendering *pha yan* (ผ้ายันต์) as 'Talisman fabric'. By specifying that *pha yan* is a talisman, MB acknowledged it was an object thought to have magical powers. At this juncture, the cultural frame that influenced the three NMT services the most was technical. As a result, the three engines focused on linguistic transfer rather than interpretation.

At the sentential level, all NMT services yielded different translations of CSIs, except for the CSI *ruesi* (ฤๅษี), the same translation 'hermit' was rendered at both lexical and sentential levels (See Table 3).

Table 3

Raw translations at the sentential level by Google Translate, Microsoft Bing, and Amazon Translate

GT	MB	AT
Have you ever wondered?	Ever wondered?	Have you ever wondered?
Sacred things protect people	Sacred things protect people.	SACRED THINGS PROTECT PEOPLE
So who protects the car?	So who covers the car?	So who protects the car?
What is the insurance?	What's the insurance?	¿Cómo se seguros?
Because of <i>Mother Yanang</i>	Because of <i>her mother and grandmother.</i>	Because <i>my mother is in her neighborhood.</i>
You cannot pay for car repairs to humans.	You can't pay for car repairs for humans.	You can't pay a human to repair a car.
Or <i>Leklai</i> cannot pay for the other party's treatment as well.	Or the <i>iron flow</i> cannot pay for the treatment to the other party either.	Nor does <i>the flow of steel</i> pay for the treatment of the parties either.
Whether it's a <i>hermit</i> , a <i>talisman</i> , or a <i>Palat Khik</i> .	Will the <i>hermit Talisman</i> or <i>bailiff</i>	To be a <i>hermit</i> , a <i>leprechaun</i> , or a <i>bridegroom</i>
You can't just knock on the side door and paint your car a new color for you.	You can't knock on the side door and paint your car for you either.	You came knocking on the side door and repainting the car for you couldn't either.

Table 4

Comparison of raw translations at lexical and sentential levels by Google Translate

CSI/Level	<i>mae ya nang</i> (แม่ย่านาง)	<i>lek lai</i> (เหล็กไหล)	<i>ruesi</i> (ฤๅษี)	<i>pha yan</i> (ผ้ายันต์)	<i>palat khik</i> (ปลัดขิก)
Lexical	Mae Yanang	Leklai	hermit	Yantra Cloth	small wooden image of penis
Sentential	Mother Yanang	Leklai	hermit	talisman	Palat Khik

Table 5

Comparison of raw translations at lexical and sentential levels by Microsoft Bing

CSI/Level	<i>mae ya nang</i> (แม่ย่านาง)	<i>lek lai</i> (เหล็กไหล)	<i>ruesi</i> (ฤๅษี)	<i>pha yan</i> (ผ้ายันต์)	<i>palat khik</i> (ปลัดขิก)
Lexical	Mother, grandmother, Mrs.	Steel flow	hermit	Talisman fabric	Bailiff
Sentential	her mother and grandmother	iron flow	hermit	Talisman	bailiff

Table 6

Comparison of raw translations at lexical and sentential levels by Amazon Translate

CSI/Level	<i>mae ya nang</i> (แม่ย่านาง)	<i>lek lai</i> (เหล็กไหล)	<i>ruesi</i> (ฤๅษี)	<i>pha yan</i> (ผ้ายันต์)	<i>palat khik</i> (ปลัดขิก)
Lexical	Mae Ya Nang	Flowing steel	hermit	Felt fabric	Bridesmaids
Sentential	my mother is in her neighborhood	the flow of steel	hermit	leprechaun	bridegroom

GT tended to use ‘borrowing’ translation procedure more often at the sentential level (See Table 4). For example, at the lexical level, the translation of the CSI *palat khik* (ปลัดขิก) was ‘small wooden image of penis’ but at the sentential level, the rendering became ‘Palat Khik’.

MB still adhered to word-for-word translation (See Table 5). For instance, the translation of *lek lai* (เหล็กไหล) at the lexical level was ‘Steel flow’ and at the sentential level it was slightly changed to ‘iron flow’. Both raw translations are grammatically incorrect. MB could produce grammatically correct and comprehensible translations as can be seen in the translations of *pha yan* (ผ้ายันต์). At the lexical level, MB produced ‘Talisman fabric’, which is an adequate translation due to its comprehensibility and retention of this CSI’s occult nature. At the sentential level, the word ‘fabric’ was removed, and *pha yan* was reduced to ‘Talisman’, erasing its physical form.

AT tended to produce more incomprehensible translations at the sentential level (See Table 6). At the lexical level, the CSI *mae ya nang* (แม่ย่านาง) was the transliterated form ‘Mae Ya Nang’ but at the sentential level, the rendering became ‘my mother is in her neighborhood’, presumably because words or sub-word units were anomalously processed. The words ‘mae ya nang’ were processed as ‘mae yan’ and the word ‘yan’ (ย่าน) in Thai means ‘neighborhood’. Forcada (2017, p. 293) explains that in NMT words or sub-word units, such as characters or short character sequences, are processed in a parallel and distributed manner, both in the context of the source sentence being processed and in the context of the target sentence being produced. If this is the case, AT’s raw translation ‘my mother is in her neighborhood’ shows no connection to the preceding or subsequent sentences. It seems this NMT engine had not looked into the broader context to help select the best fit for the target translation. Further, at the lexical level, AT produced ‘Felt fabric’ for the CSI *pha yan* (ผ้ายันต์) but at the sentential level, this CSI became ‘leprechaun’. Merriam-Webster online dictionary (n.d.-a) defines ‘leprechaun’ as “a mischievous elf of Irish folklore usually believed to reveal the hiding place of treasure if caught”. The only commonality between *pha yan* and ‘leprechaun’ is supernaturalness. No assumptions can be made regarding how AT encoded the word and subsequently represented the entire sentence inaccurately. The raw translations of *palat khik* (ปลัดขิก) at the lexical level as ‘bridesmaids’ and at the sentential level as ‘bridegroom’ were equally perplexing. Both are mistranslations of the CSI, but the rendering ‘bridegroom’ at least conveys a sense of maleness. It is evident that AT mistranslated many Thai CSIs, and the raw translations become more inaccurate at the sentential level.

Based on the FAR model, all transliterated terms, ‘Leklai’ and ‘Palat Khik’, in the functional equivalence area can be classified as semantic errors. The CSI *mae ya nang* that is partly translated literally and partly transliterated ‘Mother Yanang’ can be classified as a minor semantic error. The raw translation of *lek lai* as ‘iron flow’ is considered a ‘grammar error’. All the mistranslations, *mae ya nang* as ‘her mother and grandmother’ and ‘my mother is in her neighborhood’, *pha yan* as ‘leprechaun’ and *palat khik* as ‘bailiff’ and ‘bridegroom’ can all be classified as serious semantic equivalence errors, as they may hamper the viewers’ progress beyond that single subtitle and lead to plot misunderstanding.

GT's rendering 'Because of Mother Yanang / You cannot pay for car repairs to humans. / Or Leklai cannot pay for the other party's treatment as well.' and MB's rendering 'Because of her mother and grandmother. / You can't pay for car repairs for humans. / Or the iron flow cannot pay for the treatment to the other party either.' reflect both grammar errors and idiomaticity errors while AM's rendering 'Because my mother is in her neighborhood. / You can't pay a human to repair a car. / Nor does the flow of steel pay for the treatment of the parties either.' demonstrates idiomaticity errors. As mentioned, MB's and AT's renderings contain serious semantic equivalence errors. Regarding the MB's version, the viewers may wonder: 'Whose mother and grandmother is referred to?'. In the AT's version, viewers may question why, just because someone's mother is in her neighborhood, a person cannot pay someone else to repair a car. These errors are so serious that they render the subtitles impossible to understand and would presumably cause considerable frustration for viewers.

Beyond the translations of CSIs

Apart from CSIs, when other sentences were analysed, all three NMT engines tended to produce grammatically correct, albeit unidiomatic raw translations. The last sentence from the sample deserves investigation and discussion.

Table 7
Comparison of raw translations at the sentential level by Google Translate,
Microsoft Bing and Amazon Translate

ST	ท่านก็มาเคาะประตูข้างและทำสีรถใหม่ให้คุณไม่ได้เหมือนกัน
Human's TT	neither can push dents out of car doors or fix paint scratches.
GT	You can't just knock on the side door and paint your car a new color for you.
MB	You can't knock on the side door and paint your car for you either.
AT	You came knocking on the side door and repainting the car for you couldn't either.

All three NMT engines translated the ST literally (see Table 7). GT's and MB's raw translations were grammatically correct whereas AT's raw translation was ungrammatical (a grammar error according to the FAR model). Translating the verb *kho* (เคาะ) literally as 'knock' could confuse the audience, as 'knock' implies attracting attention rather than indicating that the car doors need fixing. In the Thai language, the word 'knock' refers to both the action of striking a surface noisily to attract attention and the action of fixing a car dent. The raw translations by GT and MB are considered 'anomalous utterances'. Although the sentences were grammatically correct and contain meaningful components, inferring a connection between the semantic meanings of the individual words proved challenging, and the intended meaning was not effectively communicated, resulting in semantic equivalence errors. Based on the claim that NMT engines consider broader contexts to select the best fit for the target translation, the grammatical and ungrammatical raw translations from all three NMT engines suggest otherwise. The preceding sentences pertain to the auto insurance policy, and all three NMT services failed to consider the contextual information.

Another flaw, the most serious semantic equivalence error, was seen in AT's raw translation of the ST 'ประกันไ้ครับ' (meaning 'Your auto insurance policy is (protecting your car)'). Its raw

translation was the Spanish sentence ‘¿Cómo se seguros?’ (meaning ‘How do you know for sure?’) (See Table 3). AT encoded the source sentence in Thai, but the decoder, for an unknown reason, assigned the maximum likelihood to the Spanish target sentence instead of the English target sentence as prompted. This raw translation was unusable as the English translation was needed. Although grammatically correct, the raw translations by GT and MB ‘What is the insurance?’ and ‘What’s the insurance?’ respectively did not fulfil their communicative purpose in the context of the discussion regarding insurance policies. The voice-over in the commercial is intended to inform the audience that an auto insurance policy provides protection for the driver and passengers. Instead, GT’s and MB’s raw translations reformulated the statement into a question by asking the other party to describe what an auto insurance policy is, deviating from the intended meaning of the source text.

DISCUSSION

Previous studies (Sennrich et al., 2016; Wu et al., 2016) reveal that NMT system performance has been consistently shown to deteriorate with rare words translated from English into German, English into Russian and English into French. Further, prior research (Castilho et al., 2017; Koehn & Knowles, 2017; Toral et al., 2018; Toral & Way, 2018) indicates that as sentence length increases, the performance of NMT systems has consistently deteriorated. In this regard, the present study lends support to such findings as CSIs in this study are rare words, not frequently used in daily life since they are culturally and occultly bound, and more errors were detected at the sentential level. Additionally, in the studies conducted by Castilho et al. (2018), Vardano et al. (2019), and Yamada (2019), lexical errors, including mistranslations, were detected in the output of NMT. The results of the present study also revealed several instances of mistranslated words. In contrast, Van Brussel et al. (2018, p. 3802) reported that NMT can fluently omit text spans of as many as four words. The experiment conducted in this study did not reveal any omission errors from the NMT systems. Koehn and Knowles (2017, p. 6) note that NMT can ‘silently fail’ by making “fluent-sounding but semantically inappropriate” translation choices, in which errors are more difficult to identify. However, the three NMT engines in this study were incapable of producing the illusion of transparency; none of the outputs from the three NMT services was fluent. Consequently, monolingual quality evaluations based solely on the raw translations evidently necessitated post-editing. When NMT output from Thai into English becomes more fluent, NMT omission errors might be detected and the visibility of NMT omission errors might become an issue.

Using a corpus of forty menus from Southern Spanish restaurants translated into English as a corpus, Montes Sánchez (2025) compares the output of two NMT systems, Google Translate and DeepL with those generated by one AI-powered system ChatGPT. All CSIs in her study can be classified as belonging to culture at the technical level whereas in this study all five CSIs can be placed across all three cultural levels. The findings in her study that are comparable to those of the present research are limited to the lexical level. Montes Sánchez (2005) reported that Google Translate predominantly favoured ‘literal translation’, whereas the present study showed that it primarily employed ‘borrowing’. It can be argued that the linguistic and cultural affinity between Spanish and English is significantly higher than that between Thai

and English. When the NMT systems failed to recognize culture-bound words, ‘borrowing’ appeared to become the default procedure. When English subtitles borrow Thai terms that viewers do not understand—especially when these terms refer to local superstitious beliefs and practices—their comprehension and immersion in the viewing experience are undermined, which may in turn lead to disengagement from the audiovisual product. Montes Sánchez (2025, p. 15) concluded that DeepL and ChatGPT demonstrated a superior capacity to capture subtle linguistic nuances to Google Translate. This conclusion lays the groundwork for future research once DeepL becomes available for automatic Thai–English translation and for other AI-powered translation systems.

Qiu and Pym (2025) investigated the effects of machine translation errors in the Chinese–English language pair by recruiting two groups of participants: one group who did not know Mandarin or any other Chinese varieties, and another group comprising learners of Chinese. Participants were asked to watch short scenes from a Chinese period drama without being informed that the subtitles were machine-generated. Qiu and Pym (2025, p. 925) conclude that viewers can accept imperfect machine-translated subtitles if the translated text gives them access to something they genuinely need or want, and that learners of Chinese can draw on their proficiency in the language to mitigate the risk of misunderstanding (Qiu & Pym, 2025, p. 926). Commercials are designed to persuade viewers of an audiovisual text to behave in a particular way, in this case by purchasing an insurance premium. However, international viewers who encounter this Thai commercial are generally unlikely to require auto insurance from a Thai company. In addition, most of these viewers presumably do not understand Thai, and if subtitles generated by the three NMT systems are used without post-editing, the risk of misunderstanding is substantial. Consequently, the persuasive force of the commercial may be diminished, and international viewers may be less motivated to continue watching.

Pinmanee (2018, p. 71) concludes that it is difficult to fully convey the meanings embedded in Thai superstitions and beliefs because Thai and Western worldviews only partially correspond. Although she acknowledges linguistic and cultural limitations and proposes strategies to help render these meanings in translation as fully as possible, the question of how machine translation might be trained to handle Thai superstitions and beliefs using such strategies lies beyond the scope of her study. Building on this gap, more recent research has focused directly on the role of machine translation and large language models. The design and structure of prompts, which play a crucial role in guiding language models to produce accurate and contextually appropriate translations, have attracted considerable attention. Affirming the unparalleled ability of human subtitlers to address cultural intricacies, Cao et al. (2025) compared ChatGPT’s, Gemini’s, and DeepSeek’s subtitles of culturally sensitive items from English into Persian in the American series *Succession* with those of a professional translator. Their findings reveal that AIs dealt more effectively with culturally sensitive elements in subtitles after being provided with more detailed prompts about the target audience and context (Cao et al., 2025, p. 14). AI-powered translation systems have performed well for high-resource European languages (Jiao et al., 2023) but not for low-resource African languages (Robinson et al., 2023). These findings suggest that for low-resource languages the role of the human translator remains irreplaceable and AI has not yet surpassed human translators and continues to function primarily as an assistant.

CONCLUSION

In the age of increasingly more mature NMT technology, this NMT research was directed at the appraisal of raw translations of CSIs in an audiovisual text from Thai into English without human stakeholders. To advance the state of MT development and ensure the efficiency of NMT as a valuable tool, experiments should be conducted with other NMT engines. Future research on the Thai-English and English-Thai language pairs should also involve human participation. The pilot study conducted by Łoboda and Mastela (2023) examines the editing process of NMT output by translator trainees, with a focus on culture-bound texts in translator education. In their research, M.A. students post-edited and evaluated two machine-translated folk tales from Polish into English. Similar interdisciplinary studies can be carried out with Thai B.A. and M.A. students to evaluate translation technology and facilitate the development of their translation skills.

NMT's overall quality increase, reported in much of the literature (See Forcada, 2017; Vaswani et al, 2017), raises questions about the future of professional translation and the impact of NMT on the translation process (Martikainen, 2019, p. 1). Ragni and Vieira (2021, p. 19) state that the bulk of NMT research involving humans is still directed at "advancing the state-of-the-art in MT development". This study found that NMT output still contained numerous errors and accuracy and fluency for NMT were not reported. Given that translators "remain a large cohort of MT users" (Way, 2018, p. 15), this research, without the involvement of human stakeholders, still addresses both the usefulness and limitations of NMT as a tool for users, including translator trainees and professional translators.

In interlingual translation, transmitting the ST intact seems impossible since languages and cultures are asymmetrical. The translation direction is also from dominated to dominant language. NMT research has disproportionately focused on dominant languages. For the people of the target culture (the English readership), the source text, the Thai language and the Thai culture remain largely unfamiliar as they have not been extensively explored in NMT research. The potential benefits and drawbacks of MT for less widely used language pairs should be further explored. To address this imbalance, additional data is necessary to understand NMT's usability for dominated languages. Furthermore, NMT systems should be configured, and post-editing professionals should be trained to effectively handle varying cultural assumptions and interpretive choices.

This study compares three neural machine translation (NMT) systems to examine differences in translation procedures and their effects on intelligibility and cultural adequacy. Future research on the Thai-English language pair could further explore prompt-based interactions with AI systems, such as ChatGPT, Gemini, and Claude, as guiding cues to enhance and support translation performance. Persistent challenges in rendering CSIs remain, and the emergence of large language models (LLMs), which claim to rival human-level performance, highlights their potential role as aids to human translators. The integration of AI into translation practices for translators-in-training in Thailand appears inevitable, and these trainees should be equipped with the skills to recognize both the strengths and limitations of NMT and other AI-powered systems, particularly in domains where contextual and cultural factors are especially salient.

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Appendix

Synthesised typology

The three most influential typologies by Ivir (1987), Newmark (1988) and Hervey and Higgins (2002) are synthesised and explained as follows:

“Borrowing” is the importation of the source-language expression (Ivir, 1987, p. 39). This procedure should be employed when the form of the source-language expressions can be easily integrated into the target language phonologically and morphologically (Ivir, 1987). For instance, “clinic” is transliterated as “คลินิก” and “วัด” is rendered as “wat”.

“Literal translation”, the commonest method of cultural transference, has the value of being faithful to the source-language expression and transparent in the target language (Ivir, 1987, p. 41). This procedure is ruled out when it would clash with an existing expression in the target language that has a meaning different from that intended by the source text and when it would lead to ungrammaticality in the target language (Ivir, 1987, p. 41). The translation of “Red Cross” as “กาชาด” (*ka chat*) is a case in point.

“Definition” reduces the unknown to the known, relying on what target readers know in an attempt to make them aware of what they do not know but no definition can give all information; therefore, the translator’s definition should be formulated based on the information relevant to the act of communication at hand (Ivir, 1987, p. 40). For example, “bacon” is defined as “หมูเค็มแผ่นบางทอดกรอบ” (*mu khem phaen bang thot krop*) or “thin, salty strips of fried pork” and the definition of “สไบ” (*sabai*) is “an upper cloth traditionally worn by Thai brides and bridesmaids during engagement ceremonies”.

“Descriptive equivalent” procedure requires translators to weigh description against function in translating a source-language word (Newmark, 1988, pp. 83–84). When this procedure is employed, the CSI “กริช” (*krit*) can be translated as “a dagger with a wavy-edged blade”; the description “with a wavy-edged blade” is added.

“Functional equivalent” procedure neutralises or generalises the source-language word by using a culture-free word (Newmark, 1988, p. 83). For example, the same CSI “กริช” (*krit*) is rendered as “dagger” because it refers to a short knife used as a weapon. The term “dagger” is culture-free as daggers exist in most cultures (if not all).

“Communicative translation” is employed for clichés, idioms, proverbs, and similar expressions which have readily identifiable communicative equivalents in the target language (Hervey & Higgins, 2002, p. 36). To use this translation procedure, the idiom “as easy as pie” is rendered as “ง่ายเหมือนปอกกล้วยเข้าปาก” (*ngai muean pok kluai khao pak*) which means “as easy as peeling a banana and putting it in one’s mouth”. To translate this idiom literally, the rendering would puzzle Thai people as pie is not a traditional Thai dish and to the Thai readership pie-making is considered complicated while peeling a banana can be done quickly and easily.

“Cultural equivalent” is an approximate translation where a source-language cultural word is translated by a target language cultural word (Newmark, 1988, pp. 82–83). For instance, ‘Cantonese restaurant’ is rendered as “ร้านอาหารจีนกวางตุ้ง” (*ran ahan chin kwang tung*). In the Thai language, “kwang tung” refers to “Canton” and to translate “Cantonese restaurant” by borrowing the English word as “ร้านอาหารจีนแคนตัน” (*ran ahan chin canton*) will certainly confuse the Thai readership.

“Cultural transplantation” is hardly a translation but an adaptation (Hervey & Higgins, 2002, p. 34). The concept of “ขวัญ” (*khwan*), which is a Thai term referring to the spiritual essence connected with the human body (Tambiah, 1970, pp. 57–58), does not exist in the West, so *khwan* must be equated with something that does. “Soul” is often considered a culturally analogous term. However, if “soul” is understood as the spiritual or immaterial part of a human being regarded as immortal, then *khwan* cannot be equated with “soul”, because when a person dies, *khwan* dies as well. When “ขวัญ” (*khwan*) is translated as “soul”, *khwan* is culturally transplanted by “soul”.