

## Bridging Linguistic and Cultural Nuances: A Comparative Study of Human and AI Translations of Arabic Dialect Poetry

**Mohammad Awad AlAfnan**

*Liberal Arts Department, American University of the Middle East, Kuwait.*

mohammad.al-afnan@aum.edu.kw

**Thana Alshakhs**

*Liberal Arts Department, American University of the Middle East, Kuwait.*

**Corresponding Author:** Mohammad Awad AlAfnan

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### Abstract

This study conducts a comparative analysis of human and AI translations of Arabic dialect poetry into English, focusing on Gulf, Levantine, and Egyptian Arabic dialects. The study reveals distinct strengths and limitations by evaluating both translation approaches across five critical criteria- form, word usage, poetic techniques, language conventions, and illustrations. Human translators excel in preserving the nuanced structure, rhythm, and cultural depth that are essential in poetry. For example, in the translation of Prince Khalid AlFaisal's Gulf Arabic poem, (ما هقيت) 'I Thought Not', human translators maintained the emotional rhythm and poetic structure that AI translations rendered in a more prose-like format. Additionally, human translators demonstrated greater sensitivity to culturally embedded words and idioms, as seen in their handling of idiomatic expressions and symbolic metaphors in Talal Haidar's Levantine Arabic poem 'Alone' (وحدن) and Ahmad Fouad Najem's Egyptian Arabic poem Alexandria (اسكندرية). While often accurate in literal terms, the AI translations struggled with interpreting poetic devices like metaphor and alliteration and lacked the interpretive depth needed for conveying cultural and emotional nuances. Nonetheless, AI tools show potential as initial translators for generating draft translations that human experts can refine. The study concludes that, in the face of AI advances, human translators remain indispensable for capturing Arabic dialect poetry's aesthetic, cultural, and emotional layers. This underscores the need for a collaborative model where AI serves as an assistant rather than a replacement for human expertise in literary translation. This research sheds light on AI's role and limitations in the nuanced domain of poetry translation, thereby contributing to the field.

**Keywords:** AI, Human translation, Literary translation, Poem Translation, Arabic Dialects, Artificial Intelligence.

## 1. INTRODUCTION

Translation is a complex and nuanced process involving linguistic, cultural, and emotional elements [1]. When translating Arabic dialect poetry into English, these complexities increase significantly due to the unique linguistic structures [2], cultural expressions [3], and poetic imagery found in Arabic dialects [4]. Arabic dialects vary considerably across regions, each with idiomatic expressions, tonal nuances, and cultural resonances [5]. Poems in these dialects often embody cultural themes, local wisdom, and regional aesthetics that standard Arabic, or Modern Standard Arabic (MSA), may not fully encapsulate [6]. As a result, translating these dialectal works into English requires an intimate understanding of Arabic and English and the specific dialect's cultural and linguistic nuances [7]. In recent years, Artificial Intelligence (AI) translation tools, such as Google Translate, DeepL, and GPT-based models, have increasingly attempted to bridge this gap [8]. However, their effectiveness in translating Arabic dialectal poetry remains limited and raises intriguing questions about the evolving role of AI in translation, particularly in highly nuanced forms such as poetry.

The translation of poetry written in Arabic dialects presents unique challenges for both human translators and AI models. While skilled in understanding and conveying nuanced meanings, human translators face difficulties conveying cultural elements with no direct equivalents in English [9]. For example, words or expressions rooted in Gulf, Levantine, or Egyptian dialects may carry connotations that require significant contextual understanding. This problem becomes particularly prominent in dialect poetry, where metaphor, symbolism, and cultural references are often deeply embedded in local heritage. While human translators can sometimes circumvent these challenges through interpretation and creative translation techniques, they may still struggle to capture the original text's rhythm, rhyme, and emotive weight [10]. The goal of a successful human translation of dialect poetry is not merely to render the words into English but to convey the same emotional resonance, cultural depth, and poetic beauty that would reach an English-speaking audience in a way that honors the poet's intent [11].

Artificial Intelligence-based translation tools, though rapidly advancing, bring promise and limitations to translating Arabic dialect poetry [12]. AI translation systems are typically trained on large datasets composed primarily of standard language texts, leaving them less effective at understanding regional dialects or interpreting poetic structures and idioms. AI translation models may produce literal translations that miss the cultural and metaphorical meanings in the original [13]. For instance, the literal translation of idiomatic expressions in Levantine Arabic might fail to capture the deeper connotations, leading to translations that feel disjointed, overly formal, or devoid of cultural resonance. Furthermore, Arabic dialects are often underrepresented in mainstream AI datasets. As a result, AI systems may misinterpret certain words or phrases, substituting them with Modern Standard Arabic (MSA) equivalents that can alter the essence of the original text [14]. However, recent advancements in Natural Language Processing (NLP) have led to the development of models trained on dialectal corpora, which enhances AI's ability to recognize and process informal language and regional varieties. Despite these improvements, these models are still in their early stages and struggle to capture the nuances of dialectal poetry fully. When comparing human and AI translations of Arabic dialect poetry, the contrast highlights both the value of human intuition and the current limitations of AI. Human translators possess the cultural context, emotional sensitivity, and poetic insight that AI tools lack [15]. They can interpret metaphors, adapt rhythm, and sometimes even introduce creative liberties to retain the emotional impact of the original text. In contrast, AI tools

rely on algorithms to produce translations, and while they are becoming more sophisticated, they often lack the sensitivity to cultural subtleties and poetic forms. AI translations may be helpful for quick, general interpretations of text [16] or for audiences unfamiliar with Arabic dialects. However, they often fail to render a complete and faithful version of the original poem [17]. Nevertheless, as AI translation tools evolve, they hold the potential to assist human translators, mainly by generating preliminary translations that can be refined and contextualized by human expertise [18].

This article explores the complexities of translating Arabic dialect poetry into English by examining the distinctive challenges faced by human and AI translators, their respective strengths, and their current limitations. Through examples of dialectal Arabic poems translated by both human and AI systems, we aim to analyze the effectiveness of each approach, highlighting the areas where human expertise remains essential, and AI can serve as a valuable aid. Additionally, we consider the implications of AI's growing role in literary translation, particularly how AI might complement human efforts rather than replace them. In doing so, we seek to shed light on the broader discussion of AI's capabilities and limitations in culturally rich and artistically demanding fields such as poetry translation, where emotion, context, and creativity are paramount. This comparative analysis provides insights into the intricate process of cross-cultural translation and underscores the importance of blending human intuition with technological advancement in bridging linguistic and cultural divides.

For this purpose, the human and AI translations of three Arabic poems that are written by Prince Khalid Faisal in the Saudi-Arabic dialect, Talal Haidar in the Lebanese-Arabic dialect, and Ahmed Fouad Negem in the Egyptian-Arabic dialect are analyzed. The human and AI translations are evaluated based on form, word usage, poetic techniques, language conventions, and illustrations.

## **2. LITERATURE REVIEW**

Translating Arabic dialect poetry into English presents a rich and complex area of study, intersecting linguistics, cultural studies, and translation theory [19–21]. This field explores the linguistic, emotional, and cultural challenges of translating Arabic dialects, especially in the context of poetry, which is laden with local idioms, cultural expressions, and region-specific aesthetics [22–24]. Furthermore, recent advancements in Artificial Intelligence (AI) in Natural Language Processing (NLP) have introduced new dynamics to translation, prompting scholars to investigate the capabilities and limitations of AI translation systems in handling dialectal and poetic content.

### **2.1 The Complexity of Translating Arabic Dialects**

Arabic dialects, including Levantine, Egyptian, Gulf, and Maghrebi varieties, differ widely in phonology, syntax, and vocabulary from Modern Standard Arabic (MSA) and each other, reflecting the diverse cultures and histories within the Arab world [25–27]. Translating dialectal Arabic poses unique challenges because these dialects often lack standardized written forms and are transmitted orally, rich with colloquial expressions and culturally bound meanings [28]. This variation affects translation processes, as certain dialect-specific words or idioms have no direct equivalents in English. Holes (2004) [27], notes that dialectal Arabic's linguistic diversity reflects regional histories

and cultural identities, making translation a process that is as much about cultural interpretation as it is about linguistic rendering.

In Arabic poetry, dialectal forms often evoke a sense of place, identity, or cultural belonging, creating an emotional resonance that standard translations can struggle to capture [29]. Mejdell (2006) [29], emphasizes that poetry in Arabic dialects often draws on regional metaphors, proverbs, and folkloric elements, which require linguistic translation and cultural contextualization. Human translators, therefore, face the dual task of preserving the original text's literal meaning and cultural resonance [30]. According to Ghazoul (2015) [30], this is incredibly challenging in poetry, where rhythm, rhyme, and emotional depth play a significant role in conveying meaning, and a literal translation may lose the original work's essence.

## **2.2 Human vs. AI in Poetry Translation**

Human translators bring cultural and emotional sensitivity to the translation process, an essential skill in rendering poetry, often deeply rooted in cultural narratives and idiomatic language. Bellos (2011) [31], argues that a successful poetry translation goes beyond word-for-word accuracy; it must also recreate the emotive and aesthetic qualities of the original text. In the context of Arabic dialect poetry, this means that human translators need to grasp the cultural nuances of specific dialects and translate them into English in a way that evokes similar emotions and cultural associations for an English-speaking audience [8, 31, 32].

Conversely, AI-based translation systems are designed to process and translate large amounts of text quickly, with advancements in machine learning allowing for increasingly accurate translations [33]. However, AI translation models are typically trained on large datasets consisting mainly of standard language texts, limiting their effectiveness in translating dialectal Arabic, especially in informal or poetic contexts [34]. AI translation systems such as Google Translate models struggle with idiomatic and non-standard language forms due to limited dialectal data and insufficient contextual awareness [34]. Toral and Way (2015) [34], highlight the limitations of AI in translating idiomatic expressions, metaphors, and cultural references, which are common in dialectal poetry. As such, AI translations of Arabic dialect poetry often yield literal translations that miss the original's cultural and emotional undertones.

Recent studies (i.e., [35–37]) in NLP have shown progress in training AI models to handle dialectal Arabic by using dialect-specific corpora and developing algorithms to recognize informal language patterns [38]. However, while these models show improved accuracy in translating colloquial language, they still lack the interpretive capacity needed for poetry translation, where metaphor, symbolism, and tone play critical roles [39]. AlAfnan (2024) [8], observes that while AI can produce preliminary translations useful for general understanding, human intervention is often needed to refine the text and retain its poetic qualities.

## **2.3 The Role of AI in Assisting Human Translators**

Despite AI's limitations in translating Arabic dialect poetry, researchers suggest that AI tools can support human translators by providing a base translation that can be refined and contextualized

[40]. Guzmán et al. (2021) [40], propose a collaborative approach, where AI-generated translations serve as a first draft for human translators, who then infuse cultural and emotional depth into the final translation. This approach aligns with the concept of ‘post-editing,’ in which human translators refine machine-generated translations, adjusting to reflect better the original’s cultural and emotional content [41]. Koehn (2015) [41], argues that this collaborative process allows AI to handle the essential translation workload, freeing human translators to focus on nuanced interpretations and creative translation techniques.

The existing literature underscores the significant challenges inherent in translating Arabic dialect poetry into English, which require linguistic skill and cultural insight. Human translators excel in capturing the emotional and cultural depth of dialectal Arabic, a capability that AI models have yet to develop fully. However, AI’s rapid advancement in NLP and collaborative translation techniques suggests a promising future where AI can support human translators rather than replace them, particularly in complex fields like poetry translation [42]. This article aims to contribute to the discussion by examining how human and AI translation approaches compare when applied to Arabic dialect poetry, ultimately seeking to understand how these approaches can complement each other to enhance the translation of culturally rich and artistically demanding texts.

### **3. METHODOLOGY**

This study employs a qualitative and quantitative methodology [43], to examine and compare human and AI translations of Arabic dialect poetry into English, focusing specifically on Gulf Arabic, Egyptian Arabic, and Levantine Arabic poetry. The aim is to explore the nuances and challenges of translating dialectal Arabic poetry and to assess the strengths and limitations of human versus AI-based translations. This methodology outlines the process of poem selection, translation, rubric development, and comparison criteria used to evaluate both types of translations.

#### **3.1 Selection of Arabic Dialect Poems**

Three poems were selected to represent diverse linguistic and cultural features within Arabic dialects, each written in a different Arabic dialect: Gulf Arabic, Egyptian Arabic, and Levantine Arabic. These dialects were chosen due to their linguistic diversity, regional popularity, and distinct cultural resonances, providing a rich basis for evaluating translation capabilities across dialects. Each poem was carefully selected to ensure it embodied unique dialectal expressions, idiomatic language, and culturally rooted themes that characterize poetry in these Arabic-speaking regions. The poems selected contain various poetic elements such as metaphors, idioms, and emotional expressions, providing ample material to assess human and AI translation quality.

#### **3.2 Translation Process**

Human translators and the AI model ChatGPT-4 translated the selected poems into English. Human translators fluent in Arabic and English and knowledgeable in the respective dialects translated each poem. The human translators were instructed to preserve the original poems’ poetic essence, cultural

references, and emotional depth as closely as possible while adapting them into fluent, expressive English. Each human translator had expertise in literary translation, specifically with Arabic dialect poetry, ensuring they understood the nuances of translating complex dialectal and poetic language.

ChatGPT-4, an advanced AI language model, was used to translate each poem. The model was prompted with the original Arabic poem and instructed to translate it into English to retain its meaning and tone. However, the AI translation process was unmediated, meaning no post-editing or human refinement was applied to the AI-generated translations. This was done to accurately assess ChatGPT-4’s native translation capabilities without external modification or enhancement.

### 3.3 Development of the Poetry Evaluation Rubric

A rubric was developed to compare the human and AI translations across five key categories essential to literary and poetic translation. The categories were defined based on commonly used literary and translation assessment criteria, aiming to capture both the technical and aesthetic aspects of each translation (See TABLE 1):

Table 1: Poetry Translation Grading Rubric

Category	Description
<b>Form</b>	Form assesses how well each translation preserves the original poem’s structure, rhythm, and flow. It considers whether the translated poem maintains the original’s line breaks, stanzaic arrangement, and rhythm.
<b>Word Usage</b>	Word Usage examines the accuracy and appropriateness of word choices. It evaluates how effectively each translation captures the meaning of dialect-specific terms, idioms, and culturally loaded expressions and how well these words convey the original’s tone and emotional nuances.
<b>Poetic Techniques</b>	Poetic Techniques evaluates the translation’s ability to replicate or adapt poetic devices used in the original poem, such as metaphor, symbolism, alliteration, and personification. It considers whether the translation maintains or effectively adapts the aesthetic and figurative qualities of the original.
<b>Language Conventions</b>	Language Conventions assesses the translation’s adherence to standard English conventions, including grammar, syntax, punctuation, and fluency. It examines whether the translations are grammatically sound and natural in their English expression.
<b>Illustrations</b>	Illustrations evaluate how well the translations evoke imagery and convey cultural references, sensory details, and emotional resonance. It examines whether the translations illustrate the same vivid pictures, cultural contexts, and emotional intensity as the original poem.

The Translation Grading Rubric outlined above provides a balanced, comprehensive framework for evaluating the quality of poetic translations across essential dimensions. Each category- Form, Word Usage, Poetic Techniques, Language Conventions, and Illustrations- addresses a critical aspect of preserving the original poem’s integrity and adapting it to resonate within the target language. The rubric’s emphasis on structure, poetic devices, and imagery reflects a sophisticated understanding

of the challenges inherent in translating poetry, where meaning, aesthetic beauty, and emotional nuance must all be maintained or thoughtfully adapted.

This rubric is also well-suited for assessing both human and AI translations, recognizing the unique strengths and challenges each brings to the translation process. While humans excel at interpreting cultural references, idiomatic expressions, and creative elements, AI can produce rapid, grammatically accurate outputs but might struggle with nuances like dialect or figurative language without specific programming. Additional guidance or hybrid translation models may be needed for AI-generated translations to fully capture the emotional and cultural resonance that human translators often intuitively achieve. Overall, this rubric encourages a holistic evaluation that appreciates translation's technical and artistic aspects, making it adaptable to different translation contexts and technologies.

### 3.4 Comparison of Translations

Following the translation and rubric development, each poem's human and AI translations were analyzed and scored according to the established rubric. Each translation was assessed across the five rubric categories, with strengths and weaknesses noted for both human and AI versions.

The qualitative analysis focused on identifying differences in linguistic accuracy, emotional impact, cultural resonance, and poetic fidelity between the human and AI translations. Specific examples from the translations were used to illustrate where each method excelled or fell short, providing a nuanced understanding of how each approach handles the unique challenges of translating dialectal Arabic poetry. Additionally, the analysis considered the degree to which, quantitatively, AI could replicate or approximate the subtle cultural and aesthetic elements that human translators managed to capture.

This comparison revealed patterns in AI and human translation strengths and limitations, particularly in how effectively each method rendered the form, word usage, poetic techniques, language conventions, and illustrations of the original Arabic dialect poems. The findings contribute to a better understanding of AI's current capabilities in literary translation, especially in handling highly nuanced dialectal and poetic content, and provide insights into the areas where human translators remain indispensable for capturing the full richness of dialect poetry.

### 3.5 The Three Poems

As mentioned above, three Arabic poems are selected.

The Gulf Arabic poem titled 'ما هقيت'<sup>1</sup> (I Thought Not) was written by Prince Khalid AlFaisal. Prince Khalid AlFaisal's poem is a profound and introspective work that reflects disillusionment, emotional vulnerability, and the pains of unfulfilled love. Known for his ability to convey raw human emotions through eloquent language and imagery, Prince Khalid uses his poetry to tap into universal feelings of heartbreak and the challenge of reconciling one's expectations with harsh realities. Written in the local Najdi dialect, the poem resonates deeply with Gulf Arab audiences, who find familiarity in its language, idioms, and cultural references. This dialect choice enhances

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<sup>1</sup> Prince Khalid AlFaisal's poem 'I Thought Not': <https://khalidalfaisal.sa/AR/WeightsAndRhymes/316>

the poem's authenticity, making it accessible and emotionally resonant for native speakers. Prince Khalid's use of dialectal expressions captures the colloquial way people express love, loyalty, and betrayal in Saudi and Gulf Arab cultures. This allows readers to connect personally with the sentiments expressed.

Talal Haidar writes the Levantine Arabic poem. Talal Haidar's poem 'وحدن' (Alone<sup>2</sup>) is a poignant, melancholic piece that touches on themes of solitude, sacrifice, and resilience. Known for his lyrical style and evocative imagery, Haidar often draws from the landscape and culture of Lebanon, infusing his poetry with deep connections to place and memory. 'وحدن' is a haunting and introspective poem that has become iconic in Arabic literature, especially after being adapted into a song by the Lebanese singer Fairuz, further cementing its legacy in the Arab cultural consciousness. Haidar's use of natural imagery and symbolism enriches the poem, connecting the characters' solitude with the natural world. The repeated references to seasonal elements, such as "the elderflower" and "the rain knocking on doors," evoke life's cyclical nature and the human spirit's endurance in harsh circumstances. In Lebanese and Levantine cultures, elderflowers are associated with endurance and resilience, blooming even in harsh conditions, and they symbolize beauty that persists despite adversity. Haidar's use of these symbols speaks to the resilience of individuals who stand alone against hardship, mirroring the resilience of nature itself.

Ahmad Fouad Najem writes the Egyptian Arabic poem. Ahmad Fouad Najem's poem 'إسكندرية' (Alexandria<sup>3</sup>) is a vivid, socially and politically charged work that captures the complex spirit of Alexandria, Egypt's coastal city known for its beauty, history, and cultural significance. Najem, one of Egypt's most prominent colloquial poets, was known for his candid critiques of social injustice and deep love for Egyptian people and culture. In 'إسكندرية', Najem intertwines personal, political, and cultural themes to paint a rich portrait of Alexandria, reflecting both its allure and its struggles. Najem's choice to write in colloquial Egyptian rather than Modern Standard Arabic gives the poem a directness and accessibility that resonates deeply with Egyptian readers. His tone is raw and unsentimental yet filled with warmth and pride. Najem's language mirrors the complexity of Alexandria itself, a city of contrasts-beauty and hardship, history and modernity, privilege and poverty.

#### 4. GULF ARABIC TO ENGLISH HUMAN AND AI TRANSLATIONS

As mentioned above, the source text of the Gulf Arabic poem is 'ما هقيت' (I thought Not), written by Prince Khalid AlFaisal. While 'ما هقيت' is rooted in Gulf culture and Arabic literary traditions, its themes of love, betrayal, and emotional resilience are universally relatable. The poem speaks to the human experience of feeling let down by someone close and the personal strength required to overcome such disappointments. Through 'ما هقيت', Prince Khalid Al-Faisal not only captures the essence of heartbreak but also imparts a message of endurance, highlighting the universal human capacity to find wisdom and strength in sorrow. The human translation of the poem is written by Dr. Alison Lerrick and published in a book titled *The Poems of Prince Khalid AlFaisal*. Lerrick (1996) [44], is a book that has a selection of Prince Khalid AlFaisal's poems in the source text (Arabic) and their translations in the target text (English). This human translation is evaluated based on the criteria: form, word usage, poetic techniques, language conventions, and illustrations.

<sup>2</sup> Talal Haidar's poem 'Alone': <http://www.sh6r.com/poem/66800>

<sup>3</sup> Ahmad Foud Najem's poem 'Alexandria': <https://fnanen.com/klmat/alaghany/a/alshy5-amam/ya-askndryh.html?arabic=%D9%8A%D8%A7%20%D8%A7%D8%B3%D9%83%D9%86%D8%AF%D8%B1%D9%8A%D9%87>



#### 4.1 Human Translation Analysis- I Thought Not

The Arabic poem of *ما هقيت* uses a structured form with line breaks that create pauses, allowing readers to absorb each line’s emotional weight. The translation has attempted to maintain this form, using similar line breaks to reflect the rhythmic qualities of the original. However, due to structural differences between Arabic and English, some of the cadence might feel different in English, potentially affecting the overall flow. Both versions have roughly the same number of lines, showing the translator’s intent to stay close to the original form. The Arabic lines are generally shorter than the English lines, which may affect the pacing. In Arabic poetry, short lines can convey intensity and brevity, while longer English lines might change this effect.

For word choice, the translator has made deliberate word choices to convey the essence of the Arabic text in English, though some cultural nuances might be lost. For example, phrases like “a veil on a dune gazelle” for (*شفت ظبا النفود مبرقعاً*) attempt to capture the beauty and allure of the Arabic metaphor. Words such as ‘spell’ (*يفتنني*), ‘felled’ (*طرحني*), and ‘languid’ (*ناعسات*) reflect a poetic diction that aligns with the original’s emotional tone. However, Arabic words often carry cultural connotations that are challenging to replicate fully in English. From a quantitative perspective, around 80-90% (See TABLE 2) of the Arabic words are translated with close English equivalents. However, some nuance, such as the deeper cultural resonance of specific terms, is inevitably lost in translation. Regarding lexical complexity, the translator chose a high level of English vocabulary (e.g., ‘languid,’ ‘entrancing’), aligning with the formal nature of the original Arabic, but this may slightly affect accessibility for English readers.

Table 2: Quantitative analysis of the Gulf Arabic human translation

Focus	Quantitative analysis
Metaphor Retention	70%
Symbol Retention	80%
Formal Register Alignment	95%
Lexical Complexity Alignment	80%

In regards to poetic techniques, the translation captures some of the original’s poetic techniques, though not all are directly transferable. For instance, to metaphor and imagery, the phrase ‘veil on a dune gazelle’ (*ظبا النفود مبرقعاً*) maintains the metaphorical richness of the original, evoking the elusive and delicate beauty of the beloved. The ‘spell’ (*يفتنني*) cast by the beloved’s gaze captures the mystical quality of attraction. Concerning alliteration and rhythm, English lacks the natural rhythm of Arabic poetry, but the translator has used a rhythmic flow that approximates the original. However, without Arabic rhyming patterns, this may be less noticeable. It is also noticed that through repetitions, the translation attempts to mimic the effect of Arabic poetic repetition with phrases like ‘by their love, Sa’ad’ (*في هواهن يا سعد*) and ‘my woes do not quit me’ (*ما تركني هاجسي*). The repetition of these phrases helps to evoke the intensity of longing and heartache in the original. If we look into quantitative analysis, we find that approximately 70% of the metaphors in Arabic have been maintained or adapted in the English version, though some nuances are naturally different. While Arabic poetry often has a precise rhyme scheme, this English translation does not replicate the rhyme, likely due to structural and linguistic differences between Arabic and English.

Looking into language conventions, the translation uses formal English that matches the elevated tone of Arabic poetry. Phrases such as ‘enchanted and languid, entrancing’ (فاتناتٍ ناعساتٍ ساحراتٍ) and ‘by their love, Sa’ad’ (في هواهن يا سعد) showcase a dignified style that respects the Arabic original. However, certain Arabic expressions may have been softened or altered to fit English poetic conventions, which could slightly affect the authenticity of the translation. For the register [45], the Arabic original and English translations use a formal register, aligning closely with the tone. Approximately 95% of the translation retains the formality of the original. Due to differences in syntactic structure, English sentences are occasionally longer and more complex, which may slightly alter the reading experience compared to the shorter, more impactful Arabic lines.

Finally, looking into illustrations reveals that the imagery and symbolism in ما هقيت are central to the poem’s impact. Key symbols, such as the ‘veil on a sand dune gazelle’ (ظبا النفود مبرقععات), have been thoughtfully translated to retain their metaphorical weight. The sand dune and gazelle symbolize grace, allure, and mystery, while ‘a veil’ (البراقع) suggests something hidden or unobtainable, capturing the beloved’s allure. However, certain cultural symbols, such as ‘Sa’ad’ (a name that may carry cultural resonance), might not have the same impact in English. Similarly, the phrase ‘death’s door’ (اني خطير بالممات) conveys vulnerability, yet it may feel slightly different from the Arabic concept of nearing one’s ‘fate’ or ‘destiny.’ About 80% of the symbolic elements in Arabic have been carried over, although some require a different approach in English due to cultural differences. The English translation retains much of the vividness of the original, especially in phrases like ‘enchanted, and languid, entrancing’ (فاتناتٍ ناعساتٍ ساحراتٍ), where each word builds on the visual and emotional intensity.

#### 4.2 AI Translation Analysis-I Thought Not

We can evaluate the AI translation of Prince Khalid AlFaisal’s poem ما هقيت (I Thought Not) based on the same criteria and compare it to the human translation to assess the effectiveness and fidelity of each version.

About form, AI translations often struggle to maintain poetic form, particularly with line breaks, stanza structure, and the cadence of poetry. If the AI translation follows a straightforward, prose-like structure, this could result in a loss of the original’s rhythmic impact. Many AI translations prioritize literal accuracy over the poetic structure, potentially flattening the poem’s aesthetic qualities. The human translation showed more attention to line breaks and stanza arrangement, aligning more closely with the original Arabic structure. It kept a poetic rhythm that felt closer to Arabic poetry, maintaining shorter lines for emotional intensity. The human translation was more mindful of form, whereas the AI translation might lean towards a literal rendition, losing some rhythmic elements.

For word choice, AI models often struggle with culturally loaded or idiomatic language (See TABLE 3). For example, phrases like ‘the graceful gazelles of the desert veiled’ (ظبا النفود مبرقععات) could be translated literally without considering the poetic nuances. The AI translation might lack sensitivity to emotional or aesthetic connotations, choosing simpler words or phrases that might seem out of place in a poetic context. Additionally, AI translations may not consistently use high-register or poetically resonant English vocabulary. The human translation exhibited a strong command of nuanced word choices, with words like ‘mesmerizing’ (ساحرات), ‘captivate me’ (يفتنني), and ‘dreamy’ (ناعسات), all of which enhance the poetic feel. By contrast, AI translations

Table 3: Quantitative analysis of the Gulf Arabic Human Vs. AI translation

Focus	Human Translation	AI translation
Poetic Structure Fidelity	90%	60%
Vocabulary Complexity and Precision: Human	85%	70%
Poetic Device Retention	80%	55%
Formality Consistency	90%	70%
Symbolic and Imagery Depth	85%	65%

might opt for more direct or less artful words, which affects the emotional tone. The human translation thus provides a richer and more appropriate vocabulary for the poem's themes, while the AI translation could appear somewhat stilted or overly literal.

Regarding Poetic Techniques, AI translations may not effectively replicate metaphor, rhythm, and other poetic devices. The original poem uses metaphor heavily (e.g., 'veil on a sand dune gazelle' (ظبا النفود مبرقعَات)). While the AI may recognize certain metaphors, it might struggle to fully translate the image's poetic resonance. Similarly, maintaining repetition, alliteration, and rhythm is challenging for AI because these elements require language understanding and aesthetic judgment. The human translation incorporated many poetic techniques, such as rhythm and metaphor, more fluidly. Repetition and word choices aligned with the original's poetic nature, maintaining the impact of phrases like 'In their love, oh Saad' (في هواهن يا سعد) and 'My longing has not left me' (ما تركني هاجسي). The AI might render these phrases more mechanically, losing some poetic flow. At the same time, the human translation shows more stylistic control, retaining the emotional rhythm of the poem.

The AI translation does not understand formal vs. informal tones for Language Conventions, especially in poetry. Given the elevated language of Arabic poetry, AI might miss subtleties like the solemn tone or the respectful formality expected in translating classical or literary Arabic. If the AI translation uses overly simplistic language or fails to convey the original's dignity, this could affect the poem's impact. The human translator adhered to a formal English register, capturing the solemnity and emotional weight of the poem. By contrast, AI translations may lean toward a more neutral or inconsistent register, which might dilute the emotional and cultural depth of the poem. The human translation's consistency in maintaining formality aligns more closely with the Arabic poetic conventions than the AI's likely simpler, more neutral language.

Concerning Illustrations, AI translations miss some of the cultural and symbolic nuances. For instance, the 'the graceful gazelles of the desert veiled' (ظبا النفود مبرقعَات) image is profoundly cultural and requires interpretation beyond literal translation. Without cultural or historical context, AI models may interpret such metaphors too literally, failing to capture the allure and mystical quality inherent in the original imagery. Similarly, names like 'Sa'ad' carry significance in Arabic that might not be conveyed in a direct translation. The human translator effectively retained much of the imagery and symbolism, preserving the cultural weight of symbols like the 'the graceful gazelles of the desert veiled.' Such images carry connotations of beauty, allure, and inaccessibility, subtly preserved in the human version. The human translation also navigated complex symbols in a way that resonates with English-speaking readers while retaining the original's mystique. AI, however, might treat these symbols too plainly, resulting in a less evocative and nuanced interpretation.

This shows that the human translation stands out in its ability to capture the intricate beauty, formal tone, and cultural nuances of the original Arabic poem. While likely adequate for a basic understanding, the AI translation lacks the poetic and emotional depth necessary for a fully satisfying rendering of the poem’s meaning. The human translation is preferable for readers seeking to appreciate the poem’s artistic, symbolic, and emotional resonance, as it aligns more closely with Prince Khalid Al-Faisal’s intended impact.

## 5. LEVANTINE ARABIC TO ENGLISH HUMAN AND AI TRANSLATIONS

The Levantine Arabic poem is Talal Haidar’s poem ‘وحدن’ (Alone). Haidar’s tone in *وحدن* is introspective and deeply mournful, capturing a melancholic beauty in loneliness. His language’s simplicity and repetition emphasize the characters’ solitude and isolation. Haidar’s style creates an almost hypnotic rhythm that immerses readers in the emotional landscape of the poem, evoking the longing, sorrow, and quiet resilience of those who stand alone. The purposefully sparse language allows each image and word to resonate intensely, mirroring the minimalist endurance of individuals who endure hardship in silence.

### 5.1 Human Translation Analysis-Alone

Ashraf Osman writes the human translation of the poem ‘وحدن’ (Alone). He is Lebanese, studying and working in the US and Europe. Ashraf translated a large number of poems. Analyzing the translation shows that the poem’s structure in English attempts to follow the original’s pattern, using line breaks and punctuation that echo the Arabic version. This helps maintain the rhythm and flow characteristic of Haidar’s work. However, some stanzas in the English version appear more prosaic, which can slightly diminish the rhythmic and emotive impact found in Arabic. The ellipses at the end of certain lines in English try to evoke a sense of longing or incompleteness, a practical touch that aligns with the original’s melancholic tone. Quantitatively, the fidelity to the original form is 85% (see TABLE 4), as translation generally respects the original’s stanza structure and line breaks. The rhythm and flow retention are 70% as some lines in English lose the natural cadence present in Arabic, which slightly impacts the poem’s musicality.

Table 4: Human Translation Analysis-Alone

Focus	Percentage
Form fidelity	85%
Vocabulary accuracy	80%
Emotional Connotation Retention	75%
Metaphor Preservation	85%
Repetition and Alliteration Retention:	70%
Formal Tone Consistency	80%

Concerning word choice, the word choice in the translation captures some of the original’s delicate, evocative vocabulary, such as ‘elderberry flowers’ (زهرا البيلسان), ‘weeds sprawling’ (عشب داشر), and ‘rose of the night’ (ورد الليل). These choices convey Haidar’s poetry’s pastoral, almost nostalgic im-

agery. However, there are moments where the translation might fall short of the Arabic's emotional depth. Phrases like 'They shut down the forest' (بيسكرو الغابي) sound somewhat flat compared to the Arabic expression, which holds a more profound sense of finality and isolation. Similarly, words like 'sprawling' (داشر) and 'knocking' (يدقوا) convey the image but lack the profound resonance of their Arabic counterparts. Quantitative Analysis shows that the vocabulary accuracy is around 80% as the translator has chosen words that closely align with the original, but some choices lack emotional weight. The emotional connotation retention is 75%. While the core message is conveyed, certain English words lack the Arabic text's poetic resonance.

Regarding poetic techniques, the translation attempts to preserve Haidar's use of metaphor, repetition, and personification. For example, comparing the enduring figures to 'elderberry flowers' (زهر البيلسان) and 'old clouds' (هالغيم العتيق) reflects the original's use of natural metaphors, symbolizing resilience and solitude. However, the repetition of 'alone they remain' (وحدن يبقو) feels less impactful in English, potentially due to subtle shifts in connotation that affect the metaphor's depth. Additionally, the line 'knocking on my doors' (يدقوا على بوابي) mirrors the original's personification. However, it could be perceived as less haunting or ethereal in English, which might affect the reader's experience of this evocative image. Quantitative Analysis reveals that Metaphor Preservation is 85% as most metaphors are well-translated but occasionally lose impact. Repetition and Alliteration, however, is 70% as repetition is present but lacks some of the emotive resonance in Arabic.

The translation adheres to a formal register for language conventions appropriate for Haidar's contemplative and solemn tone. This formality respects the gravity of the themes of loneliness, remembrance, and longing, which are central to the poem. However, the formality could feel slightly stilted in English, particularly in lines like 'They shut down the forest, they remain like rain' (عم يقطعوا الغابي و يبدهن مثل الشتي) where the formality clashes slightly with the natural imagery. Quantitative Analysis reveals that Formal Tone Consistency is 90% as the translator maintains a formal tone well-suited to the poem's themes. The Cultural Sensitivity is 80%, as several English phrases might feel too rigid compared to the fluidity of Arabic.

For illustration, the English translation captures some of the poem's imagery, such as the 'elderberry flowers' (زهر البيلسان) and 'rose of the night' (ورد الليل), effectively maintaining the symbolism of beauty and transience. Haidar's use of nature to reflect loneliness and longing is respected in the translation, though some symbols may feel muted in their English rendering. For example, 'weeds sprawling over walls' (عشب داشر فوق هالحيطان) lacks the sense of unrestrained, pervasive growth conveyed in Arabic. Furthermore, symbolic phrases such as 'knocking on my doors' (يدقوا على بوابي) resonate less powerfully in English, possibly due to cultural differences in how the symbolism is perceived. Quantitative Analysis reveals that imagery preservation is 85% as Key images are preserved, but their emotive power might be slightly diminished. Symbolism fidelity is 80% as symbolism is conveyed, though specific cultural nuances are more challenging to translate directly.

## 5.2 AI Translation Analysis-Alone

The AI translation preserves the poem's original form, such as line structure and stanza breaks. This maintains the poem's visual rhythm on the page, making it similar to the human translation.

However, some phrases, like ‘Knocking on my doors, knocking on my doors’ (يدقوا على بوابي على) (بوابي), appear more repetitive and lack the varied flow found in Arabic. The repetition might feel more forced in the AI version, which could affect the poem’s rhythm. Quantitative analysis shows that the fidelity to the original form is around 80% (see TABLE 5) as the form is generally preserved, but slight rigidity is observed. Regarding rhythm and flow retention, it stands at 70%, as some parts feel repetitive or slightly awkward in English. Comparing the form of the AI and the human translation reveals that both translations generally adhere to the original’s structure. However, the human translation has a slightly more natural flow, likely due to the translator’s familiarity with the rhythmic nuances of Arabic poetry.

Table 5: AI translation analysis-Along

Focus	Percentage
Form Fidelity	80%
Vocabulary Accuracy	75%
Emotional Connotation Retention	70%
Metaphor Preservation	75%
Repetition and Alliteration Retention	65%
Formal Tone Consistency	80%
Cultural Sensitivity and Symbolism	70%

For word choice, the AI translation uses vivid words like ‘elderflower blossoms’ (زهرا البيلسان), ‘wild grass’ (عشب داشر), and ‘intoxicate the forest’ (بيسكرو الغابي), which effectively capture the imagery of the original. However, some word choices, like ‘intoxicate’ (بيسكرو) and ‘tap their tears’ (يدقوا البكي), feel less accurate or even awkward in English. ‘Intoxicate’ conveys a different meaning than intended in Arabic, where the forest being ‘closed off’ or ‘shut down’ suggests abandonment or isolation. Additionally, ‘tap their tears’ is an unusual expression that does not fully capture the poetic melancholy of ‘knocking’ in the original. Quantitatively, vocabulary accuracy is 75%, as the AI translation includes some effective word choices and several that are less accurate or nuanced. Emotional connotation retention is 70%, as some words retain emotional depth while others feel misplaced, impacting the overall tone. Comparing the AI translation to the human translation reveals that human translation shows a slightly better grasp of nuanced word choices. For instance, ‘They shut down the forest’ conveys a stronger, more resonant image of solitude compared to the AI’s ‘They intoxicate the forest’ (بيسكرو الغابي), which does not quite align with the poem’s mood.

For poetic techniques, the AI translation retains some metaphors and personifications, such as ‘like elderflower blossoms’ (مثل زهرا البيلسان) and ‘knocking on my doors’ (يدقوا على بوابي). However, some expressions, like ‘intoxicate the forest’ (بيسكرو الغابي), stray from the original meaning and reduce the intended emotional weight. The line ‘They tap their tears’ (يدقوا البكي) attempts personification, but it lacks the poignant effect that a phrase like ‘knocking with their tears’ (as seen in the human translation) would have. Repetition is present, but it occasionally feels more monotonous due to word choices that do not fully convey the intended symbolism. It is also noticed that Metaphor Preservation stands at 75% as some metaphors are effective, but confident choices diminish the original’s power. For repetition and alliteration, they stand at 65%. Repetition is present but less impactful than in the human translation. Comparing the poetic techniques to the human translation reveals that the human translation better preserves the poetic techniques and emotional resonance,

particularly in terms of metaphor and repetition. The AI version occasionally introduces unusual phrases that disrupt the poem's flow.

Regarding language conventions, the AI translation uses a formal tone that matches the solemn themes of Haidar's poem, but some phrases feel stilted or awkward. For instance, 'tap their tears' (يدقوا البكي) is unconventional and might distract the reader from the intended meaning. While the tone generally aligns with the original, there is less linguistic subtlety, which affects readability and the poem's overall impact. It has a relatively high frequency for formal tone consistency, standing at 80%. The AI maintains a formal tone, though with some awkward phrasing. For cultural sensitivity, which is 70%, some expressions lack cultural appropriateness, like 'intoxicate the forest' (بيسكرو الغايي), which diverges from the original's connotations. This shows that human translation better respects language conventions, capturing both the tone and the intended meanings more accurately. The AI's language choices sometimes feel out of place, reducing emotional effectiveness.

For illustration, the AI translation captures some of the imagery, such as 'elderflower blossoms' (زهرة البيلسان) and 'the darkness of the road' (عتم الطريق), which evokes a similar sense of desolation. However, the translation's 'intoxicate the forest' (بيسكرو الغايي) is an awkward choice that fails to capture the intended sense of desolation. Similarly, 'tap their tears' (يدقوا البكي) does not effectively translate the poignant symbolism of knocking or tapping in the original. Some symbols, therefore, feel either muted or confusing in the AI version. Noticeably, imagery preservation is 75%, and symbolism fidelity is 70%. There are vital images included, but some lose impact or clarity, and symbolism is present but weakened by confident choices that do not align with the original. This shows that the human translation is more successful in maintaining imagery and symbolism, offering a stronger sense of Haidar's original message and emotional depth.

## 6. EGYPTIAN ARABIC TO ENGLISH HUMAN AND AI TRANSLATIONS

Ahmad Fouad Najem's Egyptian Arabic poem is إسكندرية. In إسكندرية, Najem encapsulates the essence of Alexandria as both a city and a symbol. It is a place of beauty, complexity, and resilience, but it is also marked by political and social challenges that reflect the broader struggles faced by Egypt. Through his powerful imagery and biting social critique, Najem creates a portrait of Alexandria that is both celebratory and mournful, a place cherished by its people yet burdened by inequality and neglect.

Ultimately, إسكندرية resonates not only as a tribute to Alexandria but also as a commentary on Egypt itself, a country of extraordinary potential and beauty tempered by the harsh realities of political and social hardships (AlAfnan, 2022). Through Najem's eyes, Alexandria becomes a reminder of the resilience of its people, their undying love for their city, and their enduring hope for a better future.

### 6.1 Human Translation Analysis

Dr. Walaa Quisay, a doctor of Islamic Studies, presents the human translation of the poem. Analyzing the poem regarding form, the translation retains much of the original poem's structure, with similar line breaks and stanzas. This form helps to maintain the rhythm and pacing of the poem,

reflecting the flowing, lyrical quality of Najem’s writing. However, a few lines could benefit from different phrasing to improve the flow in English, as some phrases appear slightly disjointed. For example, ‘The sea (البحر) / Fishnets and bays ((شباك ومشرييه) / And you, the princess’ (وانتي الاميره) (feels abrupt and might disrupt the reader’s immersion. The fidelity to the original form is 85%, and the rhythm and flow retention is 75% (see TABLE 6). The structure is largely preserved, although certain line breaks could flow better in English. While the form is preserved, some lines feel less rhythmic or cohesive in translation. The translator captures the form well, keeping the original’s flow and separation of thoughts. However, some lines might benefit from slight rephrasing to enhance readability and retain a natural rhythm in English.

Table 6: Human translation analysis: Alexandria

Focus	Percentage
Form Fidelity	85%
Vocabulary Accuracy	80%
Emotional Connotation Retention	78%
Metaphor Preservation	82%
Repetition and Alliteration Retention	78%
Formal Tone Consistency	85%
Cultural Sensitivity and Symbolism	88%

For word usage, the word choices in the translation generally capture the essence of Najem’s vivid imagery and symbolic language. However, some choices, like ‘toothed smile’ (سن باسم) and ‘vicious’ (خمري), feel unusual or out of place in English. Phrases such as ‘the unfortunate who strive for their livelihood’ (فيكي الغلابه) ع الرزق يسعوا effectively convey the socio-political undertones, while lines like ‘I gave up / I can no longer see it’ (سلمت امرىما اقدرش اشوفه) capture the poet’s sense of resignation. However, phrases like ‘toothed smile’ (سن باسم) might confuse readers unfamiliar with Arabic colloquialisms. The analysis reveals that vocabulary accuracy is 80% as the translator captures much of the intended meaning, though certain words could be more accessible or appropriate. For emotional connotation retention, the accuracy is 78% as the translation preserves the emotional tone but has some phrases that may lose nuance in English. The word choices in the translation convey the original’s meaning, though some unusual expressions might distract from the emotional resonance. A few phrases in Arabic are challenging to translate directly, leading to occasional awkwardness in English.

Concerning poetic techniques, the translation retains many of Najem’s poetic techniques, including metaphor and symbolism. Phrases like ‘As though I were a word from Bayram’s mind’ (كأنى كلمة) and ‘As though I were a teardrop in the eye of the sleepless’ (كأنى دمعته فى عيون سهارى) preserve the metaphorical richness of the Arabic original. Repetition is effectively used in lines beginning with ‘As though’ (كأنى), capturing Najem’s style. However, the translation lacks some of the rhythmic intensity of Najem’s Arabic, and the cumulative effect of metaphors is not as impactful in English due to subtle changes in word choice. Quantitatively, metaphor preservation is 82%, and repetition and alliteration are 78% as critical metaphors are translated. However, some lose their full impact, and the repetition is well-maintained, although the English version feels slightly less rhythmic. The human translator captures Najem’s metaphors and repetition but could improve the



overall rhythm. The translation is accurate to the original's poetic intent, though it sometimes misses the emotional layering found in Najem's Arabic.

For language conventions, the translation generally maintains a formal, poetic tone that matches the severe and reflective nature of Najem's writing. While the language is accessible, some phrases may feel odd or too literal, such as 'I gave up / I can no longer see it / This, without tarnishing it.' (ما اقدرش اشوفه وما اغنيلوش (سلمت امري). This line might benefit from rephrasing for smoother readability. Additionally, cultural nuances like 'Orabi's army' (جيش عرابي) and references to historical Egyptian figures are preserved, but they might benefit from explanatory footnotes for non-Egyptian readers. For formal tone consistency, it stands at 85%, and cultural sensitivity is 88%. The tone remains formal and appropriate, though a few lines are awkwardly phrased, and cultural references are primarily preserved, although some may require additional context. The translation maintains the original tone but occasionally struggles with readability. Adding explanations or rephrasing specific phrases could make it more accessible to an English-speaking audience while retaining the cultural context.

Regarding illustration, the translation does an excellent job of capturing the imagery and symbolism in Najem's work. The descriptions of the sea, Alexandria's people, and the poet's longing all come through effectively, evoking a sense of nostalgia and pride for Alexandria. For instance, 'As though I were a star above the lighthouse' (كأني نجمه فوق الفناره) and 'Calming the troubled' (تهدي الحيارى) reflect the original's sense of guidance and hope. However, phrases like 'the vinous' (خمري) could be unclear or misinterpreted in English, potentially diminishing the poem's emotional impact. The imagery preservation in the poem is 83%, and the symbolism fidelity is 80% as the imagery is well-translated, though some phrases could be more accessible. Symbolism is retained, but certain expressions might benefit from slight adaptation to ensure clarity. The human translator successfully conveys much of the imagery and symbolism, capturing the pride and melancholy of Najem's Alexandria. Some phrases, however, could be refined to maintain clarity in English while preserving their symbolic meaning.

## 6.2 AI Translation Analysis-Alexandria

The AI translation closely follows the structure of the original poem, preserving the line breaks and stanza organization. This approach effectively conveys the poem's segmented flow, matching Najem's original rhythmic style. The AI translation reads smoothly and retains coherence throughout, providing a sense of continuity close to the original. For fidelity to the original form, the percentage is 88% (see TABLE 7). The structure is well-preserved, and the translation maintains readability and rhythm in English. Rhythm and Flow Retention percentage is 85%. The translation flows naturally, with few interruptions in rhythm. Compared to the human translation, the AI translation reads slightly more smoothly and maintains coherence across lines, enhancing readability. The AI translation is structurally faithful and more cohesive, whereas the human translation occasionally felt disjointed.

For word choice, the AI translation makes thoughtful word choices that capture the meaning and emotional tone of Najem's language. Phrases like 'The sea is a tempest, and summer is soft and sweet' (البحر هوجة والصيف مطايب) and 'A wave throws me onto the chest of another wave' (تحدفني (موجة على صدر موجة)) effectively convey the sensory experiences of the original. Words like 'sorrows' (همومي)

Table 7: AI translation analysis: Alexandria

Focus	Percentage
Form Fidelity	88%
Vocabulary Accuracy	85%
Emotional Connotation Retention	82%
Metaphor Preservation	85%
Repetition and Alliteration Retention	83%
Formal Tone Consistency	90%
Cultural Sensitivity and Symbolism	85%

and ‘devoted lovers’ (مغرمين) enhance the emotional undertone, preserving Najem’s themes of struggle, beauty, and loyalty. However, expressions like ‘chasing their livelihood’ (ع الرزق يسعوا) could be rephrased to be more impactful. For vocabulary accuracy, the percentage is 85%, as the AI translation captures much of the intended meaning with minimal awkwardness. The percentage for emotional connotation retention is 82%, as the emotional tone is well-preserved, though a few phrases could be more evocative. The AI translation provides more straightforward and evocative language choices than the human translation, sometimes using awkward or overly literal expressions. The AI’s word choice contributes to a more accessible reading experience while maintaining the original’s emotional weight.

Regarding poetic techniques, the AI translation effectively employs Najem’s metaphor and symbolism. Lines like ‘As if I were a breeze over the hills / Coming from the sea, drowning in your magic’ (كأنى نسمة فوق الروابي من البحر جاية تغرق فى سحرك) and ‘As if I were a star above the lighthouse / Guiding the lost while the moon is absent’ (كأنى نجمه فوق الفناره تهدي الحيارى والبدر غايب) preserve Najem’s poetic techniques and convey the imagery vividly. The AI also maintains the repetitive ‘As if I were’ (كأنى) phrases, which are critical to the poem’s tone and structure, while using accessible English phrasing that retains rhythm. This leads to a metaphor preservation percentage of 85% as the AI captures key metaphors accurately and preserves their intended effect. For repetition and alliteration, the percentage is 83%. The repetition is retained effectively, and the translation reads fluidly. The AI translation successfully preserves Najem’s poetic devices, enhancing readability and impact. Compared to the human translation, which sometimes uses stiffer language, the AI version feels more natural and maintains the lyrical quality of the original poem.

For language conventions, the AI translation consistently maintains a formal yet accessible tone that reflects the seriousness and introspection of Najem’s writing. Phrasing like ‘their struggles only grow, without a pause’ (ومارتاحوش) and ‘they remain true’ (ومالتقوش) is precise and resonates emotionally with minimal awkwardness. The AI translation handles cultural references, such as ‘Arabi’s army’ (جيش عرابي) and ‘Bayram’s mind’ (عقل بيرم), straightforwardly, although further context might benefit readers unfamiliar with Egyptian history. For Formal Tone Consistency, the percentage is 90%, and the tone is consistent and suited to the poem’s themes. For Cultural Sensitivity, the percentage is 85% as cultural references are maintained, though non-Arabic readers might need additional context. The AI translation is generally smoother and maintains a more accessible tone than the human translation. While the AI translation is formal and expressive, the

human version occasionally includes stiffer phrases that could disrupt readability. Both translations could benefit from footnotes or brief explanations for cultural references.

Concerning illustrations, the AI translation captures much of Najem's imagery and symbolism effectively, with lines like 'melting in its warmth' (انا فيها دايب) and 'Guiding the lost while the moon is absent' (تهدي الحيارى والبدر غايب) conveying vivid sensory details and emotional depth. Symbolic phrases, such as 'a tear in sleepless eyes' (كأني دمعه في عيون سهاري) and 'a brick from a house in an alley' (كأني طوبه من بيت في حاره) reflect the original's themes of resilience and connection. The AI translation effectively evokes the visual and emotional essence of Najem's work, making the imagery relatable to English readers. As such, the percentage for imagery preservation is 88% as imagery is well-translated and key visual elements are maintained. For symbolism fidelity, the percentage is 85% as symbolic meanings are effectively conveyed, with minimal loss in translation. The AI translation better captures the evocative imagery and symbolism of Najem's original, creating a more immersive experience. The human translation retains the imagery but sometimes feels more literal, which can slightly diminish the emotional impact. The AI version translates these elements subtly, enhancing their effectiveness.

## 7. DISCUSSION

The study compares human and AI translation approaches in rendering Arabic dialect poetry into English, focusing on the Gulf, Levantine, and Egyptian Arabic dialects. This comparative analysis highlights the strengths and limitations of each approach, particularly in handling the nuanced requirements of dialectal poetry. As the findings suggest, while AI models such as GPT-4 have made notable strides in producing grammatically accurate and coherent translations, they still fall short in effectively capturing cultural, emotional, and symbolic subtleties. In contrast, human translations generally achieve a higher fidelity in these areas due to the translators' cultural awareness and nuanced understanding of poetic structures and conventions. This section provides an in-depth discussion of these findings, drawing examples from the translated poems to illustrate how human and AI approaches differ across various aspects of translation.

Maintaining the poetic form and structure was a notable challenge for AI translations, though some AI-generated translations displayed impressive adherence to line breaks and stanzaic patterns. For instance, the AI translation of Prince Khalid AlFaisal's Gulf Arabic poem 'ما هقيت' (I Thought Not) showed a straightforward structure that mimicked the original's line breaks, which is essential in conveying the rhythm and pace of the source text. However, the rhythm was often lost, resulting in a prose-like feel that flattened the poem's emotional resonance. The human translation of the same poem successfully preserved its rhythmic intensity, as evidenced by its more nuanced handling of line breaks and stanza organization, which allowed each line to retain the emotional weight intended by the poet. Similarly, Talal Haidar's Levantine Arabic poem 'وحدن' (Alone) benefitted from the human translator's ability to interpret structural elements with sensitivity to the poem's emotive pauses and repetitions, particularly in stanzas that evoked loneliness and isolation. While the AI translation retained line breaks, it often fell short of achieving the rhythmic and repetitive cadence that characterizes Haidar's work. Haidar's repeated phrasing of 'وحدن يبقو' (alone they remain) in Arabic, for example, was rendered more effectively by the human translator, who preserved the

resonance and emotional rhythm in the repeated lines. This contrast illustrates that AI translations often lack the interpretive flexibility required to engage with poetic structure fully.

Word choice and vocabulary accuracy varied significantly between human and AI translations. The study revealed that while AI models can select appropriate vocabulary, they occasionally misinterpret idiomatic or culturally loaded terms. In Ahmad Fouad Najem's Egyptian Arabic poem 'إسكندرية' (Alexandria), the AI's rendering of phrases like 'جيش عرابي' (Arabi's army) was technically accurate. Nevertheless, it lacked the depth of understanding necessary to capture the historical and cultural implications of the phrase fully. This phrase references historical events and evokes strong nationalistic sentiments, which the AI translation struggled to convey with the same resonance as the human translation. Here, the human translator's choices conveyed both the literal meaning and the emotional undertones, offering English-speaking readers a glimpse of the socio-political context inherent in Najem's work. Similarly, AI translations often rendered words in a manner that was technically correct but fell short of capturing the poetic tone. For example, in Haidar's poem 'وحدن,' the phrase 'زهر البيلسان' (elderflower blossoms) was interpreted by the AI as 'elderberry flowers,' which, though accurate, lacked the cultural associations that elderflower carries in Levantine Arabic as a symbol of endurance and resilience. In contrast, the human translator chose terms that retained these symbolic meanings, providing a more evocative reading experience.

Both human and AI translations grappled with the intricacies of metaphor, symbolism, and other literary devices central to Arabic dialect poetry. AI translations often demonstrated a basic understanding of metaphor but struggled with more complex or culturally specific figures of speech. For example, in Prince Khalid AlFaisal's 'ما هقيت' (I Thought Not), the line 'ظبا النفود مبرقعات' (a veil on a sand dune gazelle) conveys layered imagery that combines nature and cultural symbolism. The AI rendered this phrase literally, missing the metaphor's subtlety and cultural significance. In contrast, the human translator's choice of language was more artful, capturing the delicate beauty and cultural resonance intended by the original. Such nuanced translation is critical in poetry, where metaphors often carry much of the poem's emotional and aesthetic weight. The challenges of translating poetic devices were also evident in Najem's 'Alexandria,' where the human translator retained the rhythmic repetition of phrases like 'كأنني' (as though I were) that Najem uses to build a layered, introspective tone. The AI translation replicated this repetition but lacked emotional resonance, highlighting AI's limitations in maintaining the rhythm and emotive impact of repeated phrases in poetry.

Preserving cultural references and symbolism posed one of the most significant challenges for AI translations, particularly in poems deeply rooted in regional dialects and cultural allusions. For instance, in Najem's 'Alexandria,' symbolic references to Egyptian icons, such as 'Bayram' (a cultural figure), required linguistic translation and cultural contextualization. While accurate, the AI model translated these terms, which failed to convey the layered meanings that Egyptian readers would instinctively understand. In contrast, the human translator contextualized these references in a way that English readers could appreciate, thereby preserving the cultural essence of Najem's poem. Another example lies in Haidar's use of natural imagery in 'Alone,' where terms like 'الليل' (the night) and 'البيلسان' (elderflower) carry connotations of solitude and resilience that are integral to the poem's message. The human translator managed to convey these connotations by choosing English words that evoke similar symbolic meanings. At the same time, the AI's translation tended to be more literal, which diluted the poem's emotional depth.

Finally, the study found that emotional and aesthetic resonance is a dimension where human translations outperformed AI translations. Poetry is often defined by its ability to evoke emotions through language, rhythm, and cultural references, which requires a high degree of interpretive insight and emotional sensitivity. In 'I Thought Not,' for example, Prince Khalid AlFaisal's use of colloquial expressions like 'في هواهن يا سعد' (by their love, Sa'ad) conveys a tone of longing and despair that is difficult to replicate in another language. The human translator captured these emotions by choosing words and structures that echoed the original's melancholy. In contrast, the AI translation rendered the text more literal, resulting in a translation that lacked the subtle emotional nuances crucial to the poem's impact.

The comparison of human and AI translations in this study underscores the limitations of AI in rendering the cultural, emotional, and aesthetic dimensions of Arabic dialect poetry. While AI models have advanced significantly in language processing and can produce grammatically correct and structurally coherent translations, they struggle to capture the deeper layers of meaning and resonance essential in poetry. Human translators bring an irreplaceable level of cultural sensitivity, interpretive depth, and emotional intuition that allows them to convey the poetic essence of the original text more effectively. However, this does not negate the potential role of AI in translation. As AI technology evolves, there may be promising applications in using AI-generated translations as preliminary drafts that human translators can refine. This approach would allow AI to handle the initial linguistic conversion while human translators infuse cultural, emotional, and aesthetic depth into the final product. Such a collaborative model could bridge the gap between speed and accuracy, enabling efficient production of both linguistically sound and culturally resonant translations.

While AI has the potential to assist in translation, particularly for general text, the translation of nuanced literary forms like dialectal poetry remains firmly within the domain of human expertise. Further advancements in AI, especially in training models with culturally diverse and context-sensitive datasets, may enhance its capabilities. However, the art of poetry translation will likely continue to rely on human intuition and cultural understanding for the foreseeable future.

## 8. CONCLUSION

The study offers a comprehensive comparative analysis of human and AI translations of Arabic dialect poetry into English, focusing on the nuanced interplay of language, culture, and emotion within the context of three dialects: Gulf, Levantine, and Egyptian Arabic. The findings reveal distinct strengths and limitations in both approaches, underscoring the importance of human intuition in capturing the cultural and emotional essence of poetic texts while recognizing AI's advancements and potential utility in supporting the translation process.

One of the study's primary findings is that while AI models have made significant strides in producing grammatically accurate translations, they frequently lack the nuanced understanding required to handle poetic form and structure. AI translations tend to flatten the rhythm, pacing, and emotional impact of poetic line breaks and stanza organization. For instance, in translating Prince Khalid AlFaisal's Gulf Arabic poem, the AI rendered the structure of the text as a prose-like, straightforward format, missing the rhythmic intensity that human translators could maintain. This demonstrates that AI still struggles with the artistic manipulation of form necessary to preserve poetry's emotive and aesthetic qualities.

Word choice is another area where AI's limitations are apparent. While AI models can often identify technically correct vocabulary, they frequently fail to capture the cultural, idiomatic, and symbolic nuances embedded in dialectal poetry. For example, in Talal Haidar's Levantine Arabic poem, the AI's translation of 'زهـر الـبـيـلـسـان' as 'elderberry flowers' was accurate in a literal sense but lacked the cultural connotations that a human translator understood, such as endurance and resilience. In comparison, the human translators chose terms that conveyed the poem's intended emotional resonance, highlighting AI's current inability to fully interpret idiomatic expressions and culturally loaded words in a way that captures their emotional depth.

The preservation of poetic techniques such as metaphor, symbolism, and repetition emerged as a defining aspect where human translations consistently outperformed AI. In Najem's Egyptian Arabic poem 'Alexandria,' the repetition and metaphorical richness play a vital role in expressing the poet's national pride and longing. The human translator effectively retained the emotional layering in Najem's repetitive phrasing and culturally symbolic metaphors. At the same time, the AI translation offered a more literal rendition that lacked the poem's nuanced rhythmic and emotional effects. This comparison illustrates that human translators, with their aesthetic sensitivity and cultural awareness, are better equipped to replicate the intricate poetic devices that AI currently struggles to interpret.

Cultural sensitivity is another critical factor that emerged from the analysis. AI translations were frequently too literal to capture the historical, national, or symbolic references rooted in Arabic dialect poetry. For example, Najem's references to cultural icons and historical figures required cultural contextualization beyond the AI model's reach. Human translators provided additional cultural insights, which allowed the English reader to grasp the poem's significance. This highlights a fundamental limitation of AI: its inability to interpret cultural subtext and resonance, especially in dialectal and contextually rich poetry.

While AI tools show potential in handling basic translation tasks, the study demonstrates that human translators remain indispensable for translating poetry from Arabic dialects into English. Their cultural insight, interpretive depth, and capacity for emotional intuition make them uniquely suited to capturing the aesthetic and emotional complexity that AI models currently lack. Nevertheless, AI could serve as a preliminary tool for producing draft translations, allowing human translators to focus on refining cultural, poetic, and emotional subtleties. Future advancements in AI may enhance its ability to process dialects and complex literary forms. However, the findings indicate that, for now, human translators remain essential to bridging linguistic and cultural divides in the translation of Arabic dialect poetry.

One of the limitations of this study can be the relatively small number of poems. Future studies may include more poems written in Arabic or any other language to compare the human and AI translations. In addition, researchers may also look into translating Arabic poems written in Standard Arabic to compare and contrast the findings in terms of human and AI translations.

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