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# AI and human creativity in audiovisual translation: A comparative study of *Dumb and Dumber*

## Abstract

This article analyzes the translation of humor in the film *Dumb and Dumber* through a comparison of the original English dialogue, the official Polish human translation, and an AI-generated version. The analysis focuses on selected dialogue fragments containing wordplay, slang, and pragmatic ambiguity, which pose particular challenges in audiovisual translation. By applying the concepts of domestication and foreignization, the study shows differences between human and AI translation strategies. The findings show that while AI is capable of producing semantically accurate and fluent translations, it often struggles to reproduce the pragmatic and humorous effects of the source text. Human translations, although less literal, more effectively adapt humor to the target culture and audiovisual context. The article argues that, at present, AI functions best as a supportive tool rather than a substitute for human creativity in humor-based audiovisual translation.

Keywords: audiovisual translation, humor translation, domestication, foreignization, AI translation

## Introduction

The growing presence of artificial intelligence in translation practice has sparked an ongoing debate concerning the role of human creativity in audiovisual translation (AVT). While machine translation systems are grammatically accurate and fluent, they still have difficulty with humor, wordplay, and culture-based meaning. This issue becomes especially clear in comedies, where dialogue relies on language play, implied meaning, and informal registers.

This article examines the differences between Polish translations of selected dialogue fragments from the voice-over version of film *Dumb and Dumber* (1994), directed by Peter Farrelly. The film was chosen due to its dense concentration of verbal humor, colloquial language, and absurd exaggeration, all of which pose well-known challenges for audiovisual translators. The analysis focuses on the original English dialogue (ST),

the officially released Polish translation (TT), and an additional AI-generated version prepared specifically for the purposes of this study.

The main objective of the study is to assess how effectively AI handles humor and pragmatic meaning in comparison with a professional human translator, and to determine which solution offers greater functional adequacy in the context of Polish audiovisual reception.

## Methodological framework

The study uses a qualitative comparison based on audiovisual translation research. Selected dialogue fragments were analyzed in relation to the source text, with particular attention paid to humor mechanisms, register, idiomaticity, and pragmatic effect. The human translation constitutes the official Polish version used in distribution, while the AI-generated translations were produced using ChatGPT with a prompt instructing the system to render the dialogue in a natural and humorous way in Polish.

The analysis aims to examine translational choices and their potential impact on the target audience. Each fragment is discussed in terms of meaning transfer, stylistic adaptation, and communicative effectiveness. The AI translations are treated as independent proposals rather than as errors to be corrected, which allows for a more balanced assessment of their strengths and limitations.

## Characteristics of humor in *Dumb and Dumber*

The humor in *Dumb and Dumber* relies mainly on absurd situations, exaggerated stupidity, and playful use of language. Much of the comedic effect arises from informal speech, intentional misuse of language, and ambiguity. These features are deeply rooted in spoken English and American popular culture, making them particularly resistant to literal translation but suitable for analysis through the lens of domestication and foreignization, two well-established translation strategies frequently discussed in translation studies.

From an AVT perspective, such dialogue requires a high degree of creative intervention. The translator must often depart from the surface meaning of the source text in order to preserve the humorous function in the target language. This creates a natural tension between faithfulness to the source and adaptation to the target culture, a tension that becomes especially visible when AI-generated translations are introduced into the comparison.

In order to interpret the translation choices observed in the analyzed fragments, it is necessary to briefly outline the theoretical framework applied in this study.

## Domestication vs. foreignization

Domestication refers to translation choices that adapt the source text to the linguistic, cultural, and pragmatic norms of the target audience, often at the cost of similarity to the original. In contrast, foreignization preserves elements of the source language and

culture, allowing traces of the original to remain visible in the translation. As proposed by Venuti (1995), these strategies are not absolute opposites but rather tendencies that guide translational decision-making.

In audiovisual translation, domestication is frequently employed to ensure that humor is immediately accessible and effective for the target audience. At the same time, selective foreignization may be justified when the source-language element is widely recognizable or when preserving its form contributes to the comic effect.

This distinction is important here because human translations frequently use domestication, recreating humor with target-culture elements, while AI translations tend to be more literal or foreignizing, keeping the form but weakening the intended effect. Using these two strategies in the analysis makes it easier to see how human and AI translations differ in the examples below.

## Comparative analysis of selected dialogue fragments

Film comedy relies on emotional response, leaving little room for interpretative effort on the part of the viewer. The first fragment, as an example of a company name, illustrates this point.

ST (00:06:19) <sup>1</sup>	TT	AI
Mutt Cutts	Psi Fryzjer	Kundel Cud

Although this fragment is extremely short, it plays a crucial role in the visual and verbal humor of the scene. The name *Mutt Cutts* appears on the dog-shaped van and functions as a visual pun, combining a colloquial term for a mixed-breed dog (*mutt*) with the word *cuts*, suggesting grooming services. The humor relies on phonetic resemblance to a vulgar expression, which becomes clear only in context.

The human translation *Psi Fryzjer* represents a strongly domesticating strategy. The original pun immediately communicates the business type to a Polish audience. While the vulgar undertone of the English original is lost, the solution aligns with Polish dubbing norms, which often prioritize clarity over phonetic wordplay that may not be transferable. The translated name fits naturally with the on-screen image and does not require additional effort from the viewer to understand the humor. Although there are other translation options that could be considered depending on the chosen strategy and the intended humorous effect – such as ‘Wygolona Suka’<sup>2</sup>, ‘PIESzczot’<sup>3</sup> or ‘Psyzyjerski salon’<sup>4</sup> – the final choice depends on the desired tone.

<sup>1</sup> hh:mm:ss

<sup>2</sup> Author’s translation

<sup>3</sup> Author’s translation

<sup>4</sup> Author’s translation

The AI-generated version *Kundel Cud* attempts a different strategy by recreating a rhyme and playful sound pattern. While the phrase is linguistically creative, it introduces semantic ambiguity. The word *cud* (“miracle”) does not directly relate to grooming or cutting, and the connection between the name and the function of the business becomes less transparent. As a result, the joke risks being misunderstood. From the perspective of AVT norms, this solution may interfere with instant comprehension, which is crucial in fast-paced comedic scenes.

This comparison highlights a fundamental difference between human and AI approaches to audiovisual humor. The human translator prioritizes semiotic cohesion and audience processing speed, accepting the loss of one humorous layer to preserve overall communicative effectiveness. The AI, on the other hand, tries to reproduce the wordplay through similar forms, but it ignores the visual context and is not fully clear in meaning. While *Kundel Cud* may seem clever on its own, *Psi Fryzjer* works better in the context of the film.

Another scene refers to a situation when Lloyd and Harry, who are the main characters, leave a note to apologize to the gas man for not paying the bills.

ST (00:21:11 – 00:21:31)	TT	AI
“Dear <b>Gas Man</b> Packed up and drove to <b>Aspin</b> . Sorry about the \$.”	„Drogi <b>Gazowniku</b> Pojechalismy do <b>Aspen</b> .”	„Drogi <b>Gazowy Gościu</b> , spa- kowaliśmy manele i pojecha- liśmy do <b>Aspen</b> . Sorry za kasę!
“Gas Man”	„Gazownik”	„Gazowy Gość?”
How the hell do they know that <b>I got gas?</b>	Skąd wiedzą, że <b>męczą mnie</b> <b>gazy?</b>	Skąd, do cholery, oni wiedzą, że <b>mam gaz?</b> !

This fragment is based on a simple but effective ambiguity. In English, the term *gas man* can refer both to a gas utility worker and, informally, to someone who has intestinal gas. The humor emerges when the character interprets the note in the second sense, creating an unintended and embarrassing misunderstanding. The joke relies entirely on polysemy rather than visual cues, which makes it particularly challenging to translate.

The human translation chooses *gazownik*, a neutral and profession-oriented equivalent. This solution preserves the literal meaning of *Gas Man* as a service worker, but it weakens the ambiguity that triggers the joke. The follow-up line „Skąd wiedzą, że męczą mnie gazy?” attempts to restore the humorous misunderstanding, yet the connection feels less natural in Polish because *gazownik* is not commonly associated with bodily gas. As a result, the joke becomes more explicit and slightly forced.

The AI version takes a more creative approach by using *Gazowy Gość*, which is less standard but more flexible semantically. This phrasing allows for a smoother transition to the bodily interpretation in the following line and makes the misunderstanding more immediately plausible. However, the AI translation adds elements not present in the original, such as slang and explicit expressions (*gościu, manele*), which slightly alters the register and pacing of the dialogue.

Overall, this example shows that while AI may sometimes recreate wordplay more directly, it often does so by expanding or modifying the original text. The human translation remains more restrained and faithful to the source, even if this results in reduced humorous impact. This fragment illustrates how ambiguity-based humor poses difficulties for both approaches, requiring a careful balance between clarity, naturalness, and comic effect.

The next scene is a vivid example of a pun. While driving their van, Harry is talking to the policeman:

ST (00:27:33 – 00:27:44)	TT	AI
<b>Pull over!</b> No. It's a <b>cardigan</b> but thanks for noticing.	<b>Stańcie!</b> I co za sweter mnie, że jadę <b>na stojąco?</b>	– <b>Zjedź na pobocze!</b> – Nie, to <b>sweter</b> , ale dzięki, że zauważyłeś.

The analysis is based on a classic case of lexical ambiguity reinforced by gesture. In the original dialogue, the command “Pull over!” functions as a phrasal verb instructing the driver to stop the car, while the response deliberately interprets *pullover* as an item of clothing. The humor emerges from this intentional misunderstanding and is strengthened visually by the character grabbing his sweater. The joke depends on the coexistence of verbal ambiguity and physical action, which together activate the punchline.

The official human translation does not fully reproduce this mechanism. The command „Stańcie!” lacks any lexical connection to clothing, and the reply introducing *sweter* and *jazda na stojąco* creates a semantic gap rather than a misunderstanding. As a result, the relationship between the two lines is weakened and the humor becomes difficult to decode. Although the translation attempts to signal absurdity, it does not reconstruct the ambiguity on which the joke is based.

The AI translation offers slightly more coherent solution by explicitly linking the command „Zjedź na pobocze!” with *sweter*. However, it closely follows the English syntax and relies on direct lexical substitution. The exchange sounds unnatural and lacks the rhythm of natural Polish speech.

Other possible translation solutions depend largely on whether the visual gesture is taken into account. If the gesture of grabbing the sweater is ignored, one potential strategy would be to replace the original ambiguity with a different pragmatic misunderstanding, for example:

- *Zatrzymaj się z-boku!*
- *Ja nie z tych!*<sup>5</sup>

If the gesture is treated as a central element, an alternative solution could involve the physical action through a different association, for instance:

- *Ale pan jedziesz!*
- *To nowe perfumy, ale dzięki, że pan władza zauważył.*<sup>6</sup>

<sup>5</sup> Author's translation

<sup>6</sup> Author's translation

Here, the joke is reconstructed around smell rather than clothing, yet the interaction between verbal text and physical cue is maintained. Although quite far from the original wording, this solution shows that humor can be compensated through other elements of the scene.

In short, this fragment shows that pun-based humor needs flexible translation rather than a literal one. Both the human and AI translations encounter limitations because the original joke relies on English-specific ambiguity supported by gesture. The alternative solutions show that effective translation may require abandoning lexical correspondence in favor of pragmatic equivalence, an area where human creativity remains essential.

As the film abounds in sexual connotations and sometimes even vulgar expressions, it should come as no surprise that the next scene sounds obscene.

ST (01:09:11 – 01:09:13)	TT	AI
Nice set of <b>hooters</b> you got there.	Masz ładną parę <b>puchatek</b> .	Niezła para... <b>sówek</b> tutaj u pani.

The line “Nice set of hooters you got there” represents humor based on slang and double meaning. In English, *hooters* is an informal word that can refer both to owls and to women’s breasts. In the film, the joke works because the characters are attending a charity event related to protecting owls, which makes the literal interpretation possible – but the viewer, like the woman addressed, first understands the sexual meaning. This moment of confusion is what creates the humor, together with the inappropriate tone of the compliment.

The Polish human translation „Masz *ładną* parę *puchatek*” tries to introduce a similar ambiguity by choosing *puchatki*, an affectionate term linked to something soft or fluffy. While this choice hints at owls, it does not clearly activate the second, more vulgar meaning. As a result, the line becomes gentler and less provocative than the original. The misunderstanding is still there, but the degree of offence is reduced. This suggests a domestication strategy that softens the joke to fit Polish audience expectations.

The AI version „Niezła para... *sówek* tutaj u pani” leans toward a safer, descriptive interpretation. It removes the sexual implication almost completely and focuses only on the literal meaning. This makes the sentence perfectly understandable, but the joke essentially disappears, because there is no clash between first and second interpretation. Without this clash, the punchline falls flat, and the viewer receives a straightforward comment rather than an awkward, socially inappropriate remark.

In this fragment, both translations demonstrate different challenges. The human translator attempts to maintain ambiguity but loses some of the shock value that fuels the humor. The AI translator plays safe, providing a literal solution that eliminates the joke altogether. This scene shows that slang-based humor often depends on risk-taking and a willingness to provoke – traits that AI translation systems are not designed to manage.

Not every example is possible to render without any changes to the original. The next utterance, when Harry talks to Mary, is to demonstrate the difficulty in translation.

ST (01:09:56 – 01:10:05)	TT	AI
One time we successfully mated a <b>bulldog</b> with a <b>shih tzu</b> . Really? That's weird. Yeah. We called it a <b>bullshit</b> .	Kiedyś udało mi się skrzyżować <b>collie</b> i <b>pinchera</b> . – Naprawdę? Dziwaczne. – Tak. Nazwaliśmy go <b>cholera</b> .	– Raz udało nam się skrzyżować buldoga z shih tzu. – Serio? Dziwne. – No. Nazwaliśmy go... <b>bulszit</b> .

The humor in this short exchange is built entirely on wordplay. The first two lines create an apparently serious context involving dog breeding. The final punchline, “We called it a bullshit,” reveals the real purpose of the story: the characters were setting up a taboo term by hiding it inside two dog names. The joke relies on the audience’s recognition of the vulgar word hidden in plain sight.

The official human translation departs from the original dog breeds and substitutes a collie and a pinscher. This creates a local equivalent, but it also makes the joke less effective, because the new breed combination no longer leads naturally to the pun *bullshit*. To solve this, the translator replaces the punchline with „cholera”, which is a mild Polish swearword.

Although the Polish solution replaces phonetic approximation with a different linguistic mechanism, it achieves a comparable humorous effect by delivering a sudden, register-shifting punchline.

The AI translation stays close to the original structure, preserves the bulldog–shih tzu pairing and presents a Polish phonetic version, „bulszit”. This makes the joke immediately clear, and the audience familiar with English slang will recognize the intended word. The downside is that the phrase sounds slightly foreign. Unlike the human translator, AI does not soften the vulgarity; it simply transfers it.

In this fragment, both translations are humorous, but for different reasons. The human version swaps the wordplay for a familiar swear word, while the AI keeps the original wording and its risky tone. This demonstrates two typical strategies in humor translation: domestication versus foreignization. Which is more effective depends on audience expectations, age rating, and tolerance for TL slang.

## Conclusions

The analysis of selected dialogue fragments from *Dumb and Dumber* confirms that humor in AVT remains one of the most demanding areas for both human translators and AI systems. The analyzed examples show that comic effect in this film is created through a combination of linguistic ambiguity, taboo language, pragmatic misinterpretation, and interaction between verbal and visual elements. Successfully transferring these mechanisms into Polish requires not only lexical knowledge, but also cultural awareness and interpretive flexibility.

In the analyzed fragments, there are clear differences between human and AI translation strategies. Human translations tend to prioritize functional equivalence, audience

processing speed, and coherence with visual cues. This often involves domestication that departs from the source text but preserves the intended humorous effect. AI translations, by contrast, generally favor semantic transparency and similarity to the original. This makes the meaning clearer but often weakens the dialogue and the humor, especially when the joke is subtle or delayed.

The findings also demonstrate that there is no single “correct” solution in humor translation. In several cases, multiple alternative versions could be justified depending on the chosen strategy and target audience. This variability highlights the creative nature of audiovisual translation and explains why human translators sometimes deliberately take linguistic risks that AI systems are not equipped to evaluate.

Moreover, the study shows that AI is not entirely ineffective. In fragments where humor relies on explicit content or internationally recognizable elements, AI is capable of producing acceptable translations. However, when humor is based on subtle ambiguity or culture, AI still struggles to balance meaning, tone, and pragmatics.

Overall, the analysis suggests that AI currently functions best as a supportive tool in audiovisual translation rather than as an independent creative agent. While technological development may reduce some limitations in the future, the translation of humor-rich film dialogue continues to require human intuition and the ability to adapt language beyond literal equivalence.

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## **Streszczenie**

### **Sztuczna inteligencja a ludzka kreatywność w przekładzie audiowizualnym: studium porównawcze filmu *Głupi i głupszy***

Artykuł poświęcony jest analizie przekładu humoru w filmie *Głupi i głupszy* na podstawie porównania oryginalnych dialogów angielskich oficjalnego polskiego tłumaczenia oraz wersji wygenerowanej przez sztuczną inteligencję. Badanie obejmuje wybrane fragmenty dialogów zawierające grę słów, slang oraz niejednoznaczność pragmatyczną, które stanowią szczególne wyzwanie w przekładzie audiowizualnym. Analiza opiera się na pojęciach udomowienia i egzotyzacji, pozwalając ukazać różnice w strategiach tłumaczeniowych stosowanych przez człowieka i AI. Wyniki wskazują, że choć tłumaczenia generowane przez AI są poprawne znaczeniowo i płynne językowo, często nie oddają efektu humorystycznego oryginału. Tłumaczenia ludzkie, mimo większego odejścia od struktury tekstu wyjściowego, lepiej dostosowują humor do realiów kulturowych i wymogów przekładu audiowizualnego. Artykuł dowodzi, że obecnie AI pełni raczej funkcję narzędzia wspomagającego niż alternatywy dla kreatywności tłumacza.

**Słowa kluczowe:** przekład audiowizualny, tłumaczenie humoru, udomowienie, egzotyzacja, tłumaczenie AI