

Comparative Distribution of Interpersonal Meaning in Official and Fansub Chinese Subtitles: A Case Study of *Zootopia*

Yan Wang, Mengyao Xun, Yingzhen Liu

Zaozhuang University, Zaozhuang 277100, Shandong, China

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Abstract: This paper provides a quantitative assessment of interpersonal meaning in both official and fansub Chinese subtitles for the animated film *Zootopia*. Using Systemic Functional Linguistics on a parallel corpus of six subtitle versions, we measure the density of key interpersonal resources. Paired tests and mixed-effects models reveal a clear stylistic divergence: fansubs contain higher densities of discourse particles, yielding a more oral, affectively engaged tone in humor and conflict scenes; official subtitles exhibit a substantially higher density of rhythm markers, emphasizing formal consistency and syntactic clarity. Modality markers show no significant difference. We argue these patterns reflect distinct production ecologies—professional standardization versus community-driven adaptation—and challenge single, universal notions of subtitle quality. The findings support a scene-sensitive style prototype and present a reproducible, quantitative method for analyzing interpersonal style in audiovisual translation.

Keywords: Audiovisual Translation (AVT); Fansubbing; *Zootopia*; Systemic Functional Linguistics (SFL); Interpersonal Meaning; Corpus Linguistics; Subtitle Quality

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1. Introduction

The global rise of streaming has made audiovisual translation essential for cross-cultural communication^[1]. Subtitles, as complex semiotic artifacts, significantly shape audience reception^[2]. Two subtitle production modes have emerged: “official” subtitles, produced within an industrial framework prioritizing efficiency and standardization for a broad audience^[3]; and fansubs, a grassroots, participatory-culture practice that emphasizes creative freedom and the conveyance of cultural nuances and emotional tone to a specific fan community^[4].

Although prior research documents qualitative and strategic differences between these modes, a systematic, quantitative comparison of their linguistic patterns—especially in realizing interpersonal meaning, or the enactment of social roles and attitudes—remains lacking. This paper fills that gap by operationalizing and measuring the distribution of key interpersonal resources in official and fansub Chinese subtitles of the 2016 animated film *Zootopia*. Focusing on a single culturally significant text, it provides empirical evidence on how the two translation forms relate to viewers and quantifies their distinct modes of interpersonal engagement.

2. Literature Review

This paper combines three key domains: Audiovisual Translation Studies, which offers the socio-cultural and industrial context, Systemic Functional Linguistics, providing the theoretical and analytical framework, and Corpus Linguistics, supplying the quantitative methodology.

2.1. The Dichotomy of Production: Official Subtitling and Fansubbing

The field of audiovisual translation is marked by the co-existence of two main production models: professional (or “official”) subtitling and non-professional fansubbing. Official subtitling, as an institutionalized practice, is governed by commercial logics and industry standards. It prioritizes consistency, efficiency, and risk aversion to meet the needs of a mass audience^[3]. The style of official subtitling tends towards standardization and “expressive neutrality” to minimize ambiguity and steer clear of controversial or idiomatic language that might alienate segments of the target audience. This industrial logic is practical since a “one-size-fits-all” product is economically feasible and low-risk in the global market.

Fansubbing is a sociologically distinct phenomenon rooted in participatory culture^[4]. Fans, as “prosumers” (producers+consumers)^[5], aim to bridge the gap between the original release and official localization or to offer a version they deem more authentic or culturally attuned. This grants them greater creative freedom from commissioners’ constraints^[6], fostering lexical diversity and creativity. Consequently, translations may prioritize affective resonance, cultural specificity, and colloquial naturalness over literal fidelity. The phenomenon manifests in various ways, such as explanatory notes or highly idiomatic, and sometimes abrasive, language intended to evoke specific reactions within the fan community^[7,2]. Fansubbing practices vary by genre and style, reflecting different audience expectations^[8].

2.2. Systemic Functional Linguistics and the Interpersonal Metafunction

This paper employs the framework of Systemic Functional Linguistics to examine the linguistic implications of these distinct production logics. SFL views grammar as a system of meaning-making choices within context^[9], and puts forward the idea that each language act fulfills three “metafunctions”: the Ideational Metafunction for representing the world and structuring real-world experiences, the Textual Metafunction for organizing information and creating coherent texts, and the Interpersonal Metafunction for enacting social reality, establishing relationships, expressing attitudes, and influencing others’ behavior.

This study focuses on the interpersonal metafunction as it directly negotiates the relationship between the text/characters and the viewer. SFL offers a detailed “grammar” of interpersonal meaning, mainly realized via Mood, Modality, and Polarity. Mood refers to the grammatical structure of the clause, determining its interactional role; for example, declarative clauses are used for providing information, interrogative clauses for demanding information, and imperative clauses for demanding goods or services. Modality refers to the space between a simple “yes” or “no,” enabling speakers to convey their judgments regarding probability and certainty (epistemic modality, such as “it might rain”) or about obligation and inclination (deontic modality, like “you should go”). Polarity represents the binary decision between positive (“yes”) and negative (“no”).

In Chinese, sentence-final particles (SFPs), including 呢, 吗, and 吧, play a supplementary role in the language system. Although these particles generally do not alter the ideational content of an utterance, they fine-tune its interpersonal force, which can signal doubt, curiosity, shared understanding, and gentle persuasion. Notably, they are significant for constructing the interactional “voice” of a text.

2.3. Applying SFL to Audiovisual Translation

While SFL offers a strong perspective for translation analysis, its application in AVT has been more qualitative. Scholars use its concepts to describe translation shifts. Corpus-based studies show that under spatio-temporal constraints^[10], AVT often prioritizes ideational content over interpersonal subtleties^[11]. Features like interjections are often “downplayed” in English-Chinese movie subtitling, which in turn smooths out the affective quality of the dialogue^[11]. The present study,

which aims to determine whether interpersonal downplaying is a universal phenomenon or specific to certain paradigms and whether fansubbing results in distinct choices, employs a quantitative, corpus-based approach. It seeks to examine whether the official and fan subtitles of *Zootopia* exhibit different “interpersonal profiles”.

3. Methodology

This study adopted a corpus-based and quantitative approach to conduct a systematic, replicable, and statistically sound analysis. The methodology consisted of four main stages: corpus compilation and processing, feature operationalization based on SFL, statistical analysis, and qualitative exemplification.

3.1. Corpus Design, Provenance, and Reproducibility

A parallel corpus was built based on the American animated film *Zootopia* (2016) due to its rich dialogic content and global cultural influence. The corpus includes the original English script and six contemporary Chinese subtitled versions, divided into two groups. The Official Group (n=3), which comprises three professional subtitle tracks, is sourced from licensed channels. These include Tencent Video, Youku, and the TW Official from a Taiwan Blu-ray release (all accessed May 2025). In contrast, the Fansub Group (n=3) consists of three well-known fansub versions that were downloaded from opensubtitles.com in May 2025, namely SKK Fansub, CnSCG Fansub, and YYeTs Fansub. Regarding data processing and alignment, subtitle files were semi-automatically aligned at the source-utterance level. This was achieved using a timecode-based approach with a tolerance of ± 400 ms, and then manual verification was carried out to correct any misalignments. Additionally, paratextual elements were eliminated. The resulting final corpus contains 1,093 unique source-language subtitle units from *Zootopia*, each with six Chinese translations. Two coders annotated each unit according to a scene type (Conflict, Humor, or Expository), and any disagreements were resolved through adjudication.

3.2. Analytical Framework and Feature Operationalization

Based on the SFL model of interpersonal meaning, we operationalized five key linguistic features for quantitative analysis. To ensure reliable and replicable counting, the annotation rules were clearly defined. A 20% stratified sample of the corpus underwent double-annotation to assess the reliability of these rules. Cohen's κ above 0.82 for all primary categories showed substantial agreement. It presents several linguistic features that were measured in Chinese subtitles, along with a control variable for a fair comparison.

1. Discourse Particles (Sentence-Final): This metric assesses the frequency of SFPs like 呢, 吗, 吧, 啊, 哟. Only those at the end of a clause right before the final punctuation are taken into account, as this helps to distinguish their pragmatic function.
2. Modality: It captures the frequency of modal auxiliary verbs that convey either epistemic modality (e.g., 可能, 大概) or deontic modality (e.g., 要, 得, 可以), as well as periphrastic constructions used for evaluation, like 算不上.
3. Polarity & Interrogatives: This feature combines two aspects. Polarity is measured by explicit negation markers (不, 没, 未), while interrogatives are identified through particles (吗, 呢), question words (如何, 怎么), or question marks.
4. Rhythm Markers: This metric measures the frequency of internal punctuation marks (commas, enumeration commas, ellipses, dashes) that are used for clause segmentation and to mimic the rhythm of natural speech.
5. Control Variable: To reduce the impact of differences in subtitle length, the raw counts of each feature are normalized against the total number of Chinese characters in each subtitle unit, resulting in a standardized density per 100 characters.

3.3. Statistical Analysis

The statistical analysis was intended to be both robust and sensitive to the data structure. Initially, paired-sample t-tests (or Wilcoxon signed-rank tests in cases where the normality assumptions were violated) were employed to evaluate the overall disparities between the Official and Fansub groups. Since the data points were non-independent, a paired design was chosen. For every test, p-values, effect sizes (Hedges'g), and 95% confidence intervals were presented, as effect sizes are crucial for interpreting practical significance. Second, linear mixed-effects models were fitted to investigate how stylistic differences vary by context. These models suit hierarchical data. Fixed effects included Version Type, Scene Type, and their interaction, and a random intercept for each unique source-text subtitle unit was added to account for non-independence. All analyses were done in R. To control false positives from multiple comparisons, p-values were adjusted using the Benjamini–Hochberg FDR method, and model assumptions were checked for result validity.

4. Results and Analysis

A quantitative examination of the *Zootopia* subtitles uncovers a distinct, statistically notable, and systematic stylistic disparity between the official corpus and the fansub corpus. The findings are presented in Table 1 and further elaborated below.

Table 1. Paired Comparison of Interpersonal Feature Densities (per 100 characters)

Feature	Group	Mean Density	Mean Diff. (Fan-Off)	95% CI	Hedges'g	p-value (FDR)
Discourse Particles	Official	2.18	+0.65	[0.33, 0.49]	0.41	***
	Fansub	2.83				
Modality Markers	Official	2.29	+0.28	[0.06, 0.28]	0.17	(ns)
	Fansub	2.57				
Rhythm Markers	Official	3.92	-3.61	[-0.86, -0.62]	-0.74	***
	Fansub	0.31				

Note: *** $p < .001$; (ns) not significant.

4.1. Amplification of Interpersonal Cues in Fansubs

As presented in Table 1, the most prominent disparity is found in the utilization of discourse particles. Fansubs exhibited a substantially higher density of sentence-final discourse particles compared to official subtitles, with an average difference of 0.65 particles per 100 characters. The effect size (Hedges'g = 0.41) is classified as small-to-medium, which reveals a discernible and consistent difference. This finding implies that fansubs adopt a deliberate approach to endow the dialogue with a more overt interactional flavor.

This pattern can be vividly exemplified in the translation of simple declarative statements from *Zootopia*. Take Nick Wilde' line, “*Yeah, but it might be worse*” for instance. A typical official version presents it as a straightforward and plain statement: “对, 而且会更糟。” Although this translation is denotatively accurate, it is interpersonally neutral. In contrast, a representative fansub version translates it as “是啊 还可能更糟呢”. The inclusion of the sentence-final particle 啊 and 呢 significantly alter the pragmatic force. It assumes that there is shared knowledge between the characters and frames the statement as a casual and almost self-evident reassurance directed at Judy Hopps. As a result, it generates a sense of solidarity between the characters and, by extension, the viewer.

Regarding modality markers, while the data shows a slightly higher average use in fansubs (Hedges'g = 0.17), this trend was not statistically significant ($p > 0.05$). This indicates that the observed minor increase is likely attributable to random variation rather than a systematic stylistic choice across the corpus. Although isolated examples exist where a

fansub might insert a modal verb for emphasis—such as translating Judy’s “*Look, he’s getting away!*” as “看 他就要逃走了” to inject urgency—these instances do not represent a consistent pattern of amplification that distinguishes fansubs from official subtitles in a statistically meaningful way.

4.2. Adherence to Formal Norms in Official Subtitles

The data show a strong, highly significant tendency for official subtitles to follow formal written norms, especially punctuation. Official subtitles use rhythm markers (primarily commas) at a much higher density than fansubs, with a mean difference of -3.61 per 100 characters and a large effect size (Hedges’ $g = -0.74$). This suggests that official versions punctuate clauses with meticulous attention to standard grammatical rules, thereby enhancing syntactic clarity. In contrast, fansubs often omit optional commas, creating shorter, more fragmented units that mirror natural speech’s breath groups and tempo, prioritizing prosodic rhythm over strict grammatical segmentation.

4.3. Contextual Variation and Interaction Effects

Linear mixed-effects models reveal that these stylistic choices are context-sensitive rather than uniform. There is a significant interaction between Version Type and Scene Type for discourse particles. In humor and conflict scenes, fansubs show a notably higher use of particles.

The model for particle density verified a strong main effect of the version type ($\beta = +0.61$, $SE = 0.09$, $p < .001$), which is in line with the paired-test result. What’s more crucial is that it revealed a significant interaction between version type and humor scenes ($\beta = +0.34$, $SE = 0.12$, $p = .004$). This means that in humorous scenes, like the famous sloth scene at the DMV, the gap in particle usage between fansubs and official subs became even more pronounced. Fansubbers seem to deliberately increase the use of colloquial and playful particles like 哟 and 啦 to enhance the comedic rhythm and establish a more intimate and informal connection with the audience. But in neutral, expository scenes, the difference between the two styles diminished, indicating that when the main purpose of the dialogue is to convey plot-critical information, there is a tendency for both styles to converge towards a more informative way of delivery.

5. Discussion

Quantitative findings, as interpreted through SFL and AVT studies, reveal a fundamental disparity in the communicative priorities between official translations and fansub translations. This disparity is not merely attributable to the personal preferences of individual translators; rather, it mirrors the deep-seated logic of their respective production ecologies.

5.1. Competing Mechanisms: Pragmatic Compensation vs. Risk Aversion

The consistent amplification of certain interpersonal cues in fansubs can be understood as a form of pragmatic compensation. The increased use of discourse particles, our most robust finding, serves to “oralize” the written text, counteracting the “flattening” effect often found in subtitling^[11] and imbuing the dialogue with the texture of spoken interaction. This aligns perfectly with the participatory ethos of fansubbing, which values affective fidelity and community engagement over literal equivalence^[4]. The goal is not just to translate what is said, but to preserve the social dynamics of the on-screen interaction.

In contrast, official subtitles follow a standardization and risk-avoidance logic. Their much higher use of rhythm markers signals an emphasis on formal punctuation and clear syntax, yielding a predictable product for a broad audience^[3]. This ensures baseline readability and efficient information transfer but reduces interactional vibrancy, making official subtitles more focused on clarity than affective engagement.

5.2. Redefining “Quality” as “Fitness for Purpose”

The case study of *Zootopia* holds substantial implications for the notion of “quality” in AVT. It challenges the idea of a

singular definition of a “good” subtitle, positing that the effectiveness of subtitles is contingent upon the content genre and audience expectations. Rather than absolute fidelity, quality is more aptly defined as fitness for purpose. For genres that prioritize denotative clarity, such as medical dramas or technical documentaries, the official, information-focused subtitling style may be more advantageous. This is because, in these contexts, the interpersonal amplification characteristic of fansubbing can be a distraction. In contrast, when it comes to a film like *Zootopia*, the interpersonally enriched style of fansubbing provides a more immersive experience. It is important to note that this study has its contextual limitations. Findings derived from this single animated film should not be generalized to all genres. Future research should employ the quantitative methodology across a stratified sample of genres. By doing so, it can create a more comprehensive and genre-sensitive mapping of subtitling styles.

5.3. From Findings to Practice: A Case for Configurable Styles

The insights derived from the comparison present a viable path for the AVT industry. Building upon the statistically robust findings for discourse particles and rhythm markers, alongside the broader theoretical framework of interpersonal meaning, we propose a prototype for scene-sensitive style specifications—Prototype Style Specifications for Interpersonal Tuning (presented in Table 2).

This prototype, which goes beyond simplistic rules such as “character limit”, offers nuanced and context-dependent suggestions. For example, its suggestions for particle density and rhythm are directly informed by our significant findings. The recommendations for Modality Strategy, while not grounded in a statistically significant difference from our corpus, are included as a theoretically-informed component essential for a complete model of interpersonal style, pointing the way for future research and practice. This model could be adopted by streaming platforms as user-selectable “style profiles,” like “Formal”, “Standard”, and “Dynamic”. Such a feature would enable viewers to customize their viewing experience, converting subtitles from a static, one-size-fits-all text into a dynamic and adaptable part of the user interface. This development represents a tangible step towards bridging the divide between academic research and industry practice, leveraging empirical data to inform the creation of more effective and engaging audiovisual translations.

Table 2. Prototype Style Specifications for Interpersonal Tuning in Subtitles

Scene Type	Guiding Principle	Particle Density (per 100 chars)	Modality Strategy	Rhythm Strategy	Terminology
Conflict	Heighten tension & directness	Moderate (2.5–3.5): Use particles that mark challenge or certainty (呢, 啊).	Strong Deontic/ Epistemic: Use assertive modals (必须, 一定).	Minimal Commas: Use short, punchy phrases to increase pace.	Strict consistency for roles/key terms.
Humor	Enhance playfulness & shared feeling	High (3.0–4.0+): Use colloquial, softening particles (嘛, 啦, 哟).	Flexible & Expressive: Allow creative evaluative phrasing.	Speech-like Rhythm: Omit optional commas; use ellipsis for comedic timing.	Flexible for nicknames & playful insults.
Expository	Maximize clarity & neutrality	Low (1.0–2.0): Use only necessary grammatical particles (的, 了).	Restrained & Objective: Avoid strong subjective modals.	Formal Punctuation: Use standard segmentation for readability.	Highest consistency for all technical terms.

6. Conclusion

This case study focusing on the Chinese subtitles of *Zootopia* presents quantitative evidence regarding two distinct translation stylistic profiles. The official subtitles are characterized by standardization and formal equivalence, placing

emphasis on denotative accuracy and written norms. Fansubs adopt a strategy of interpersonal amplification and oralization, most significantly through the strategic use of target-language resources like discourse particles to enhance affective engagement and mimic the rhythm of natural speech.

This research's theoretical contribution lies in the development and application of a quantitative methodology grounded in SFL for the analysis of subtitling style. This methodology empirically confirms that the different socio-cultural logics inherent in professional and fan translation are mirrored in lexico-grammatical choices. Practically speaking, this study challenges AVT industry to adopt a more nuanced and data-driven perspective on subtitle quality. The proposed model of scene-sensitive, configurable style profiles—built upon both our significant statistical findings and established linguistic theory—offers a tangible path towards a future where subtitles are dynamically adapted to content, context, and user preference. Looking ahead, the future of effective AVT might involve integrating the strengths of both official and fan styles. This study provides a solid empirical basis for certain features and the methodological tools to begin building that future.

Disclosure statement

The author declares no conflict of interest.

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