

# A Study on the Interpersonal Meaning of Modal Values in TED Speeches

Qiushuang Zhang<sup>1\*</sup>, Ziqian Zhang<sup>1</sup>

<sup>1</sup>Department of Foreign Studies, North China Electric Power University, Baoding, Hebei, China

DOI: <https://doi.org/10.36348/sjhss.2025.v10i07.007>

| Received: 04.06.2025 | Accepted: 12.07.2025 | Published: 15.07.2025

\*Corresponding author: Qiushuang Zhang

Department of Foreign Studies, North China Electric Power University, Baoding, Hebei, China

## Abstract

This paper analyzes the interpersonal meaning of different modal values in TED speeches from the perspective of the interpersonal function of Halliday's Systemic Functional Grammar, using a self-built corpus method with 30 TED speech texts as English data. In English, modal values are mainly expressed through modal auxiliaries. By using the Antconc tool, this study finds that low modal values are used most frequently, followed by medium modal values, and high modal values are used least. This research expands the application of modal values in speech texts, helps speakers dynamically adjust modal values according to topic characteristics, balances authoritative guidance and audience autonomy, and provides insights for optimizing speech communication strategies and enhancing persuasiveness.

**Keywords:** Systemic Functional Grammar, TED speeches, modal values, interpersonal meaning.

**Copyright © 2025 The Author(s):** This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 International License (CC BY-NC 4.0) which permits unrestricted use, distribution, and reproduction in any medium for non-commercial use provided the original author and source are credited.

## 1. INTRODUCTION

Halliday (1994) proposed that language has three metafunctions: ideational function, interpersonal function, and textual function. The interpersonal function refers to people's use of language to participate in communicative acts, express their emotions and judgments, and influence others' attitudes and behaviors. It is mainly realized through the mood system and the modal system. Modality is a basic element of discourse, and all expressed information involves some degree of modality (Li Zhanzi, 2004).

Halliday classifies modality into three modal values, which reflect different interpersonal relationships and power dynamics in social discourse. Briefly, high modal values typically express requirements, medium modal values express permission, and low modal values express possibility.

TED speeches cover diverse fields such as technology, culture, and society. Speakers convey ideas through story-telling, experience-sharing, and achievement-displaying to inspire audience reflection. The application of modal values is crucial here: by reasonably adjusting modal values, speakers can guide the audience's thinking, attract attention, enhance participation, and effectively convey ideas to trigger action and change.

This paper uses Halliday's systemic functional grammar and a combination of qualitative and quantitative methods to analyze the distribution and interpersonal meaning of different modal values in speeches, exploring how speakers construct interactive relationships with the audience through various modal values.

## 2. LITERATURE REVIEW

Numerous scholars have conducted in-depth research on modal values from different perspectives, accumulating rich and valuable achievements. Overall, the research focuses on three perspectives: studies on the modal system, applications of modal values, and contrastive studies of modal values.

(1) Regarding the modal system itself, scholars such as Li Jian, Li Zhanzi, and Wang Zhenhua have expanded research on modal types and modal evaluation. (2) In literary studies, modal values are closely related to the psychological changes of protagonists, reflecting character traits and relationship dynamics (Li Jianyun, 2020), as well as social power games in literary works (Kang Jing, 2013). (3) In contrastive studies, Gao Yanjie, Ding Yi, and Jiang Yue (2020) analyzed TV interview texts of British and American politicians, finding significant similarities and differences in the use of modal verbs between interviewees and interviewers, which reflect status relations and interactive dynamics.

Cheng Hao (2023) compared online reviews of new energy vehicles in China and Britain, finding that consumers in both contexts mainly use medium and low modal values, adjusting them according to audiences (potential consumers or manufacturers) to effectively convey attitudes.

In summary, certain achievements have been made in the above three research fields of modal values. Modality primarily transmits interpersonal meaning to achieve communicative purposes, which aligns with speech texts. The success of TED speeches depends not only on speakers' expression skills and topic attractiveness but also on the effective conveyance and perception of interpersonal meaning (Li Kai & Wu Min, 2024). However, research on how different modal values convey interpersonal meaning in speech texts remains insufficient. This paper, starting from English TED speech texts, analyzes the interpersonal meaning of different modal values to enrich research in this field and provide practical references for speech practice.

### 3. METHOD

The corpus of this study consists of 30 TED speeches, with an average text length of 1,629 words and a total length of 48,881 words. The speech topics are diverse, mainly covering four types: personal growth and career development (9 speeches), mental health and emotional management (10 speeches), social phenomena and issue discussion (7 speeches), and healthy lifestyle science popularization (4 speeches). These four types are frequent themes in TED speeches, closely related to daily life, providing novel and valuable perspectives for in-depth thinking and problem-solving.

The Antconc tool is used to count modal auxiliaries in the 30 selected TED English speeches, analyze their proportions in the four topic types, and explore the conveyed interpersonal meaning.

### 4. RESULTS AND DISCUSSION

#### 4.1 Macro-level Analysis

The overall distribution of modal values in the corpus is as follows:

**Table 1: Modal Value Proportions**

Types	Affirmation	Negation	Number	Proportion
Low Modal Values	can, may, could, might	needn't	393	51.5%
Middle Modal Values	will, would, should, shall	won't, wouldn't, shouldn't	218	28.6%
High Modal Values	Must, need, ought to, have to	mustn't, can't	152	19.9%

The data show that low modal values (393, 51.5%) are dominant, followed by medium modal values (218, 28.6%) and high modal values (152, 19.9%). This indicates that the corpus predominantly uses low modal values to express uncertainty, euphemism, or tentativeness, demonstrating a flexible and reserved expression style. The fewer high modal values reflect the corpus' feature of "predominantly low modal values supplemented by medium and high ones" in attitude intensity and certainty.

#### (1) The Use of Low Modal Values

Low modal auxiliaries indicate low possibility, expressing the speaker's euphemism and uncertainty. As shown, low modal values account for the highest proportion (51.5%). Examples illustrate their interpersonal meaning:

**Example 1:** That seems to be the second way in which sleep can actually strengthen these memories. Sleep is actually replaying and scoring those memories into a new circuit within the brain, strengthening that memory representation.

**Example 2:** Lymphatic vessels, which serve as pathways for immune cells, have recently been discovered in the brain, and they may also play a role in clearing out the brain's daily waste products.

**Example 3:** That's what Emeka did. You won't change your story overnight; it could take years and be painful.

**Example 4:** You might think you're in control of unwanted emotions when you ignore them, but in fact they control you.

The core function of low modal auxiliaries is to create a dialogic knowledge-sharing space by weakening the intensity of assertions. In scientific communication, they reflect academic prudence toward knowledge uncertainty. For example, "may" in Example 2 presents an unfully verified scientific discovery as a possible inference, avoiding doubt from absolute statements, in line with TED's principle of "evidence-based but reserved" science popularization. In advisory discourse, low modal values maintain audience autonomy through soft expressions: "it could take years" in Example 3 replaces direct commands with conditional statements, making life advice more realistically inclusive; "you might think" in Example 4 increases resonance by presupposing the audience's cognitive perspective, establishing an equal communication relationship.

The extensive use of low modal values essentially serves TED's "inspirational" communication goal: by reducing discourse coerciveness when introducing new ideas or complex theories, it encourages the audience to accept suggestions openly rather than passively submit to authoritative assertions.

**(2) The Use of Medium Modal Values**

As shown, medium modal values rank second (28.6%).

**Example 5:** This will probably make you feel a little bit anxious, and you'll probably want to start running like crazy.

**Example 6:** And we should get rid of the vast industry of paternalistic bureaucrats when we could simply hand over their salaries to the poor they're supposed to help.

**Example 7:** To become great, he didn't spend all his time just being an orator or a lawyer, which would be his performance zone.

Medium modal auxiliaries function as a transitional layer of meaning, playing a key role in rational argumentation. The combination of "should"-type obligatory modality and "would"-type hypothetical modality often forms a logical chain of "problem-solution". For instance, in Example 6, "should" clarifies action obligations, while "could" provides feasibility, transforming abstract ideas into achievable solutions. "will probably" in Example 5 establishes a highly credible causal connection at the experiential level by qualifying probability, avoiding both the ambiguity of low modal values and the absoluteness of high modal values, suitable for psychological analysis scenarios requiring resonance.

The "intermediate" feature of medium modal values makes them a bridge between factual statements and value judgments. When speakers need to guide the audience through logical reasoning (e.g., analyzing problem causes or comparing advantages/disadvantages), these modals enable "quasi-deterministic" expressions (neither absolutely affirmative nor purely possible), maintaining argumentative rigor while leaving interpretation space for individual cognitive differences, thus promoting the transformation from "factual cognition" to "rational cognition".

**(3) The Use of High Modal Values**

As shown, high modal values have the lowest proportion (19.9%).

**Example 8:** The reason is because your brain will very quickly associate your bedroom with the place of wakefulness, and you need to break that association.

**Example 9:** And fourth, we must be in a low-stakes situation, because if mistakes are to be expected, then the consequence of making them must not be catastrophic, or even very significant.

**Example 10:** We have to teach them to be brave in schools and early in their careers, when it has the most potential to impact their lives and the lives of others, and we have to show them that they will be loved and accepted not for being perfect but for being courageous.

**Example 11:** And without sleep, the memory circuits within the brain effectively become waterlogged, as it were, and we can't absorb new information.

High modal auxiliaries in TED speeches convey necessity and obligation through intensification. "must/have to" emphasize action imperatives. For example, Example 10 uses the inclusive subject "we" to bind speakers and the audience as a common entity, narrowing psychological distance and stimulating collective action awareness, elevating "cultivating courage" from advice to a shared obligation. "need" highlights audience obligations and objective necessity, enhancing the acceptance of suggestions at the cognitive level. "can't" in Example 11 emphasizes the consequences of sleep deprivation, attracting audience attention and enhancing persuasive power.

The strategic use of high modal values (low proportion but concentrated in core arguments) aligns with TED's ultimate goal of "knowledge transmission + behavior change". At critical moments requiring cognitive inertia breakthrough and behavior transformation, absolute expressions transform "ought to" into "must" by eliminating uncertainty, pushing the audience from "ideological affirmation" to "action commitment".

**4.2 Micro-level Analysis**

According to speech topics, the 30 corpus texts are divided into four types, with modal value proportions as follows:

**Table 2: Modal Value Proportions in Four Types**

Type	Low Modal Values (%)	Medium Modal Values (%)	High Modal Values (%)
Personal Growth & Career Development	49.4%	34.2%	16.4%
Mental Health & Emotional Management	48.3%	34.4%	17.3%
Social Phenomena & Issue Discussion	47.9%	31.3%	20.8%
Healthy Lifestyle Science Popularization	40.5%	34.8%	24.7%

The table shows that modal value proportions in different topic types generally align with the overall text distribution. In personal growth and career development speeches (low modal values 49.4% highest), speakers construct an "equal dialogue" relationship as "experience sharers", weakening authority (e.g., "You

could create your own journey") to position the audience as "independent explorers" and encourage active suggestion acceptance. Mental health and emotional management speeches, involving sensitive topics (e.g., depression), have low modal values (48.3%). Speakers act as "empathetic companions", using soft expressions

(e.g., “talking could help”) to maintain the psychological safety of “vulnerable speakers”, avoiding coerciveness that may trigger resistance. In social phenomena and issue discussion speeches, low modal values (47.9%) present topic complexity, while medium modal values construct a “problem-conditional solution” logical chain. Speakers, as “rational analysts”, position the audience as “shared responsibility bearers” to promote critical consensus. Healthy lifestyle science popularization speeches have the highest medium modal values (34.8%). Speakers, as “knowledge interpreters”, use “quasi-deterministic expressions” to convey professional advice, while low modal values acknowledge individual differences, shaping the audience as “health practitioners”. Overall, speakers dynamically adjust modal values to balance “authoritative guidance” and “audience autonomy”, flexibly switching roles according to topic characteristics to guide the audience through identities of “explorer—listener—participant—executor” and achieve speech purposes.

## 5. CONCLUSION

This study analyzes the interpersonal meanings conveyed by modal values in 30 TED speeches from the perspective of Systemic Functional Grammar, finding that low modal values are used most, followed by medium and high ones. The analysis reveals that different modal values convey distinct interpersonal meanings: low modal values narrow psychological distance, inspiring the audience to accept ideas optimistically and openly; medium modal values serve as a bridge, neither as uncertain as low values nor as decisive as high ones, conveying professional stances while leaving discussion space to balance authoritative guidance and audience autonomy; high modal values, though less used, are precisely applied in core conclusions or action appeals, emphasizing necessity

with a strong tone to highlight key claims without appearing coercive.

By analyzing the use of modal verbs with different values in TED speeches, this paper reveals speakers’ diverse ways of expressing ideas to the audience and provides a new perspective for speakers to understand audience psychology, enabling them to objectively use different modal values to enhance speech persuasiveness.

## REFERENCES

- Halliday M A K (1994). *An Introduction to Functional Grammar* [M]. London: Edward Arnold.
- Hao Cheng. (2023). A Contrastive Analysis of Interpersonal Meaning of Modal Values in Chinese and English Online Reviews of New Energy Vehicles [J]. *English Square*, (20), 69-73. doi: 10.16723/j.cnki.yyg.2023.20.012.
- Ji'an Li. (1998). A Study on Modal Meanings [J]. *Journal of Foreign Languages (Shanghai International Studies University Journal)*, (3), 58-61.
- Jiayun Li. (2020). Interpersonal Meaning of Modal Values: A Case Study of the Short Story "Runaway" [J]. *English Square*, (14), 49-52. doi: 10.16723/j.cnki.yyg.2020.14.014.
- Kai Li & Min Wu. (2024). A Study on Interpersonal Meaning in TED Talk Discourse [J]. *Taste Classics*, (5), 57-59.
- Zhanzi Li. (2005). From Mood and Modality to Appraisal [J]. *Foreign Language Research*, (6), 14-19+80.
- Zhenhua Wang. (2001). The Appraisal System and Its Operation: New Developments in Systemic Functional Linguistics [J]. *Journal of Foreign Languages (Shanghai International Studies University Journal)*, (6), 13-20.