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Attitudinal Resources in Academic Talks: A Corpus-Based Analysis Across Languages

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Abstract
Attitude in language serves as a pronounced indicator, reflecting the individual stance of the speaker. This study analyses how scholars from diverse language backgrounds, including L1 English, English as a Lingua Franca (ELF), and L1 Chinese, articulate and convey their viewpoints through the use of attitudinal markers in academic talks. Findings reveal that L1 English speakers use the highest proportion of positive value assessment resources. In contrast, the L1 Chinese group demonstrates a comparable use of both positive and negative attitude cues, while ELF speakers exhibit a relatively higher frequency of language force markers. The implementation of contrastive (corpus) analysis, as exemplified in this study, contributes to an enhanced comprehension of identifying specific attitude cues and elucidates the role of language as a vehicle in conveying individual perspectives, particularly within the academic discourse domain.

Keywords Attitudinal resources · Academic talks · Corpus-based · L1 English · L1 Chinese · English as a lingua franca

Introduction

Attitudes are integral to human cognition, shaping perceptions and evaluations of the world. They play a crucial role in identity formation and self-presentation. In academic discourse, speakers typically guide the audience's understanding through various strategies, using attitudes to convey affect and values. These expressions, often direct and explicit, rely on attitudinal words (verbs, adverbs, adjectives) and structures (e.g., "*it is significant that/to*") to communicate the author's stance.

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Attitudinal resources have been extensively investigated under the banner of various conceptual frameworks, including attitude (Halliday, 1994), evaluation (Hunston, 1993/1994; Hunston & Thompson, 2000), stance (Biber & Finegan, 1989; Biber et al., 1999/2002; Hyland, 2005), and appraisal (Martin & White, 2005). While these works may present slightly differing definitions of attitudinal resources, they consistently highlight a close association with the speaker's stance, subjectivity, and intersubjectivity. Considerable scholarly attention has been devoted to precisely delineating attitudes. For instance, Martin and White (2005) hold that the attitude system is central to Appraisal Theory, determining the speaker's psycho-emotional state (e.g., *sadness*, *happiness*), value judgments, social and moral values, and aesthetic perceptions (e.g., *beauty*, *ugliness*) (also see, Si et al., 2017). Biber (2006) posits that attitudes encompass linguistic units expressing speakers' emotions or attitudes. According to Hunston (2011), attitude towards a subject holds significance in socially impactful speech acts, such as persuasion and argumentation. Hyland and Jiang (2016) further demonstrate that affect spans a wide spectrum of personal and professional attitudes expressed through attitude markers towards the content being discussed. Previous research has established a robust theoretical foundation for defining the scope of attitudinal resources, thereby providing a basis for the analytical framework of this study.

Academic talks, widely acknowledged as a substantial mode of communication within the academic community, entail meticulously constructed lines of discourse for articulating (objective) scientific content, as well as personal sentiments, viewpoints, and evaluations. These talks serve as a platform for researchers to disseminate their latest findings, methodologies, and theoretical advancements to a broader academic audience. As an indispensable component of the academic ecosystem, they contribute significantly to the continuous evolution and enrichment of knowledge and advance scholarly discourse. While prior scholars have extensively explored topics related to stance and voice in written scientific discourse (e.g., review articles, research reports, and university essays), there exists a gap in attention towards research dedicated to the academic spoken register. Building upon the foundation laid by preceding scholars, the study refines and narrows the scope of attitudinal markers (henceforth, ATMs) as distinct linguistic elements used by authors/speakers to articulate their assessments and individual sentiments. It serves the purpose of persuading the immediate audience and effectively conveying their academic stance. The primary objective of this study is to analyse and compare the academic voice of speakers with diverse language backgrounds. This research focuses on a contrastive analysis of attitudinal resources in three linguistic contexts: English as a first language (L1E), English as a lingua franca (ELF), and Chinese as a first language (L1C). The choice of these three languages (varieties) is driven by several factors. First, English and Chinese are the two most widely spoken languages globally. Examining their use of attitudinal resources can uncover significant similarities and differences, enhancing our understanding of academic pragmatics in these languages. Such an investigation not only validates and extends contrastive pragmatic theories but also aids in understanding cross-linguistic and cross-cultural communication in academic contexts, fostering collaboration and knowledge exchange. Second, this study aims to identify differences or consistencies in the use of attitudinal resources between L1

English and ELF. It also seeks to determine whether ELF can be considered a distinct variety with unique socio-pragmatic features compared to L1E, providing insights into the dynamics of global English usage. Thus, this research addresses a gap in the literature and advances our understanding of attitudinal resources in academic spoken discourse.

Previous Studies of Attitude

Research on ATMs can be broadly classified into two main strands: studies centered on the targeted subject of analysis and those focusing on criteria for classification. A significant body of prior research has explored ATM use across diverse contexts and genres. For instance, scholars like Azar and Hashim (2019), and Nayernia (2019) studied ATMs within review articles, while Mur-Dueñas (2010), Soler (2002), and Swales and Burke (2003), have focused on the specific role of adjectives as ATMs in various academic genres. Others, such as Kashiha and Chan (2014), and Kashiha (2021), have concentrated on the distribution and functions of ATMs, particularly in relation to the expression of authorial stance in academic discourse. These studies reveal the strategic deployment of ATMs to convey opinions and engage with the audience. The attention given to ATMs in languages beyond English (e.g., Dimmendaal, 1996; Şen Erdoğan, 2022) provides a broader linguistic perspective that is essential for a cross-linguistic study. These works highlight the variability and commonality of ATM use across different languages and cultural contexts. The research mentioned above focuses on the use of attitudinal resources across different contexts, including various languages, disciplines, and registers, highlighting the versatility and contextual specificity of these markers. Building on these insights, our research aims to uncover the intricate ways speakers from diverse linguistic and cultural backgrounds use ATMs to convey attitudes, thereby enhancing cross-linguistic and cross-cultural academic communication.

Various approaches place emphasis on the classification and annotation of ATMs. The ABC model, proposed by Eagly and Chaiken (1998), posits that attitude comprises three elements: Affect, Behavior, and Cognition. Affect represents an individual's emotive reaction towards an attitude object; Behavior pertains to their intention regarding the attitude object; and Cognition encompasses individuals' beliefs about the objects. This model lays the groundwork for a comprehensive understanding of the multifaceted nature of attitudes. Hyland's (2005) investigations into attitudes reside within the framework of stance analysis. According to his interpersonal model of metadiscourse, ATMs contribute to conveying an informal voice, predominantly expressed through attitude verbs, sentence adverbs, and adjectives. This framework emphasizes the exploration of attitudes from a grammatical and lexical perspective, offering a highly practical and operational approach. Biber (2006) holds that the expression of attitude mainly manifests through lexical bundles, integrating the concept into stance research and categorizing it into four subdomains: desire (e.g., *I don't want to*), obligation/directive (e.g., *I want you to*, *you need to know*), intention/prediction (e.g., *we are going to*, *is going to be*), and ability (e.g., *to be able to*). This categorization provides a nuanced understanding of how attitudes are linguistically

manifested, which is needed for cross-linguistic comparisons in academic discourse. Wilson and Wiebe (2005) propose types of attitudes when annotating attributions of private states. These include positive/negative attitudes, positive/negative arguments, positive/negative intentions, speculation, and other nuanced attitudes. Their model highlights the complexity and diversity of attitudinal expressions, underscoring the need for detailed annotation in cross-pragmatics studies. Another highly influential classification model was proposed by Martin and White (2005). Their appraisal system aims to articulate attitudes in discourse as resources that not only convey the author/speaker's stance towards the content of discourse, but that also enable them to shape the thoughts and emotions of potential hearers. The concept of attitude in Appraisal Theory involves a three-dimensional evaluation of people, things, and phenomena. According to Martin and White (2005), the Attitude system can be further divided into three subsystems: Affective, Judgement, and Appreciation. These subsystems are used to express emotions, assess personal conduct, and evaluate the value of objects respectively. Appraisal theory has been applied by various scholars, with a particular emphasis on ATMs in media discourse (Anwar & Anwar, 2021; Liu & Ran, 2017; Liu & Zhang, 2020; Zhan et al., 2013). These studies provide a foundation for applying similar analytical frameworks to academic spoken discourse, where attitudinal resources play a critical role in constructing and negotiating meaning.

A minority of studies underscore the importance of the linguistic comparative perspective (e.g., Mur-Dueñas, 2010; Lee, 2021; Zhu et al., 2019), with only a few focusing specifically on spoken genres. For instance, Bellés-Fortuño (2018) explored evaluative language in university lectures conducted in both English and Spanish. This study revealed that medical lectures in these languages display features characteristic of conversational discourse, highlighting the importance of establishing effective lexical, grammatical, and syntactic pattern correspondences between them. Similarly, Bastola and Hu (2021) investigated tutor feedback and the evaluation of master's thesis guidance in both spoken and written modes. Their research identified significant disciplinary variations in certain types of judgment and appreciation, underscoring the importance of being aware of the power of evaluative language. These findings are crucial for our research as they inform the analysis of how speakers use ATMs to manage interpersonal dynamics, as well as how linguistic, disciplinary and cultural factors influence the use of attitudinal resources in academia. In addition to the comparative research, some studies have focused on annotating and identifying emotion and attitude. For instance, Devillers et al. (2002) proposed a multi-level annotation approach, including emotion tags, for diagnosing dialogue states and exploring automated emotion detection using linguistic information. Wiebe et al. (2005) discussed expansions to a corpus annotation project for manually annotating attributions, along with opinions, emotions, sentiments, speculations, evaluations, and other subjective states in language. Deng et al. (2013) introduced an annotation scheme for events that have a positive or negative impact on entities (benefactive/malefactive events), as well as for the writer's stance towards their agents and objects. The aforementioned studies serve as a source of inspiration for the annotation and coding processes applied to the corpora in this study. They highlight the diverse methodologies and frameworks employed in the analysis of attitudinal resources, providing a robust basis for the current investigation.

In summary, existing research has tackled the classification and annotation of attitudes from diverse angles, predominantly focusing on written discourse across various genres such as news, scientific, and literary discourse, with talks receiving comparatively less attention. Importantly, there is a paucity of scholars who have concentrated on academic spoken discourse as a distinct linguistic register. Few have delved into how scholars talk about their academic perspectives and establish scholarly authority through a range of interpersonal communication strategies. This serves as the primary impetus for the current study. The models and empirical studies on attitude/stance provide a theoretical framework for our cross-linguistic exploration on academic spoken discourse. By focusing on how scholars articulate their academic perspectives and employ interpersonal communication strategies in talks, this study aims to fill a critical gap in the field of pragmatics and discourse analysis. Building on the literature as mentioned earlier, the objective is to answer the following research questions:

(1) How do scholars manage attitudinal resources grammatically and functionally in academic talks?
(2) How do linguistic expressions differ in fulfilling the ATMs model across different languages/varieties?

Data and Methods

The Data

The study draws on three corpora for analysis. As mentioned, exploring differences and similarities in the use of attitudinal resources in English and Chinese is motivated by the frequent international academic interactions between speakers of these languages. The goal is to find out how English and Chinese scholars position themselves and convey their academic voices through their attitudinal choices. The rationale for including ELF as a specific spoken variety stems from the observations made by Mair (2013) and Prodromou (2007), emphasising ELF's evolution into a linguistic variety with transnational significance, demographic impact, and sociocultural relevance. We hypothesise that speakers will demonstrate distinct communicative strategies in academic contexts compared to L1 English speakers, thus reflecting a prevalent and distinctive linguistic feature. Investigating this aspect can uncover potential misunderstandings and conflicts in academic interactions, facilitating the identification of effective communication strategies and promoting a more inclusive and open exchange environment.

The AL1E corpus ('Academic L1 English') comprises academic talks delivered in L1 English, spanning disciplines such as education, sociology, psychology, economics, and linguistics. The AELF corpus contains scientific presentations in English as a lingua Franca, while the AL1C corpus ('Academic L1 Chinese') does the same for L1 Mandarin Chinese. The latter corpora feature lectures across the aforementioned disciplinary categories so as to topically map the AL1E corpus. The selection of these

domains is underpinned by the observed prevalence of explicit metadiscourse markers within the soft sciences compared to the hard sciences (e.g., Hyland, 2006; Sun et al., 2024; Williams, 1981). Each corpus consists of a balanced combination of 30 online and offline public talks sourced from three publicly accessible video-sharing platforms: *YouTube.com*, *Bilibili.com*, and *weixin.qq.com*. The academic speakers in the AL1E and AL1C corpora are native speakers of English and Mandarin Chinese, respectively. All original recordings were transcribed orthographically according to the transliteration conventions outlined in the Academic Discourse Verbal Interactions Corpus (ADVICe) (Brezina, 2012). The AELF sample primarily features academic speakers from various countries, including Spain, Germany, France, Sweden, Italy, Japan, India, China, and Austria. Table 1 provides further details on the three datasets.

During the collection and construction of the corpora, consideration was given to representativeness, naturalness and balance between the different languages. The considerations included the diversity of fields of study to ensure an even distribution across various topics, the inclusion of transcribed spoken data to capture natural discourse, and the representation of different language backgrounds including L1 English, L1 Chinese, and ELF. Additionally, factors such as the age limitation of scholars and gender balance were carefully considered to promote inclusivity. Given the focus on academic monologue discourse in this study, the influence of the audience on the research objectives is perceived to be limited, yet consistent audience size across all scenarios was respected. It is worth noting that although discrepancies exist among the transcripts of the three corpora regarding word count and recording duration due to variations in lecture styles during communicative events, these differences hold minimal significance, as all comparisons are normalised based on relative frequencies.

The Analytical Framework

In academic discourse, understanding the speaker's attitude requires exploring the interplay between the speaker's sentiments, the rapport with the audience, and the alignment with the expressed propositional content or reality. The functional-pragmatic framework of ATMs presented in this paper is synthesized from earlier taxonomies put forth by Crismore et al. (1993); Hyland (2002a, 2002b, 2005); Martin and White (2005); Vande Kopple (1985). These taxonomies are supplemented with

Table 1 Description of the corpora

Corpus	Number of the talks collected	Tokens	av. Tokens talk	Types	STTR[1]
AL1E	30	144,104	4,803	30,047	22.68
AELF	30	133,352	4,445	27,492	23.51
AL1C	30	102,535	3,418	18,931	19.38

[1]The Standardized Type-Token Ratio (STTR) is preferable to the traditional Type-Token Ratio (TTR = type/token*100%) because it reduced the impact of diverging text size. Consequently, this study employs STTR, where *j* represents the number of talks. A higher STTR value indicates greater lexical diversity in the talk

* STTR (Standard Type-Token Ratio) = $\sum_{i=0}^{j} TTRi/j$

additional categories and adjustments derived from the materials scrutinised in this study, with clear illustrations of the interrelationships between parameters.

We propose that ATMs can be systematically classified into three primary groups based on their pragmatic functions. The first category concerns the Person's Affect (PA), which is linked to emotions, feelings, and states of mind, expressed by the speakers themselves. Acknowledging prior studies examining human emotion models and classifications (Marinier & Laird, 2007; Ortony et al., 1998; Plutchik, 1994), this paper primarily focuses on four pairs of emotional states: un/happiness, non/surprise, non/preference, and non/appreciation. Any lexical item, clause, or other linguistic form capable of conveying the aforementioned emotional states is identified as explicit cues of emotions.

The second category pertains to the subjective assessments made by speakers concerning proposition or topic information, termed as value assessment (VA). This includes considerations of personal capacity and tenacity, properties of the matter, social valuation and tendency, among other factors. Examples include attitudinal indicators highlighting specific professional abilities or qualities possessed by the speaker or individuals they refer to, such as *robust*, *deficient*, and *well-established skills*, or evaluative assessments of the properties of entities, such as *plausibly*, *extraordinary*.

The last type of ATMs involves the articulation of personal viewpoints, wherein language force and rhetorical tools play an integral role. Grounded in Martin and White's theoretical framework (2005), language force encompasses the mechanisms by which discourse users enhance or diminish the intensity of subjective evaluation expressions. These forces are categorised into intensification and quantification. Intensification entails the speaker's assessment of the potential of a particular standpoint or entity, using adverbs, comparatives, superlatives, or repetition to express the degree of attitude involvement, such as *slightly*, *extremely*, *very*. On the other hand, quantification refers to the evaluation of characteristics such as weight, quantity, intensity, configuration, and spatiality. It modifies entities or abstract concepts through quantifying, such as *many*, *vast*, *a few*. Rhetorical tools analysed in this study extend beyond lexical items and phrases in a grammatical sense. They also encompass the use of diverse rhetorical strategies, proverbs, idiomatic expressions, and other linguistic forms.

The first two categories delineate either clear-cut positive and negative attitudes, whereas the third category centrally investigates how speakers enhance, diminish, or modify their attitudes by the use of specific linguistic devices. Within discourse analysis, a positive attitude denotes the speaker's favorable position towards a particular object, idea, event, or proposition, emphasising positive aspects or qualities associated with the subject under discussion (e.g., approval, satisfaction, agreement, or support). This can be conveyed through a range of linguistic elements, including positive adjectives, adverbs, and other expressive cues. Conversely, a negative attitude reflects the speaker's adverse assessment or critical opinions of the objective entity or proposition (e.g., disapproval, dissatisfaction, disagreement, opposition). Together, positive and negative attitudes contribute to the nuanced and complex ways individuals convey their perspectives in discourse. Additionally, linguistic expressions indicating a neutral attitude, conveying a stance devoid of overt emotions, exist.

These primarily center on factual representation or information provision, and thus fall beyond the scope of this research.

Scholarly consensus emphasises that the articulation of an individual's subjective attitude can be manifested through various linguistic means, including grammatical structures, value-laden word choices, prosodic elements, and even paralinguistic devices (Biber, 2006; Biber et al., 1999/2002: 966–969). Within this set of devices, grammatical structures dominate to express a speaker's attitude. In line with this work, the study confines its focus to a close examination of grammatical forms as explicit indicators of attitude. More specifically, the focus encompasses attitudinal adverbials and attitudinal complement clauses governed by attitude verbs, adjectives, and nouns, etc.

Data Retrieval and Coding

The objectives of the annotation scheme are twofold: firstly, to depict and compare linguistic patterns reflecting the mental and emotional states of speakers across various language groups; and secondly, to test the applicability of the ATMs model to spoken corpora in both English and Mandarin Chinese. The process of data annotation entails several steps. Initially, the transcribed corpora are segmented into sentence units. Then, 100 sentences were manually tagged and scanned by the annotator as a pilot labelling. After examination and discussion of the pilot annotation, a detailed annotation scheme for ATMs was devised for the entire dataset. This scheme operates at both the word and phrase levels taking into account the surrounding context. For reasons of annotation consistency, the target items were identified and coded with the aid of computer-assisted software programs, namely UAMCorpus Tool (UAMCT)[1], Sketch Engine, and Microsoft Excel, with a second annotation round at a one-month interval for reasons of validity and reliability. UAMCT and Sketch Engine facilitated the automated identification and extraction of attitudinal tokens and MS Excel served as a tool for the tabulation and systematic organization of the obtained data. All items were annotated by the KWIC (keyword in context) tool to closely disentangle the precise contribution of the ATM and its coding following the aforementioned categories.

Grammatically, ATMs primarily fall into nouns and adjectives. Emotionally charged nouns (such as *belief*, *commitment*, and *pleasure)* carry the speaker's appreciation, emphasis, and other emotional attitudes, serving as explicit indicators of the speaker's attitude. Adjectives may also contribute to the text's subjectivity, as they contribute either a positive or negative evaluation of the modified noun, thus mirroring the writer/speaker's favorable or unfavorable stance towards the modified noun (Soler, 2002). Next are verbs and adverbs. Those included in the attitude annotation system assume an evaluative function in conveying information, effectively supplementing meaning, highlighting specific (subjective) features of the conveyed information. Another category encompasses idiomatic expressions, proverbs, specific clauses, and instances of repetition, among others.

In the analysis and extraction of attitude target tags, the annotator must accurately consider each utterance within its context. The scenarios for tracking ATM include:

[1] The website of UAMCT: http://www.corpustool.com/.

(1) determining whether the speaker explicitly mentions subjective sentiment or merely expounds upon objective facts; (2) determining whether the discourse subject is the author/speaker themselves or a third party; (3) ascertaining whether the speaker explicitly employs attitudinal tools or conveys personal sentiments through the incorporation of subjective elements without statement (e.g., some idioms have the potential to incorporate sarcasm or irony); and (4) identifying the presence of nested relationships within the speaker's expressions. Example (1) provides an illustration:

(1) but um [.] yeah [.] you know […] I think it's um [.] taking a very broad reach about who once [once] hoping to um […] influence, but you know, we'd, quite a few of us on independent stage did have one-to-one off-the-record briefings with very senior Labour Party people who asked for that (AL1E-18)

In this instance (1), the value assessment items consist of *broad*, *independent*, *senior* (positive), while the intensification items involve repetitions of *very*, along with the quantifications *quite a few*. The metaphorical usage of the rhetorical tool *stage* suggests the experiences of numerous individuals in their own lives. Note that the cue *hoping* does not fall under any category of ATMs due to its subject *who* being a third party.

The speaker's attitude and appraisal are observable in grammatical units at all linguistic levels (words, phrases, expressions, clauses, sentences). The expression of attitude depends heavily on the context and academic discipline, with specific contexts potentially altering the evaluative connotations of certain constructions. Despite efforts to develop a comprehensive annotation scheme for academic spoken discourse, challenges remain in its implementation. Several crucial points during the corpus annotation process require careful attention. First, in the ATM identification process, emphasis is put on discerning between factual statements and expressions of attitude. As illustrated in (2)[2], the keyword *bēngkuì* (collapse) functions as a modifier for the subject *gold standard*. Since this modification represents a statement of fact without conveying the speaker's attitude, it must be excluded.

(2) *jīnběnwèi zhì bēngkuì zhīhòu, hái huì chūxiàn bùléidùnsēnlín tǐxì zhèyàng*
Gold standard system collapse after, CA AUX appear Bretton Woods system such
shuāng guàgōu de zhè zhǒng huòbì zhìdù (AL1C-13, excluded, fact)
double pegged ATT this CLF currency system
'After the collapse of the gold standard, there will be a dual-linked currency system like the Bretton Woods system'

Secondly, it is important to differentiate between the speaker's attitude and the attitudes attributed to others as perceived and described by the speaker. Following O'Donnell (2014) and White (2001), the analysis excludes attitude tokens originating from sources other than the individual author/speaker in the text. Authorial Affect refers to emotions expressed in the first person, while emotions expressed in other persons are considered non-authorial emotions. This distinction aligns with the

[2] The abbreviations used in the morpheme-by-morpheme glossing line are as follows: ASP=aspect marker, ATT=attributive marker; AUX=auxiliary verb; CA=correlative adverb; CLF=classifier; COP=copular verb; DE=the complementizer (in Mandarin de); MP=modal particle; NR=nominalization and relative clause marker; PREP=preposition; PRT=utterance final particle.

exploration of "subjectivity" or "subjectiveness" in discourse analysis, particularly in the investigation of these aspects within scientific discourse (Howe, 1988). Therefore, all annotations should be expressly articulated from the speaker's perspective, as exemplified in (3) and (4):

(3) there will be a time for you if you are not satisfied with yourself right now (AELF-14, excluded, other voice from the speaker)
(4) there is no doubt even if you never leave your town […] your daily activities are truly global in nature (AELF-01, included, speaker's voice)

Thirdly, positive Affect within varying contexts may carry negative meanings, and conversely, negative emotions may sometimes convey positive meanings. The same evaluative terms might hold diverse or even contradictory value implications for individuals from different cultural backgrounds, highlighting the significant impact of cultural and situational contexts on emotional interpretations. In such instances, explicit ATMs identified through computer programs require subsequent manual validation and refinement. As demonstrated in (5), the computer recognition of this utterance implies a positive attitude toward the target item *perfect*. However, the speaker employs an ironic rhetorical device to express his frustration stemming from the missed crucial meeting attributable to network issues.

(5) uhm [.] I mean, it just sounds perfect [VA-], okay <laugh> The internet decided to go out right in the middle of my important meeting (AL1E-18)

The fourth point concerns outstanding patterns conveying attitude polarity (positive, negative) and markers indicating the intensity of subjective emotional polarity (e.g., *generally agree*, *strongly agree*). These devices are also interlinked with other explicit markers in terms of co-occurrence. For example, some elements may not inherently convey attitudes, but their attitudinal nuances can become apparent when combined with intensifying expressions. Therefore, in the coding process, it is crucial not only to consider individual parts of speech containing attitude-related meanings but also to integrate contextual and discursive factors for the identification of ATMs.

(6) *wǒ fāxiàn qíshí hěnduō lǎoshī méiyǒu* [IN-]*tài* [IN+] *lǐjiě* [VA+] *xuéxí shèjì*(AL1E-05)
I find indeed many teachers didn't very well understand learning design
'I found that a lot of teachers are not familiar with learning design very well'

Example (6) illustrates that the attitudinal verb *lǐjiě* (understand) may initially be classified as denoting a positive connotation. However, when the speaker introduces the negator *méiyǒu* (didn't) and the intensifier *tài* (very well) before it, the positive meaning of *lǐjiě* (understand) is reversed, resulting in the entire sentence conveying the speaker's negative attitude.

Given the complex and somewhat subjective nature of annotating data, especially when semantic and pragmatic aspects are involved (Enschot et al., 2024), a second coding round took place with a one-month interval. Subsequently, two separate reliability scores were computed using the 2-way mixed-effects model and abso-

lute agreement type of Intraclass Correlation Coefficient (ICC[3]). The ICC for the average stability value between the first and second coding rounds was reported as ICC = 0.792, with a 95% confidence interval [0.790, 0.794], implicating that even in the worst-cases scenario, the true ICC remains greater than 0.79. Cases where the coder failed to reach unanimity were left out, accounting for less than 2.1% of the total number of potential marked ATMs.

Results and Discussion

Overview of Cross-Corpus Comparison

Table 2 presents the distribution of the ATMs per category across the three data sets. Both raw frequencies and normalized frequencies (per 1,000 words) are given in order to enable comparison.

Overall, attitude marking is more frequent in English varieties (L1/ELF) than in spoken Chinese discourse, as evidenced by a K-W H test ($\chi^2 = 12.18$, $p < .01$)[4]. Specifically, the frequency in L1 English (N. Freq. = 39.65) marginally surpasses the AELF group (N. Freq. = 36.50), albeit with a slight difference between the two. Comparison of the STTRs shows that the lexical density of ATMs in L1 English (STTR = 26.93) far exceeds that of both AELF (STTR = 16.59) and AL1C (STTR = 16.60) ($\chi^2 = 28.14$, $p = .00$).

AL1E holds a distinct advantage in the two subcategories of PA and VA markers, whereas AELF exhibits the highest frequency of language force markers among the three groups (AELF: 13.82; AL1E: 7.91; AL1C: 10.33; $\chi^2 = 15.45$, $p < .05$). Noteworthy is the absence of significant differences in value assessment between AELF and AL1C ($\chi^2 = 3.88$, $p = .062 > .05$), whereas AL1E and AL1C demonstrate comparable frequencies in the use of language force elements ($\chi^2 = 9.01$, $p = .0515$). Moreover, the occurrence of rhetorical items in AL1C exceeds their counterpart in English. We further see that rhetorical devices employed by Chinese scholars in academic discourse are both more abundant and recurrent than those utilized by English speakers. Within the same corpus, markers indicative of value-assessment constitutes the subcategory with the highest proportion, whereas rhetorical markers represent the subcategory with the lowest proportion. Section 4.2 to 4.5 will examine similarities and differences in the use of the subcategories of ATMs across the three languages/varieties.

In terms of lexico-grammatical forms, it comes as no surprise that attitudinal adjectives emerge as the predominant elements for conveying personal attitudes, as depicted in Fig. 1. This finding aligns with those of Soler (2002), Swales and Burke (2003) as well as Yang (2016), all of whom indicate that adjectives play a pivotal role in expressing attitude. Apart from a negligible number of clause structures (included in *att_others* in Fig. 1), verbs and adverbs exhibit higher frequencies as ATMs, while nouns

[3] With regard to the ICC values, as suggested by Innes and Straker (1999), they range from 0.00 to 1.00, with 0.00 indicating no reliability and 1.00 representing perfect consistency. Scores equal to or less than 0.75 suggest "poor to moderate reliability", while scores above 0.75 indicate "good reliability".

[4] Significance testing was conducted using SPSS 29.

Table 2 The overall distribution of ATMs across groups

Category	AL1E			AELF			AL1C		
	Tokens*	Types	STTR	Tokens	Types	STTR	Tokens	Types	STTR
Person's Affect	1,467 (10.18)	409	27.94	949 (7.12)	197	20.78	459 (4.48)	157	34.24
Value Assessment	3,081 (21.38)	991	33.17	2,066 (15.49)	486	23.53	1,840 (17.94)	242	14.15
Language Force	1,140 (7.91)	69	6.05	1,843 (13.82)	113	6.23	1,059 (10.33)	83	7.88
Rhetorical Tools	26 (0.18)	11	42.38	9 (0.07)	9	1.00	98 (0.96)	54	55.10
Total	5,714 (39.65)	1,480	26.93	4,867 (36.50)	805	16.59	3,456 (33.71)	536	16.60

*Raw frequency (normalized frequency per 1,000 words), STTR = Standardized Type-Token ratio

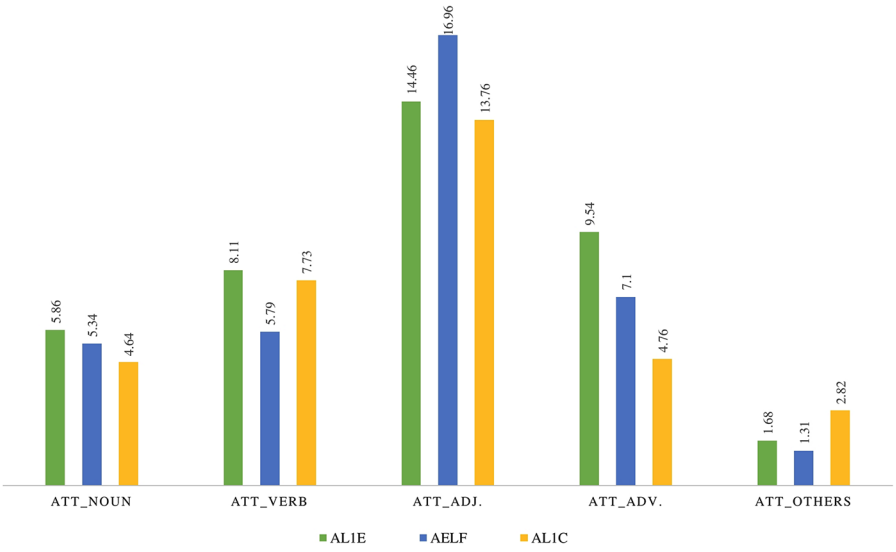

Fig. 1 Distribution of lexical-grammatical items in the groups. The data in Fig. 1 represent the relative frequency of noun, verb, adjective, adverb, and other categories of ATMs per language group, calculated as permillage

are comparatively less frequent. Attitudinal nouns, verbs, and adjectives frequently appear within complement clauses, as exemplified by constructions such as *attitudinal adjective/verb/noun + that-clause/to-clause* (often in the form of extraposed complement constructions). Some adjectives governing *verbs with -ing-clauses* express a feeling or evaluation, many of which are followed by prepositions (e.g. *excited about*, *in favor of*). Ellipsis and substitution within complement clauses are notably widespread in spoken genres. Both omissions and substitutions are commonly encountered in the use of these syntactic patterns, including instances of *bare infinitive clauses* and *-ed clauses*. Furthermore, attention should be directed towards the noteworthy use of clause structures and attitudinal bundles as signs in L1 academic discourse. Typical examples of the lexico-grammatical patterns involving ATMs are (7–9):

(7) so it is very important to distinguish [.] between the relational order of reality and the interactional order of reality (AELF-08)

(8) I have old-fashioned prejudices in favor of the liberal arts, in favor of trying to understand the greatest works that the human race has produced (AL1E-03)

(9) suǒyǒu zhèxiē, nǐ guāng zhīdào (yòng shénmejìshù) bùxíng, hái yào zài nǐde
all these you merely know adopt what method not enough also AUX in your ATT
yánjiū lǐmiàn xiǎng wǒ de nǎ yī gè huánjié shōují shénmeyàng de
project itself think about my ATT which one CLF stage collect what kind of ATT
zīliào (AL1C-07)
materials
'Knowing all this, simply understanding (which technology to use) is not enough; you also need to think about what type of data to collect at each stage of your research'

Person's Affect

In academic presentations, the Affect resources serve as direct linguistic tools for expressing the speaker's emotional preferences and psychological responses towards human beings or things, representing overt and subjective indicators of attitude.

An ANOVA test indicates significant variations in the frequency of personal emotions across the three corpora ($F=42.38$, $p<.001$). As outlined in Table 3, positive emotion markers predominate in English varieties surpassing negative markers significantly (AL1E: $LL=59.53$, $p=.028$; AELF: $LL=68.45$, $p=.045$), while in L1 Chinese, the frequencies of positive and negative emotional markers are nearly equivalent ($LL=9.84$, $p=.078$). We speculate that the reason for this difference lies in the concept of balance being deeply rooted in Chinese culture and permeating various aspects of social life (Li, 2015; Wang, 2012). This pursuit of balance serves not only as a guiding principle for individual behaviour but also a fundamental basis for maintaining harmony between society and nature. Influenced by this value, Chinese scholars tend to avoid extremes in behaviour and attitude, striving for moderation to achieve both personal and social equilibrium. Consequently, they acknowledge the positive role of negative emotions in individual and social development, while also advocating for the appropriate expression of positive emotions in a restrained and understated manner. This observation aligns with Hwang (2012)'s position that adherents of the three major philosophies in Chinese culture exhibit a certain degree of control and restraint over their emotions, desires, and psychological impulses. Further, multiple comparisons unveil a statistically significant difference in the prevalence of positive Affect cues between L1 English scholars and their Chinese counterparts ($F=16.17$, $p=.005$), while the frequency difference for negative emotional markers is deemed statistically insignificant ($F=9.77$, $p=.058$). Additionally, the emotional range observed in L1 Chinese ($STTR=34.24$) surpasses that found in AL1E ($STTR=27.94$) and AELF ($STTR=20.78$), as presented in Table 2. However, Log-likelihood calculations reveal that negative emotion types are more prevalent than positive ones within AL1E ($LL=24.12$, $p=.02$) and AELF ($LL=31.04$, $p<.00$). We hypothesize that English-speaking cultures, which tend to express positive emotions, are more cautious when using negative language. This caution likely stems from a desire to mitigate the impact of negative attitudes through various modes of expression.

Concerning the different lexico-grammatical forms of PAs, our next procedure focuses on presenting outcomes for devices ranking in the top 4 in each grammatical form across the three corpora. Table 4 illustrates these outcomes, with

Table 3 Distribution of person's affect (PA) cues across groups

Group	Positive (PA+)			Negative (PA–)		
	Tokens	Types	STTR	Tokens	Types	STTR
AL1E	1,070 (7.43)	229	22.40	397 (2.75)	180	46.34
AELF	786 (5.90)	108	13.79	163 (1.22)	89	55.21
AL1C	249 (2.43)	86	34.65	210 (2.05)	71	34.44

*PA+ : positive personal emotion; PA- : negative personal emotion

Table 4 Top 4 wordings for person's affect (PA) in each corpus

	AL1E		AELF		AL1C	
	PA cues	N. Freq./1,000	PA cues	N. Freq./1,000	PA cues	N. Freq./1,000
n	trust	0.30 (43)	belief	0.25 (34)	**zhīchí** (support, n.)	0.11 (11)
	compliance	0.18 (26)	respect	0.15 (20)	(gǎn/yǒu+)xìngqù (interesting)	0.12 (12)
	support	0.17 (24)	commitment	0.11 (15)	kùnnán (difficulty)	0.06 (6)
	happiness	0.14 (21)	optimist	0.10 (13)	yìyù (depressed)	0.06 (6)
v	suggest	0.37 (54)	understand	0.42 (56)	**xīwàng** (hope)	0.12 (12)
	understand	0.33 (47)	**hope**	0.36 (48)	**zhīchí** (support, v.)	0.13 (13)
	thank	0.31 (45)	**support**	0.32 (43)	xǐhuān (like)	0.11 (11)
	hope	0.10 (14)	expect	0.23 (31)	fàngqì (give up)	0.09 (9)
adj	happy	0.25 (36)	sorry	0.13 (17)	**lǐxiǎng de** (willing)	0.15 (15)
	emotional	0.17 (24)	amazing	0.10 (14)	jījí (positive)	0.13 (13)
	surprising	0.12 (17)	surprising	0.07 (10)	nàixīn (patient)	0.08 (8)
	willing	0.10 (14)	**willing**	0.04 (6)	máodùn (contradict)	0.06 (6)
adv	unfortunately	0.05 (8)	unfortunately	0.07 (9)	rènzhēn (seriously)	0.05 (5)
	incredibly	0.05 (7)	freely	0.04 (6)	zhǔdòng (proactively)	0.03 (3)
	interestingly	0.05 (7)	frankly	0.04 (5)		
	surprisingly	0.03 (5)	interestingly	0.04 (5)		

* The English equivalent of each Mandarin item is provided in parentheses (hereinafter the same)

underlined items indicating markers shared by two of the English varieties, while bold fonts highlight common markers across both English and Chinese, ordered by frequency of occurrence.

Affect resources readily resonate with the audience's emotions, fostering inclusiveness and identification, reducing psychological distance, and striving to build harmonious relationships, thus laying a positive emotional atmosphere for the entire discourse. The speaker affect is typically accentuated through lexical choices, making annotation on this aspect relatively straightforward. Within these categories, distinctions emerge in the predominant usage patterns of Affect nouns. The sole overlapping noun in Table 4 is *support (zhīchí)*. Nonetheless, in L1 Chinese collocations, *support* is frequently positioned at the end of the sentence, either preceded by a physical adjective (such as *cáizhèng zhīchí* (financial support), *cáiliào zhīchí* (material support) or without any modifiers; whereas in English, the noun *support* is commonly paired with cognitive adjectives like *principal support* and *emotional support*, and is typically placed at either the beginning or the end of the sentence. Statistical analysis of emotional verbs, adjectives, and adverbs in spoken English reveals that at least half, and often more, of the high-frequency markers are shared. However, noticeable differences persist in the lexical usage patterns between English and Chinese, and the common words exhibiting the highest frequency rarely coincide. The overlapping occurrence of *hope* (*xīwàng*, v.) and *willing* (*lǐxiǎngde*, adj.) across the dataset suggests shared commonalities between English and Chinese in expressing personal emotions within academic contexts. Further, it should be acknowledged that emotional adverb types are rather scarce in the Chinese language.

Value Assessment

Undoubtedly, the prevalence of markers indicating value assessment stands out as the highest among various types of ATMs. This phenomenon is intricately tied to the genre-specific attributes of academic reports, where positivity markers consistently dominate across all three groups. As illustrated in Table 5, the analysis reveals a parity in the frequency of positive VA markers between AL1C and AELF (F = 20.296,

Table 5 Distributions of value-assessment (VA) markers across groups

Group	Positive (VA+)			Negative (VA–)		
	Tokens	Types	STTR	Tokens	Types	STTR
AL1E	2,150 (14.92)	680	32.43	931 (6.46)	311	33.74
AELF	1,520 (11.40)	315	22.12	546 (4.09)	171	32.31
AL1C	1,086 (10.59)	154	15.24	754 (7.35)	88	12.77

*VA+ : positive value-assessment markers; VA- : negative value-assessment markers

p = .268), with L1 English speakers exhibiting a slightly higher prevalence compared to the former two (F = 20.296, p = .041). Fiske et al. (1998) hold that, according to the viewpoint of North Americans and numerous Europeans, the individual is conceived as the sole intelligible unit encompassing thought, motivation, emotion, evaluation, and action. Evidently, the heightened density of attitudinal evaluation underscores the significance that the English data places on the manifestation of affective stances. This aligns with Heine et al' s (1999) view that emotions constitute a crucial component of personal identity. On the other hand, negative VA markers slightly diverge between the three corpora (F = 28.831, $p = .0503$), say, AL1C > AL1E > AELF.

Within the two English varieties, intra-group comparisons revealed significant variations in the use of positive and negative devices (AL1E: LL = 29.76, $p = .023$; AELF: LL = 32.40, $p = .026$). Conversely, the deployment of positive and negative markers by L1 Chinese speakers was unexpectedly less pronounced (LL = 57.00, $p = .053$). Moreover, the range of VA markers employed by L1 English speakers (STTR = 33.17) in academic spoken discourse exhibits greater diversity compared to those utilized by ELF speakers (STTR = 23.53) and L1 Chinese speakers (STTR = 14.15). However, positive and negative types exhibit parity within each corpus (AL1E: LL = 12.08, $p = .082$; AEFL: LL = 20.11, $p = .057$; AL1C: LL = −0.77, p = .071), based on Log-likelihood calculations.

Likewise, we investigated grammatical value-assessment cues across the three corpora. A pronounced similarity in form between the L1 English and AELF groups was observed. In contrast, there appears to be a relative scarcity of VA markers in the Chinese discourse, with markedly different items, as depicted in Table 6.

The inquiry has discerned a prevailing practice in the AL1C corpus, where several typical markers undergo conversion into their corresponding forms (e.g., the widely used term *fāzhǎn (develop/ment)* in spoken Chinese functions as both a noun and a verb in different utterances). This pattern is particularly exemplified in instances where the noun and adverbial forms of markers exhibit a higher frequency of tokens but a lower diversity of types. In contrast, the corresponding marker types in English exhibit greater abundance.

Judgement resources pertain to the speaker's evaluative stance, whether positive or negative, towards the behaviors and characters of individuals, aligning with social norms and standards of judgement. This assessment can be praise or criticism, compliment or rebuke. Illustrated in Example (10), the target cue *important* encapsulates a noteworthy observation made by the speaker, implying a favorable assessment of prevailing societal trends. Conversely, the term *struggle* denotes the arduous circumstances faced by the middle and lower socioeconomic strata in the United States. This

Table 6 Top 4 wordings for value-assessment (VA) in each corpus

	AL1E		AELF		AL1C	
	VA cues	N. Freq./1,000	VA cues	N. Freq./1,000	VA cues	N. Freq./1,000
n	**problem**	0.44 (64)	**development**	0.27(36)	**wèntí** (problem)	0.30(31)
	inequality	0.37 (54)	excellence	0.25 (33)	**fāzhǎn(n)** (development)	0.18 (18)
	development	0.33 (47)	**problem**	0.19 (26)	héxīn (key)	0.15 (15)
	compliance	0.21 (30)	innovation	0.16 (21)	yǐngxiǎng (influence)	0.12 (12)
v	**develop**	0.40 (57)	**develop**	0.28 (37)	**fāzhǎn (v)** (develop)	0.32 (33)
	emphasize	0.21 (30)	achieve	0.27 (36)	**tígāo** (improve, v.)	0.24 (25)
	achieve	0.17 (25)	understand	0.19 (26)	zhīchí (suppport)	0.20 (21)
	improve	0.12 (17)	**improve**	0.16 (22)	lǐjiě (understand)	0.16 (16)
adj	**good**	0.63 (91)	**good**	0.57 (76)	**(adv.+) nán** (hard)	0.35 (36)
	important	0.49 (70)	**important**	0.34 (45)	**(adv+) hǎo** (X good)	0.22 (23)
	key	0.29 (42)	great	0.30 (40)	**zhòngyào** (vital)	0.15 (15)
	difficult	0.24 (35)	interesting	0.24 (32)	**guānjiàn** (key)	0.14 (14)
adv	**easily**	0.37 (54)	**easily**	0.28 (37)	**róngyì** (easily)	0.41 (42)
	fairly	0.24 (34)	importantly	0.18 (24)	wánzhěng (completely)	0.20 (21)
	effectively	0.15 (22)	significantly	0.13 (18)	qīngxī (clearly)	0.07 (7)
	importantly	0.08 (12)	effectively	0.11 (15)		

characterization entails an unfavorable appraisal of the material conditions shaping individuals' lives in local society. In Example (11), the term *tíshēng* (enhance) represents a more direct expression of the speaker's endorsement of the developmental trajectory in financial integration.

(10) the final important [VA+] trend that we've seen is, […] we've seen households particularly in the middle and lower part of the income distribution in the United States [.] really struggle [VA-] to build wealth and accumulate savings (AL1E-30)

(11) *suǒyǐ ne, xiànzài de jīnróng kāifàng dǎozhì de jīnróng yìtǐhuà de chéngdù*
so MP now ATT financial opening lead to DE financial integration NR level
zhè gè, zhèngzài zhúbù de tíshēng [VA+] (AL1C-30)
this CLF are gradually DE improving
'so, because of the current financial openness, we're seeing more and more financial integration happening'

Language Force and Rhetorical Tools

The language force of attitudes refers to how participants adjust the intensity of evaluative expressions, shaping impact and emphasis in communicative interactions. Markers of language force do not inherently convey the speaker's stance but work with emotional and evaluative elements (nouns, verbs, adjectives, adverbs) to modify or specify the intensity of the speaker's viewpoint or to quantify the discussed entity.

Table 7 shows a statistically significant difference in the frequency of intensification markers across the three datasets, with the ranking order AELF > AL1C > AL1E ($\chi^2 = 44.34$, $p < .05$). This phenomenon could be associated with the diverse first languages of ELF speakers, suggesting potential disparities in language habits and expressive methods. Similarly, a substantial contrast in the frequency of qualification markers is observed between AELF and AL1C ($\chi^2 = 6.56$, $p < .001$). Additionally, the frequency of rhetorical idioms/structures in academic Chinese significantly

Table 7 Distributions of language force & rhetorical tools across groups

Group	Intensification (IN+/-)			Qualification (QU+/-)			Rhetorical tools (RT+/-)		
	Tokens	Types	STTR	Tokens	Types	STTR	Tokens	Types	STTR
AL1E	964 (6.69)	50	5.37	176 (1.22)	19	11.81	26 (0.18)	11	42.44
AELF	1,606 (12.04)	89	6.63	237 (1.78)	24	10.36	9 (0.07)	9	100
AL1C	984 (9.60)	64	6.58	75 (0.73)	29	38.88	98 (0.96)	79	81.22

*IN+ : enhance intensification markers; IN- : diminish intensification markers; RT+ : positive rhetorical attitudinal markers; RT- : negative rhetorical attitudinal markers

exceeds that in the two English varieties, with AL1C having the highest frequency, followed by AL1E and AELF ($\chi^2 = 11.58$, $p < .01$). The structural characteristics of the Chinese language, including the brevity and meaningfulness of idioms and expressions, along with the linguistic principle of economy and the cultural value placed on rhetorical expressions as a direct manifestation of the speaker's knowledge, enhance the charm and persuasiveness of language. Taken together, these factors make idioms and expressions more readily used by Chinese scholars.

Reinforcement strategies are used frequently and flexibly, including isolated, embedded, and repeated markers. These strategies are mainly reflected through grammatical elements such as degree, frequency, range and mood adverbs, as well as comparative and superlative adjectives. Modal adverbs express the speaker's subjective evaluation or emotional intensity directly, while superlative adjectives amplify the evaluation intensity. Comparative forms, however, weaken the assessment. In the examining intensifying and qualifying markers, significant consistency was observed in the diversity of markers used in both varieties of English.

(12) because it's very [IN+] hard [VA-] to do this alone another idea that's very [IN+] concrete [VA-] but very [IN+] simple [VA+] um (AELF-01)

(13) Here, I'm going to very, very [IN+, repetition] briefly describe some of the main types of tasks (AL1E-02)

(14) *suǒyǐ dāngshí jiù shuō ma, dèngxiǎopíng néng bǎ zhè pán làngí* [RT-] *gěi, gěi*
so at that time CA said PRT, PN can PREP this CLF bad game PREP, PREP
tā xià huó le, nà shì děi yǒu juézhāo [RT+] *de* (AL1C-16)
he makes success ASP, that COP AUX have kill shot PRT
'Back then, I was like, Deng Xiaoping can come out on top in this messed-up chess game, he's gotta have some serious tricks up his sleeve'

Specifically, constructions such as *very/really+attitudinal adj.* are pervasive, as shown in example (12). The frequent repetition of elements in both L1 English and L1 Chinese suggests that L1 speakers tend to use repetition for specific communicative purposes. Among these, there is the refinement of expressed ideas or the initiation of a new topic, as exemplified in (13). In the Chinese context, apart from force markers, the rhetorical tools wielded in spoken discourse also show distinctive features in (14). The speaker metaphorically compared the social conditions in China at that time to a *yìpán làngí* (messed-up chess game) and used *juézhāo* (masterstroke) to highlight Deng Xiaoping's exceptional strategies.

Table 8 shows a substantial overlap of two-thirds in the top 10 keywords. Yet, variations exist likely stemming from differences in contextual realities and shared knowledge across the three languages/varieties under consideration. In English discourse (both L1 and ELF), intensification mechanisms primarily rely on adverbs of

Table 8 Wordings for language force (LF) & rhetorical tools (RT) in each corpus

AL1E		AELF		AL1C	
LF&RT cues	N. Freq./1,000	LF&RT cues	N. Freq./1,000	LF&RT cues	N. Freq./1,000
so	0.69 (71)	very	0.19 (25)	hěn (quite) duō/shǎo (plenty of/seldom)	0.31 (32)
just	0.36 (37)	just	0.17 (23)	fēicháng (very)	0.18 (18)
very	0.30 (31)	really	0.17 (23)	zuì (the most)	0.16 (16)
really	0.32 (33)	much	0.17 (23)	gèng (much more)	0.22 (23)
much	0.26 (27)	only	0.15 (20)	bǐjiào (+adj.) (relatively adj.)	0.16 (16)
only	0.28 (29)	little	0.13 (18)	rìyì (increasingly)	0.15 (15)
most	0.22 (23)	so	0.13 (18)	quánmiàn (+v.) (roundly X)	0.24 (25)
little	0.29 (30)	less	0.13 (17)	dàliàng/jùdà (+n.) (many/less/large amount of/huge X)	0.15 (15)
less	0.26 (27)	increasing	0.15 (15)	bùtài (+adj.) (not too)	0.05 (5)
increasingly	0.20 (20)	most	0.09 (12)		

degree and negative adverbs, which modify both attitude-laden adjectives and nouns. Among these, the most commonly used adverbs include *very*, *really*, *just*, *much*, *so*, *most.* In contrast, methods for expressing quantification are relatively limited, with only 4 primary adverbs *(only*, *increasing/ly (rìyì)*, *little*, *less)* used in conjunction with attitudinal adjectives or nouns. In Chinese discourse, next to intensification based on adverbs of degree (*very (fēicháng)*, *much (gèng)*, *so (hěn)*, *most (zuì)*), devices of intensity primarily manifest through comparative and superlative terms, while markers of quantification predominantly comprise words delineating numerical values and spatiotemporal distribution. Furthermore, a notable distinction is identified between English and Chinese. Rhetorical strategies appear to be rather infrequent in the AELF context, with only 9 instances, while the Chinese academic discourse displays comparatively more frequent rhetorical devices, including idioms, proverbs, and sayings. This distinctive characteristic underscores the fact that, even within academic discourse, Chinese often employ rhetorical strategies to cultivate a relatively relaxed and engaging interaction environment. Such strategies enable scholars to effectively communicate their unique perspectives and intelligence.

Co-occurrences between Attitude Markers

Following the analysis of the aforementioned three distinct subcategories, the examination extends to the co-occurrence patterns. In Fig. 2, the numerical values within the different ATM boxes refer to the cumulative count of annotated items. The double-arrowed lines indicate the presence of a co-occurrence relationship between two categories, with the numbers on these lines representing the frequency of such co-occurrences.

In the AL1E and AELF corpora, evaluative adjectives more frequently co-occur with evaluative nouns and intensifying markers, respectively (as shown in example (15)). Most emotional adverbs and rhetorical elements in these corpora do not co-occur with other attitude markers. The AL1E group shows a higher prevalence of co-occurring evaluative verbs and nouns, while in the AELF group, VA verbs and emotional adjectives tend to co-occur separately with intensification markers raises. Additionally, in the AL1E group, qualification markers (LF_QU) substantially co-

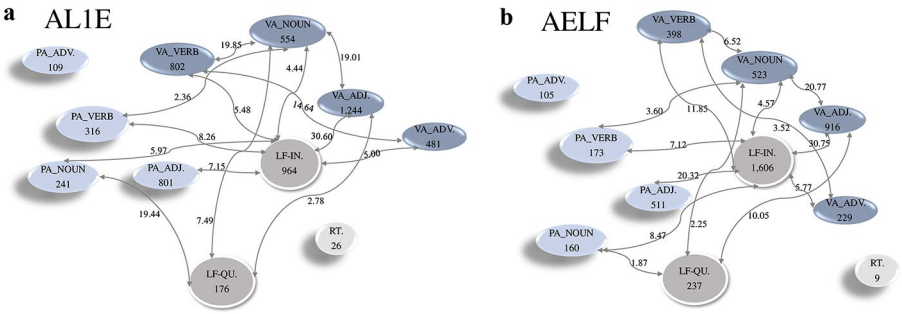

Fig. 2 Co-occurrences between categories in AL1E and AELF. The numbers on the line are derived from the raw frequency of co-occurrence between words, divided by the total data of the corresponding corpus and multiplied by 10,000 in order to maintain stable comparability among the three groups.

occur with PA nouns, whereas in the AELF group, qualification markers more often co-occur with VA adjectives.

(15) it's academic or not, are very [IN+] important [VA+], crucial (VA+) (IN→VA) (AL1E-23)

In the Chinese spoken discourse, the co-occurrence patterns are simpler and less frequent (see Fig. 3).

Apart from the intensification markers shared between English and Chinese, which frequently co-occur with evaluative nouns, verbs, adjectives, and attitude adjectives, there is a noteworthy co-occurrence of emotional nouns and verbs (as

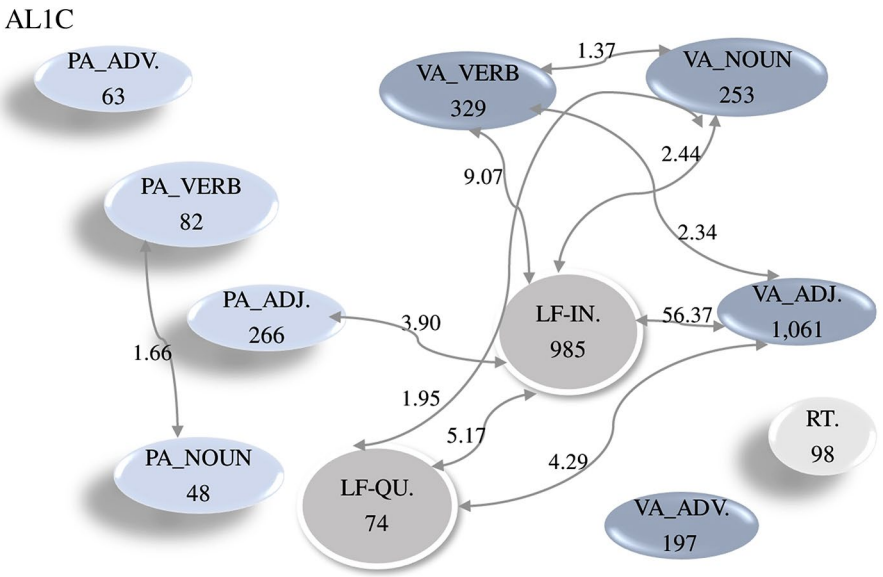

Fig. 3 Co-occurrences between categories in AL1C

shown in example (16)). The co-occurrence of quantification and intensification cues is also frequent, as exemplified in (17). In contrast, PA adverbs and rhetorical items exhibit minimal associations with other ATMs.

(16) *wǒ* *zhèlǐ gǎn xìngqù* (PA_{v+n}+) *de* *zhǔyào shì* *sìdà, sì* *lèi* *a* (AL1C-13)
I here have interest in NR mainly COP four, four types PRT
'what I am interested in here are mainly the four major categories.'

(17) *shèhuì* *yǐngxiǎng* *hěnshǎo* [IN+QU]- *shì* *tèbié* [IN+] *zhíjiē* [VA+] *tèbié* [IN+] *míngxiǎn*
social impact rarely COP very direct very obvious [VA+]
de (AL1C-21)
PRT
'we don't usually see the social impact being very direct or obvious'

Conclusion

Overall, this study aims to provide a detailed portrayal of the distinctive stances scholars project during academic speeches at the verbal level. It allows to compare similarities and differences prevalent in academic discourse across the three languages/varieties. The findings show that, whether in Germanic English or Sino-Tibetan Chinese, scholars predominantly use positive value-assessment resources, with widespread use of intensification elements. Value-assessment cues are more frequent than Affect markers, aligning with the genre characteristics of academic discourse. Grammatically, adjectives and verbs with personal Affect and evaluation functions are predominant. This tendency reflects some peculiarities of the speakers' cultural or ideological backgrounds, although the degree of subjectivity varies depending on the evaluation parameter of the marker.

Subjective attitudes inherently emerge during interpersonal engagements, marking a scholar's stance. Disparities across various languages (varieties) likely stem from deeper sociocultural factors, reflecting speakers' national identities. Ideological differences and social value orientations in emotion and evaluation between English and Chinese cultures significantly contribute to these disparities. The results provide a valuable contribution to contrastive discourse (pragmatic) analysis (Taboada et al., 2013). Additionally, ELF scholars in the international academic community strive to align their attitudinal expressions with those of L1 English speakers to mitigate potential miscommunication from ideological differences. Language force and rhetorical strategies are notable examples, with ELF scholars using them most frequently, followed by L1 English speakers and L1 Chinese speakers. These tactics enhance speakers' ability to accommodate varied communicative demands and expectations.

The labelling scheme for attitudinal resources is featured by objectivity and precision, making it applicable to other research on stance and (inter)subjectivity. The methodology used in this study offers valuable insights for constructing comparable corpora, annotating corpora, and coding attitudinal resources. Researchers interested in contrastive analysis and corpus pragmatics can benefit from the findings of this study. It is important to note that this research focuses solely on spoken discourse. Broader investigations into non-verbal dimensions of cross-cultural attitudinal differences are also worth exploring.

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