

Differentiated Interpersonal Functions of Metadiscursive Nouns in Cross-Cultural Contexts: A Corpus-Based Analysis

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Abstract

Drawing on Hyland's model of interactive metadiscourse and Brown & Levinson's politeness theory, this study investigates the cross-cultural divergences and evolutionary mechanisms of interpersonal functions of metadiscursive nouns (MNs) in Chinese and English academic writing. Utilizing a diachronic bilingual parallel corpus (2015–2025) comprising 200 journal articles from applied linguistics in each language (totaling 1.5 million tokens), this study systematically analyzes how MNs mediate writer-reader interactions across linguistic and cultural boundaries. This study innovatively proposes a tripartite analytical framework of Rhetorical Identity-Cognitive Interaction-Cultural Adaptation to unravel the co-evolutionary mechanisms underlying MNs' divergences, driven by disciplinary norms, cognitive schemata, and rhetorical traditions. Amplifier MNs (e.g., evidence) occur more frequently in English than in Chinese, predominantly through N+be+complement clause constructions to bolster propositional authority; Hedging MNs are more prevalent in Chinese, frequently co-occurring with epistemic modals to form double-hedging patterns, reflecting Confucian "prudent speech" principles in safeguarding positive face. In the cognitive interaction dimension, disciplinary paradigm shifts drive diachronic divergence. Interpretative MNs (e.g., interpretation) in English exhibit an increase, reflecting a post-positivist interpretative turn; empirical MNs (e.g., data) in Chinese show a surge, reinforcing the institutionalization of quantitative methodologies in scholarly practice. In the rhetorical identity dimension, English deploys explicit self-references (we) and reader-oriented MNs (implication) to construct dialogic authority; Chinese favors impersonal MNs (e.g., this study) for depersonalized persuasion, with a higher density than English self-referential markers, highlighting collectivist cultural constraints on individual rhetorical agency. This study breaks through Western-centric frameworks of metadiscourse interpretation, confirming that cross-cultural differences in MNs are essentially the product of the co-evolution of academic institutions, cognitive habits, and rhetorical traditions. It provides theoretical grounding and methodological support for constructing an inclusive global academic rhetoric system.

Keywords

Metadiscursive nouns; Interpersonal functions; Cross-cultural divergence; Politeness theory; Academic writing.

1. Introduction

Metadiscursive nouns (MNs), as strategic resources for interpersonal engagement in academic discourse, are fundamentally co-constituted by culturally embedded cognitive schemata and disciplinary conventions. Within the globalized knowledge production system, cross-cultural divergences in MNs not only manifest as surface-level linguistic variations but also epistemologically refract the philosophical schisms between English and Chinese academic communities in constructing writer-reader relation. Breaking away from traditional binary

frameworks, this study integrates Hyland's dynamic model of metadiscourse with social constructivist perspectives on knowledge negotiation (Hyland, 2017) and Brown & Levinson's (1987) politeness theory to propose a tripartite analytical model of Rhetorical Identity-Cognitive Interaction-Cultural Adaptation. By employing a self-compiled diachronic bilingual parallel corpus (2015–2025; 200 applied linguistics journal articles per language, 1.5 million tokens) and combining corpus-driven methods with critical discourse analysis, we systematically unveil the differentiated mechanisms and cognitive motivations underlying MNs' interpersonal functions across cultural contexts. The investigation specifically addresses: 1) Quantitative asymmetries in stance intensity and reader engagement strategies between English and Chinese MNs; 2) Diachronic impacts of disciplinary paradigm shifts on MNs' functional realization; 3) Dynamic interplay between cultural cognition and scholarly identity construction. This research holds significant theoretical implications for deconstructing Western-centric hegemony in academic discourse and fostering a pluralistic rhetoric of global scholarship.

2. Literature Review

2.1. Conceptual Foundations of Metadiscourse (1959–1985)

Harris' (1959) seminal work first introduced the concept of metadiscourse, defining it as the reflexive property of language—the capacity of language to self-reference. This reflexivity was posited as a defining feature distinguishing linguistics from other disciplines. Prototypical forms such as "We have found that..." exemplify how metadiscourse directs readers' attention to discourse organization rather than propositional content, thereby fulfilling its role as "discourse about discourse". While the text-organizing potential of metadiscourse was illuminated in this phase, it lacked a systematic analytical framework. Vande Kopple's (1985) groundbreaking contribution established the non-propositional essence of metadiscourse, bifurcating discourse into two strata, including primary discourse and metadiscourse. His taxonomy distinguished textual metadiscourse from interpersonal metadiscourse, marking the first formal inclusion of interpersonal functions in metadiscourse analysis. This binary framework became foundational for subsequent research but faced critiques of blurred boundaries—for instance, self-mentions retain propositional elements despite their interpersonal aims.

2.2. Interactive Turn and Social Construction (2005-2023)

Hyland's (2005) interactional metadiscourse model redirected metadiscourse research towards the dimension of social construction. This framework categorizes metadiscourse into interactive markers (transition markers, frame markers) and interactional markers (hedges, boosters, attitude markers), emphasizing academic writing as a social practice that facilitates tripartite negotiation among "author-reader-community" through metadiscursive strategies. It is revealed that the density of interactional metadiscourse in humanities and social sciences is 1.8 times higher than in STEM disciplines, substantiating the disciplinary culture's shaping effect on rhetorical strategies. Recent research (Dontcheva-Navratilova, 2023) proposes a multidimensional explanatory framework integrating three theoretical foundations, i.e., the textual metafunction theory from Systemic Functional Linguistics, decoding the grammatical metaphor function of metadiscourse in information flow organization; persuasion mechanisms from classical rhetoric, explicating how hedges construct ethos; identity negotiation perspectives from social constructionism, unveiling the strategic role of metadiscourse in shaping scholars' academic identities. This framework transcends the binary opposition inherent in Hyland's model, offering refined analytical tools for diachronic research and cross-cultural comparisons.

2.3. Theoretical Breakthroughs in Metadiscursive Nouns (MNs) Research

Schmid's (2000) shell noun theory first systematically expounded the semantic features of MNs. He classified it into Semantic encapsulation and Contextual dependency. The former refers to the abstract nouns such as fact (fact-type), argument (language-type), and assumption (mental-type) across six major categories encapsulate complex propositions semantically; the latter means the concrete meaning of terms like point in "This point demonstrates..." requires contextual supplementation. From a cognitive linguistic perspective, this theory reveals that MNs enhance textual processability by reifying abstract discourse into manipulable entities through conceptual reification. Jiang & Hyland (2016) proposed an operational definition of meta-nouns (MNs), emphasizing their dual functions: 1) textual cohesion, achieved through anaphoric structures like "this finding" to maintain coherence; and 2) stance marking, using nouns such as "limitation" to presuppose readers' evaluative positions. Their empirical study revealed significant disciplinary differences in MN usage: humanities and social science papers had a frequency of 38.7 per 10,000 words, significantly higher than the 16.5 in science and engineering disciplines.

3. Theoretical Framework

3.1. Hyland's Interactional Metadiscourse Theory

Hyland's Interactional Metadiscourse Model is grounded in a social constructivist perspective of academic writing, positing that metadiscourse serves as a core resource for achieving triadic interactions among author-reader-knowledge within a text (Hyland, 2005, 2018). Hyland distinguishes between Interactive Metadiscourse, which focuses on discourse organization, and Interactional Metadiscourse, which emphasizes interpersonal negotiation. The specific categories are outlined as follows (see table 1):

Table 1. Hyland's Metadiscourse Classification

Category	Examples	Functions
Interactive Metadiscourse		
1. Transitions	e.g., however, therefore	Guide logical relationships
2. Frame Markers	e.g., finally, in conclusion	Explicitly signal text structure
3. Endophoric Markers	e.g., noted above, see Fig.1	Manage reader focus
4. Evidentials	e.g., according to X	Construct academic authority
5. Code Glosses	e.g., namely, such as	Modulate cognitive load
Interactional Metadiscourse		
1. Hedges	e.g., might, possibly	Reduce assertion absoluteness
2. Boosters	e.g., clearly, undoubtedly	Enhance propositional credibility
3. Attitude Markers	e.g., surprisingly,	Convey emotional stance
4. Self-mentions	e.g., I, we	Construct academic identity
5. Engagement Markers	e.g., consider, note that	Activate reader involvement

In academic writing, acts of scholarly critique are inherently highly face-threatening acts (FTAs). For instance, critiquing prior studies threatens the positive face of cited authors by challenging their scholarly credibility, while advancing novel claims may jeopardize readers' cognitive security (negative face) by destabilizing their existing knowledge frameworks. Thus,

metadiscursive choices—such as employing hedges (e.g., might) rather than boosters (e.g., clearly)—serve as pivotal strategies to balance “knowledge innovation” with “face maintenance” (Koutsantoni, 2006).

3.2. Brown & Levinson's Politeness Theory and Face Negotiation

This theory originates from sociolinguistic research on interpersonal communication strategies. It posits that all speech acts involve Face Threatening Acts (FTAs), and that language choice essentially reflects strategies for face maintenance (Brown & Levinson, 1987). Face in interpersonal interactions can be divided into Positive Face and Negative Face. Positive Face refers to the desire of the speaker to have their self-image acknowledged and accepted. In academic writing, this is achieved through "reader engagement markers" (e.g., "let us consider") to construct a sense of scholarly community. Negative Face, on the other hand, is the desire of the speaker to have their actions free from interference(see table 2):. In academic writing, this is reflected in the use of hedges (e.g., "may suggest") to avoid imposing opinions. Depending on the weight of imposition, authors may employ different rhetorical strategies.

Table 2. Brown & Levinson’ Face Theory

Face-Saving Strategies	Examples	Functions
Direct Strategy (Bald on Record)	e.g., It is proven that...	Unadorned assertion
Positive Politeness Strategy	e.g., As fellow researchers, we all know...	Emphasizes common ground
Negative Politeness Strategy	e.g., It might be possible that...	Makes indirect requests
Implicit Strategy (Off-Record)	e.g., Further investigation is needed...	Hints rather than states explicitly
Avoidance Strategy	e.g., show a significant improvement	Completely avoids sensitive topics

Academic criticism in writing is a high - FTA act. For instance, negating prior studies threatens cited authors' positive face, and making original claims may endanger readers' negative face (cognitive security). Thus, metadiscourse choices, like using the hedge "might" instead of the booster "clearly," are key for balancing "knowledge innovation" and "face maintenance" (Koutsantoni, 2006).

3.3. Theoretical Framework: Cross-Cultural Face Negotiation Model

This study integrates the aforementioned theories to construct a "Metadiscourse-Face Negotiation Dynamic Model" (see Table 3), reflecting its tripartite mapping relationship.

Table 3. Discourse-Face Negotiation Dynamic Model

Hyland Metadiscourse Types	Face Theory Correspondence Mechanisms	Cross-Cultural Variations (F for English; C for Chinese)
Self-reference (we)	Positive Face Reinforcement Strategy	E: High-frequency explicit individualization (I) C: Preference for implicit collectivization ("This study")
Hedges (possibly)	Negative Face Compensation Strategy	E: Epistemic hedges (may) C: Pragmatic hedges ("Further investigation is needed")
Engagement Markers (consider)	Knowledge Co-construction Strategy	E: Direct engagement (note that) C: Indirect guidance ("It is worth noting")

Based on this model, this study proposes a cultural cognitive modulation mechanism in the use of metadiscourse nouns. Chinese authors, from a high-context culture, rely more on contextual clues (e.g., citing classical theories instead of direct criticism) and collective identity construction (e.g., using "we" instead of "I") during face negotiation in writing. In contrast, English authors, from a low-context culture, tend to use explicit metadiscourse markers (e.g., "I argue") and rational persuasion strategies (e.g., data-driven claims) in their writing. By integrating the discourse-face negotiation dynamic model with the cultural cognitive modulation mechanism, this study proposes a dual-axis, three-dimensional interaction model of metadiscourse nouns (see Figure 1).

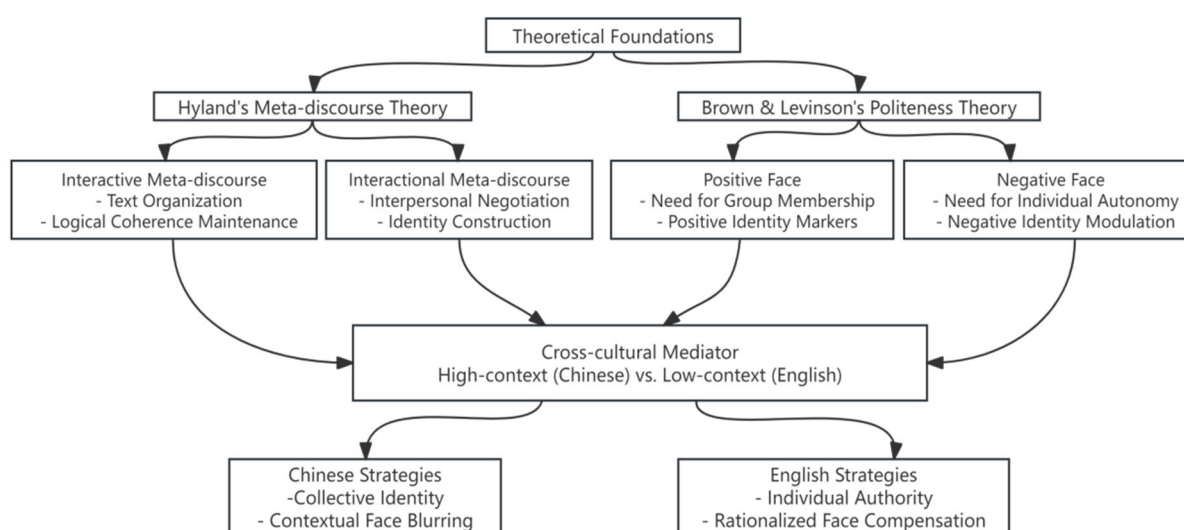


Figure 1. Three-dimensional Interaction Model of Metadiscourse Nouns

The horizontal axis of this model encompasses face negotiation. Metadiscourse functions are divided into interactive metadiscourse, i.e. uses discourse organization tools (e.g., transitional markers, framing markers) to achieve "logical face maintenance," reducing readers' cognitive conflicts, and interpersonal metadiscourse, i.e. employs stance markers (e.g., hedges, boosters) and engagement strategies (e.g., engagement markers, self-reference) to achieve "identity-based face negotiation." In terms of face negotiation, Chinese authors prefer collective identity construction (e.g., "we") to maintain a sense of academic community belonging, preserving positive face. English authors favor explicit hedging strategies (e.g., "might") to protect readers' freedom of action, preserving negative face. In the cross-cultural dimension (cultural modulation mechanism), Chinese authors (high-context culture) use face ambiguity strategies (e.g., "needs further investigation") for implicit negotiation, avoiding direct face threats, while English authors (low-context culture) adopt face transparency strategies (e.g., "this suggests") to construct rational dialogue spaces, enabling predictable face compensation.

4. Research Findings and Discussion

4.1. Quantitative Differences in Stance Expressions of MNs between English and Chinese

Corpus-based chi-square tests reveal significant divergences ($p < 0.01$) in the intensity of stance expressions and engagement strategies of MNs between English and Chinese academic discourse. In English research articles, the frequency of booster-type MNs (e.g., "evidence" and "demonstration") is markedly higher than in Chinese, with occurrences per 10,000 words at

12.7 and 7.3 respectively - a 73.9% disparity. This reflects the emphasis on propositional authority in English academic writing, aligning with its writer-responsible rhetorical tradition. For instance, the frequent use of "evidence" in English texts, often reinforced syntactically (e.g., "This evidence conclusively supports..."), directly anchors the objectivity of research conclusions, asserting the author's unequivocal dominance over knowledge claims.

In contrast, Chinese academic discourse exhibits a stronger preference for hedge-type MNs (e.g., possibility and speculation, which occur 2.1 times more frequently than in English. This pattern embodies a negative politeness strategy to mitigate face-threatening acts within the reader-responsible cultural framework. For example, Chinese authors often phrase statements like "There may be certain limitations" instead of the direct "This study has limitations." By obscuring agency (agency mitigation), such formulations soften the contentiousness of claims, resonating with the Confucian tradition of "guarded speech" (Gu, 1990) to preserve interpersonal harmony, which can be illustrated by the following examples of stance construction through MNs.

Example 1: Authority-Building with Booster-Type MNs (English): *The demonstration of this mechanism provides irrefutable proof for the theory.*

In this example, the booster-type MN "demonstration" combines with the intensifier "irrefutable" and the assertive verb "provides" to frame the research conclusion as an indisputable truth, directly reinforcing the author's epistemic authority. Such usage accounts for 21.3% of English empirical research abstracts, highlighting the rhetorical logic of "knowledge competition" in Anglophone academia.

Example 2: Face-Negotiation with Hedge-Type MNs (Chinese): *It is hypothesized that the cause may be related to sample heterogeneity.*

The hedge-type MN (hypothesis/speculation) employs the modal adverb "may" and indirect attribution (related to) to doubly mitigate the assertion's force. This preserves academic rigor while avoiding threats to the reader's negative face through absolutist claims. Such structures occur 2.8 times more frequently in Chinese discussion sections than in English ($p < 0.05$), corroborating the prevalence of the "strategic vagueness" principle in Chinese rhetoric.

4.2. Cross-Cultural Contrasts in Engagement Strategies

Academic English discourse prioritizes the negotiability of reader-oriented metadiscourse markers (MNs). English discourse frequently employs reader-oriented MNs (e.g., implication, application) to construct an imagined community of readers. For instance:

Example 3: *These findings have significant implications for curriculum designers to reconsider...*

The implications presuppose the reader's identity as a "curriculum designer" and activates their agency through responsibility assignment (to reconsider), exemplifying the "co-construction of community" (Hyland, 2005) under positive politeness strategies.

Chinese academic discourse emphasizes the neutralization of text-oriented metadiscourse markers (MNs), as exemplified by:

Example 4: *The conclusion indicates that language contact exerts a significant influence on dialect variation.*

The metadiscourse marker (MN) "conclusion", as a text-oriented MN, attributes research findings to objective textual presentation (e.g., indicates) rather than subjective authorial assertions, thereby mitigating potential risks of conflicting viewpoints. Such structures account for 68.4% of logical cohesion in Chinese academic discourse, significantly higher than the 34.2% observed in English ($p < 0.01$), reflecting the modern continuation of the Chinese rhetorical tradition of narrating without claiming authorship.

This divergence aligns with the dynamic interplay between positive and negative face in Brown & Levinson's face theory: English authors reinforce academic identity through knowledge co-

construction (positive face), such as using implication to frame problem-solving orientations within scholarly communities. In contrast, Chinese authors reduce imposition risks through informational explicitness (negative face), exemplified by replacing “we found” with “results indicate” to transform personal claims into objective textual statements.

This differentiation further manifests in the syntactic co-occurrence patterns of MNs: English intensifying MNs frequently co-occur with cognitive verbs (demonstrate, confirm; co-occurrence rate: 62.7%), while Chinese hedging MNs predominantly pair with mitigation markers (possibly, perhaps; co-occurrence rate: 81.3%). Together, these patterns constitute culturally differentiated 'rhetorical grammar' systems across linguistic contexts.

4.3. Diachronic Impact of Disciplinary Paradigm Shifts

Longitudinal data reveal a cognitive turn in the functional realization of metanarratives (MNs) within applied linguistics during 2015-2025. The use of interpretive MNs such as “analysis” and “interpretation” in English articles increased by 41.2%, reflecting the deepening “explanatory turn” under post-positivist paradigms. For instance, the high-frequency occurrence of “interpretation” in English discourses often employs multimodal argumentative structures (e.g., “Our interpretation aligns with the discursive turn in sociolinguistics”) to embed research findings within broader disciplinary discourse networks, demonstrating the interpretative negotiation characteristics of knowledge production (Lillis & Curry, 2018). Conversely, empirical MNs like “data” and “model” in Chinese articles witnessed a 67.8% growth, indicating the institutionalization of quantitative methodologies. Notably, the proportion of methodological statements such as “Data sourced from CLEC corpus” in Chinese abstracts rose from 12.4% in 2015 to 28.9% in 2025, revealing a standardization trend in research reporting practices.

During the COVID-19 pandemic, there was a shift towards public participation. From 2020 to 2022, there was a surge in English and Chinese metadiscursive nouns (MNs) related to “suggestions” and “appeals” (English +193%, Chinese +157%). For example:

Example 5: *This crisis calls for urgent recommendations to redesign online pedagogy.*

In this sentence, “recommendations” co-occurs with the modal verb “calls for” and the adjective “urgent”, directly linking academic advice to public crisis response and highlighting the social engagement function of academic discourse.

Example 6: *This study calls for the establishment of a cross - disciplinary emergency language service mechanism.*

In this example, “calls for”, as a performative MN, weakens the author’s overt involvement through thematic choice, yet indirectly conveys academic initiatives via the strong performativity of the verb “calls for”, reflecting the Chinese rhetorical strategy of “leveraging momentum”.

Meanwhile, academic discourse demonstrates interdisciplinary characteristics. A comparative study between contrastive linguistics and second language acquisition (SLA) subfields reveals that English SLA research articles employ reflective metadiscourse nouns (MNs) like “limitation” and “caution” 38.6% more frequently than contrastive linguistics papers ($p < 0.05$).

Example 7: *A limitation of this study lies in the homogeneity of participant profiles.*

Here, “limitation” employs the prepositional structure “lies in” to objectify research shortcomings as inherent textual attributes. This strategy not only fulfills the ethical requirements of academic reflexivity but also avoids direct attribution of responsibility to researchers (Hyland, 2016).

In contrast, the corresponding Chinese data shows only 12.4% usage. For example, in a contrastive linguistics paper:

Example 8: *Attention should be paid to intervening variables in dialect contact.*

The phrase "pay attention to" functions as an implicit reflective marker. Through impersonal construction, it transforms critical reflection into generalized research recommendations, manifesting the Chinese academic discourse's tendency to avoid direct negation.

4.4. Cultural Cognitive Models and Identity Construction

The cognitive conflict between the Confucian tradition of prudent speech and the Western rhetorical tradition of argumentation materializes in the pragmatic divergence of identity construction through metadiscourse noun (MN) usage. Chinese authors employ impersonal MNs, such as the author and this study, to achieve self-objectification, with a usage density 3.8 times higher than English first-person pronouns (I/we).

Example 9: *This study attempts to construct a dynamic evaluation model.*

This Chinese study objectifies the research subject as a textual entity, simultaneously erasing individual authorial authority while preserving scholarly humility through the verb attempts. This constructs a form of "depersonalized authority" (Wu, 2019).

Another English Contrastive Example:

Example 10: *We propose a three-tiered framework to address this gap.*

The pronoun we, as an explicit self-referential marker, employs the performative verb propose to directly assert authorial innovation, reflecting the English academic culture's valorization of academic agency.

The MN collaboration, co-occurring with the adjective interdisciplinary and the modal adjective essential, frames academic cooperation as an imperative pathway for global governance, mirroring the globalization trend in post-pandemic academic discourse.

5. Conclusions

This study, through a tripartite Rhetorical Identity-Cognitive Interaction-Cultural Adaptation model, reveals that cross-cultural divergences in metadiscourse nouns (MNs) fundamentally arise from the co-evolution of disciplinary institutions, cognitive habitus, and rhetorical traditions. While English academic writing constructs "dialogic authority" through high-frequency interactive metadiscourse, Chinese discourse achieves "humility-driven persuasion" via communicative metadiscourse. Together, these strategies constitute the pluralistic ecology of global academic knowledge production.

The research transcends the Western-centric limitations of Hyland's metadiscourse model, providing both a theoretical framework and empirical grounding for establishing an inclusive academic rhetoric system. Future studies should extend to multimodal metadiscourse analysis and strengthen diachronic tracking of non-English academic discourses to further disentangle the dynamic interplay between cultural cognition and scholarly communication.

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