

# A Corpus-Based Study of Hedges in Conversation Analysis Research Articles

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Hedging is an important linguistic device for expressing uncertainty, politeness, or caution in academic writing. This study aims to investigate the use of hedges across the Abstract, Introduction, Discussion, and Conclusion sections of conversation analysis (CA) research articles. A corpus-based analysis indicates that hedges occur most frequently in the Discussion and Conclusion section. Sectional differences seem to be in alignment with the rhetorical functions of each section. These findings suggest some hedging strategies in CA research articles and provide practical guidance for novice writers aiming to publish in this field.

*Keywords:* hedge, conversation analysis, corpus, rhetorical function

## Introduction

In academic writing, researchers are required not only to present new information, but also to engage in negotiation with the research community to achieve consensus and gain recognition. During this process, hedges function as an important communicative device, allowing writers to qualify their assertions, maintain flexibility, and remain open to alternative interpretations of their claims. This importance is such that Hyland (1994) has argued for the necessity of teaching hedges explicitly in even textbooks on top of academic writings.

Previous studies on hedges have investigated their uses and functions in academic writing across various disciplines, including Medicine (Salager-Meyer, 1994), Molecular Biology (Hyland, 1996), and Applied Linguistics (Chaisiri, Kumdee, & Pramoolsook, 2025). Further studies have taken a cross-disciplinary perspective, or an intercultural perspective. For cross-disciplinary studies, Abdeljaoued (2026) has conducted a corpus-based study on hedges spanning eight disciplines, revealing different frequencies of their use across hard and soft disciplines. From an intercultural perspective, studies have examined hedging differences between English and other languages (e.g., Chinese, Spanish) as well as between native and non-native English writers from different backgrounds (e.g., Turkish, Chinese). Findings suggest that English texts generally employ more hedging devices than other languages, and that non-native scholars tend to use more hedges in international publications than in national ones (Yang, 2013). However, despite growing interest in disciplinary and cross-cultural variation, hedging in conversation analysis (CA) research articles remains under-explored. Given CA's focus on the fine-grained, sequential analysis of naturally occurring interaction (Schegloff, 2007), it is unclear whether hedging in CA follows patterns observed in other disciplines. To address these gaps, the present study conducts a corpus-based analysis of hedges in CA research articles, focusing on three key sections: the Abstract, Introduction, and Discussion & Conclusion.

## Method

The data were drawn from a self-compiled corpus of 33 CA research articles published between 2018 and 2025 in leading journals (e.g., *Journal of Pragmatics*). Only empirical studies grounded in the CA tradition were included. Three sections were extracted for analysis: Abstract, Introduction, and Discussion & Conclusion, as they are widely recognized as key parts for expressing authorial stance and epistemic evaluation. The corpus comprises approximately 60,302 words in total, with each section forming a sub-corpus. The analysis adopts Crompton's (1997) taxonomy of hedges, which defines hedges as linguistic devices used to explicitly qualify the author's lack of commitment to the truth of a proposition he or she utters. Six categories of hedging devices were examined, including non-be copulas (H1), epistemic modals (H2), probability clauses (H3), probability adverbs (H4), author's non-factive reporting verbs (H5), and verbs implying hypothesized existence (H6). His Commitment Test (1997) was also applied to check whether it is indeed a hedge in the context. Data analysis was conducted in several steps. First, the extracted texts were processed using Antconc to generate frequency lists and concordance lines. Second, each potential hedge was manually checked via the Commitment Test. Finally, all confirmed hedging devices were categorized and quantified across sections. Occurrences were normalized per 1,000 words to allow for meaningful comparison.

## Results

### Overall Distribution

Table 1 shows the normalized frequency of hedges across the three sections. As seen from the table, the Discussion & Conclusion section exhibits the highest frequency of hedging devices (11.5 per 1,000 words), while the Introduction section contains the lowest frequency, with only 1.9 per 1,000 words. The Abstract section occupies an intermediate level of hedging devices, which is 4.7 per 1,000 words.

Table 1

#### *Overall Frequency of Hedges Across Sections*

Sections	Total n. of words	Total n. of hedges	Frequency per 1,000 words
Abstract	5,570	26	4.7
Introduction	26,839	50	1.9
Discussion & Conclusion	27,893	320	11.5

Specifically, the density of hedges in the Discussion & Conclusion section is substantially higher than that in the other sections, which indicates a greater epistemic tentativeness and academic caution in this part of research articles. In contrast, the Introduction section contains the fewest hedging devices, suggesting a limited employment of epistemic mitigation. The Abstract section typically displays a moderate use of hedging devices, balancing concise reporting with cautious interpretation. Overall, the results reveal a salient sectional distribution of hedging devices, with an increase tendency from the Introduction section through the Abstract section to the Discussion & Conclusion section.

### Use of Different Categories of Hedging Devices Across Sections

Table 2 shows the normalized occurrences of different categories of hedges across the Abstract, Introduction, Discussion & Conclusion sections. As seen from this table, different sections display specific preference for specific categories of hedging devices. In the Abstract section, hedging is primarily realized through epistemic modal verbs and author's non-factive reporting verbs. These two categories account for the majority of hedging

devices in this section. Non-be copulas remain a moderate level in this section. In contrast, other categories occur only marginally or are entirely absent from this section.

Table 2

*Different Categories of Hedges Across Sections (per 1,000 Words)*

Hedge types/sections	Abstract	Introduction	Discussion & Conclusion
H1	0.72	0.52	1.43
H2	1.44	0.60	8.25
H3	0	0.04	0.11
H4	0.18	0.19	0.54
H5	2.30	0.52	1.00
H6	0	0	0.14

The Introduction section displays the lowest overall density of hedging devices and a relatively even distribution of different categories. Epistemic modal verbs, non-be copulas, and author's non-factive reporting verbs are all used sparingly, while probability clauses, probability adverbs, and verbs implying hypothesized existence are largely absent from this section. The Discussion & Conclusion section demonstrates a marked increase in both the overall frequency and the range of hedging devices, with epistemic modal verbs displaying a particularly pronounced increase. In addition, non-be copulas, probability adverbs, and author's non-factive reporting verbs are more frequently used in this section to show epistemic tentativeness. Notably, verbs implying hypothesized existence occur only in the Discussion & Conclusion section. One thing that needs to mention is that although author's non-factive reporting verbs remain salient in this section, their frequency of use is lower than that in the Abstract section.

### Discussion

The purpose of this study was to examine sectional differences of CA research articles on hedge frequency and types. Overall, the results suggest that the overall distribution and hedge types systematically vary across the three sections. First, regarding the overall distribution of hedges across sections, the results reveal a clear function-driven pattern. The Introduction section contains the fewest hedging devices, as its primary rhetorical function is to establish a research territory and assert the legitimacy of the study. Excessive hedging at this stage may undermine the clarity and strength of research positioning. The Abstract section displays a moderate level of hedging, since in this section, concise reporting and cautious interpretation must be balanced under strict space constraints. In contrast, the Discussion & Conclusion section involves a higher degree of interpretation and evaluation, which necessitates extensive use of hedging devices to signal epistemic tentativeness and to delimit the scope of claims. Thus, this section exhibits the highest frequency of hedges, reflecting their interpretive and evaluative nature. At this stage, authors are required to explain findings, propose implications, and acknowledge limitations, all of which involve epistemic uncertainty. Particularly in the context-sensitive and data-driven nature of CA, where claims are grounded in fine-grained analyses of situated interaction, hedging serves as an essential resource for signaling analytical caution and restricting the scope of generalization. Therefore, authors tend to employ more hedges in this section to acknowledge the interpretive nature of their analyses and to avoid over-generalization.

Second, in terms of variation in hedging categories, different sections display distinct preferences which are in alignment with their respective rhetorical functions. The Abstract section favors epistemic modals and non-

factive reporting verbs. Epistemic modals enable authors to summarize findings while avoiding categorical commitment, thus balancing informational density with epistemic caution. Similarly, non-factive reporting verbs allow authors to present results as provisional interpretations rather than definitive claims, which is particularly suitable for the highly compressed nature of abstracts. The Introduction section displays a relatively low and even distribution of hedging categories. This pattern reflects the primary function of the Introduction, which is to establish the research context, review previous studies, and identify research gaps rather than to advance strong interpretive claims. Non-be copulas are used when assessing previous research, characterizing phenomena, or identifying research gaps, as they allow authors to express an evaluative stance without making strong epistemic commitments. The Discussion & Conclusion section shows a marked increase in the range of hedging devices, with epistemic modals displaying a particularly pronounced rise. This section represents the phase of greatest interpretive uncertainty, where authors are required to explain results, infer underlying mechanisms, and relate findings to broader theoretical frameworks. These epistemic modals thus provide a flexible means of formulating explanations and generalizations while mitigating the risk of overstatement, particularly suitable for the contingent nature of analytical claims in CA. Notably, verbs implying hypothesized existence occur only in this section, reflecting their role in constructing abstract entities or tentative explanatory patterns that emerge from the interpretation of results.

In all, the sectional differences in the overall distribution, variation in hedging categories, and salient hedging expressions could be attributed, on the one hand, to the distinct rhetorical functions of each section, and on the other hand, to the fine-grained, sequential organization of naturally occurring talk-in-interaction nature of CA, which is context-sensitive and data-driven and avoids over-generalization. These findings suggest the vital role of hedging strategies in academic writing not only for researchers in the field of CA, but also for cross-disciplinary English for Academic Writing (EAP) instructions.

### Conclusion

This study investigated the use of hedging devices in CA research articles through a corpus-based approach, with particular attention to sectional differences across the Abstract, Introduction, Discussion & Conclusion sections. Drawing on Crompton's (1997) taxonomy of hedges and his Commitment Test, the results suggest a clear and systematic pattern. Hedges are of the highest density in the Discussion & Conclusion section, occur at a moderate level in the Abstract section, and are least frequent in the Introduction section. Different sections favor different hedging categories according to the distinct rhetorical functions of each section. The findings contribute to a more comprehensive understanding of hedging and epistemic commitment in academic writing by extending previous studies to the under-explored and specific field of CA research articles. However, the corpus is relatively limited in size and may not represent the full diversity of CA publications. Future research could enlarge the corpus by including a greater number of Conversation Analysis research articles drawn from a wider range of journals and publication periods.

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