The Construction of Knowledge Claims in Three Disciplines: An Exploration of Hedging and Boosting Strategies in Research Articles Written in English by Arab and Anglophone Writers

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Research background: Academic writers utilize a variety of rhetorical methods to construct their knowledge claims through hedges and boosters. These two strategies may also be affected by disciplinary, cultural, or generic contexts.

Gap in knowledge and Purpose of the study: This mixed-methods contrastive research study explored how disciplinary and cultural contexts may affect the way Arab and Anglophone writers construct and modulate knowledge claims through hedges and boosters in the results and discussion sections of 90 English research articles in three disciplines: Journalism, Law, and Political Science.

Methods: Instances of hedges and boosters and their pragmatic functions in context were identified, employing Liu and Tseng's (2021) framework. This framework provides a detailed functional interpretation of the use and variation of these devices along four continuums: authorial voice, reasoning, consensus-building, and information evaluation.

Findings: The results showed interesting contrasts and similarities between both groups regarding the approaches they used to define their levels of commitment and detachment in their knowledge claims. The quantitative findings revealed significant differences in hedges but non-significant differences in boosters used by both groups. The qualitative analysis revealed that hedging and boosting functions in Arab and Anglophone writers' RAs differed along the four continuums. Anglophone writers often used hedges in their writing to show humility, negotiate knowledge claims, and accommodate vagueness. These acts enabled them to sketch the realities emerging from their research. By contrast, the English-speaking Arab writers used fewer hedging strategies and demonstrated assertiveness, and assumed shared knowledge to enhance the realities constructed in their knowledge claims.

Value Added: These findings can benefit ESP/EAP teachers, especially those teaching writing for publication purposes to raise postgraduate students' awareness of epistemic modality markers. A custom-made ESP/EAP course tailored to the needs of learners based on Liu and Tseng's (2021) hedging-boosting framework can be devised to develop communicative and academic strategies in English.

Keywords: Anglophone Academic Writers (AAWs), Arab Academic English Writers (AAEWs), research articles (RAs), metadiscourse, hedges and boosters, discourse analysis

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INTRODUCTION

Constructing knowledge claims is crucial in academic writing since authors have to distinguish fact from opinion and evaluate their assertions in adequate and persuasive ways. Expressions of doubt and certainty are essential communication skills in academic writing. These expressions have been classified in various ways in the literature. Stubbs (1986), for example, classified such practices as "modality markers" to explore evaluative aspects in texts, whereas Hyland (1998) classified expressions of doubt and certainty as hedges and boosters. Hunston and Thompson (2000) broadly used the term "evaluation" to refer to those statements that express a writer's beliefs, judgments, or attitudes. Silver (2003) referred to linguistic features that emphasise confidence in propositions through epistemic certainty as a 'writer's stance.' Regardless of the terminology used to explore discourse, analysing the degree of commitment or detachment in conveying meanings can be applied to knowledge claims constructions and stance representation in academic writing.

Hedges and boosters are two of the most important communicative strategies of academic discourse because they strengthen or weaken knowledge claims. They help writers express an authorial stance about the truth value of a proposition. Hedges and boosters are deployed in research articles (RAs) to express a writer's relationship with members of the discourse community. The academic RA is a crucial genre for knowledge construction and communication influenced and shaped by complex communicative interactions in academic discourse communities (Hyland, 2009; Swales, 1990). Manipulation of hedges and boosters in RAs is important in academic writing because these metadiscursive expressions are used to construct knowledge claims by anticipating readers' reactions to these claims (Hyland, 2017).

Hyland (2005) has pointed out differences in how first language (L1) and second language (L2) writers organise their ideas and engage readers in their compositions. He argued that each culture seems to have its values, norms, language(s), and communication methods. Thus, text organisation varies across different cultures. A considerable number of studies of the effects of culture on the use of hedges and boosters in English RAs written by L1 and L2 writers have been conducted over the past three decades (e.g., Al-Mudhaffari, Hussin, & HoAbdullah, 2020; Farrokhi & Emami, 2008; Koutsantoni, 2005; Mirzapour & Mahand, 2012; Thuy, 2018; Samaie et al., 2014; Sanjaya et al., 2015; Vassileva, 2001). These cross-cultural studies have indicated that writers' use of hedges and boosters may be affected by their cultural background, the literacy practices they are associated with, and conventions of genre and discipline. For example, Koutsantoni (2005) has examined three sets of engineering RAs and conference papers written in Greek by L1writers, English by Greek writers, and English by L1 writers. The results revealed that Greek writers (L1 and L2) employed a high-boosting style compared to the English L1 writers who avoided making too authoritative knowledge claims. However, Koutsantoni did not explore the use of uncertainty devices. The use of such devices might have made the Greek writing appear less authoritative and confident, despite the frequent use of boosters.

Along similar lines, Vassileva (2001) has investigated how academic discourse in English and Bulgarian discourse exhibits commitment (through boosters) and detachment (through hedges). She studied three sets of linguistics RAs written in Bulgarian, in English by Bulgarians, and in English by L1 writers. The analysis revealed a highly authoritative style with more boosting devices than hedges in the Bulgarian English texts, and less assertive discourse in negotiating knowledge claims in the English L1 texts. Also, Bulgarian English texts started with a highly committed style and closed with an intensely hesitant tone. As such, they seemed to utilise more boosters in their introductions and discussions, yet offering more tentative claims of knowledge in the conclusion sections. Bulgarian English writers simply did the opposite of what English L1 writers did. It was rather the assertive nature of Bulgarian expert writers' knowledge presentations in general that highlighted a cultural characteristic of Bulgarian writers. According to Vassileva (2001), Bulgarians who lack sufficient knowledge in L2 academic writing may be unaware of the role of hedging in L2 academic writing. This makes them unlikely to conform to the norms and expectations of the discourse community.

A recent study by Al-Mudhaffari et al. (2020) has investigated hedges and boosters used by Yemeni L2 writers in Applied Linguistics RAs.The study found a lower rate of hedges and boosters, suggesting that this discrepancy may be ascribed to cultural differences and the unfamiliarity with the norms of academic writing or the essential characteristics of appropriate argument. Balancing the expression of commitments and detachment can be highly problematic for L2 writers.

Most of these studies, however, focused on the quantitative aspects of hedges and boosters. Little focus and attention were given to the contextual and functional features of hedges and boosters. Moreover, although hedges and boosters are shown to be moderately or highly negatively correlated features (Hu & Cao, 2011), some researchers have studied hedging features alone (e.g., Atai & Sadr, 2008; Crompton, 1997; Falahati, 2004; Hyland, 1996; Kranich, 2011; Lewin, 2005; McLaren-Hankin, 2008; Peterlin, 2010; Šeškauskienė, 2008; Varttala, 1999, 2001). The concept of boosters has also been separately examined in very few studies (e.g., Bondi, 2008; Heiniluoma, 2008; Koutsantoni, 2005; Vázquez Orta & Giner, 2009). While some studies on hedges and boosters were associated with issues of modest and vague claims (Crompton, 1997), politeness and cautiousness (Varttala, 1999), and/or (un)certainty (Akbas, 2014), both features

contribute to highlighting the level of commitment/detachment.

Academic writers vary in their use of argumentative and rhetorical practices to express and position their views, and are influenced by the generic, disciplinary, and cultural contexts in which they write (Bondi, 2008; Fløttum, 2012; Hyland, 2009; Silver, 2003). Cultural rhetorical variations of hedging and boosting preference exist as these two linguistic features are culture-related (Bloor & Bloor, 1991). Hinkel (2003) argues that Anglophone Academic Writers (hereafter, AAWs) consider hedging an overtly persuasive strategy and, as such, its use may be worth comparing with other cultural-rhetorical contexts, where it may or may not be perceived to have such a rhetorical value. For example, amplification in classical Arabic may be preferred to hedging for persuasion to take place. According to Hinkel (2005), exaggeration and assertion are characteristics of Arabic rhetoric. Although Hinkel (2005) compared the use of hedges and intensifiers in L2 academic essays written by university students from six cultural backgrounds, including Arabic, with those written by AAWs, there seem to be few other studies investigating and comparing the use of hedging and boosting strategies in RAs authored by Arab Academic English Writers (hereafter, AAEWs) with those written by AAWs. The claim that Arab writers may intend to persuade their audiences through emphatic expressions rather than hedging (Connor et al., 1996) must also be explored by investigating hedging and boosting strategies in RAs written by AAEWs and AAWs.The use of native/non-native dichotomies in the present study has been avoided since these concepts are a 'myth,' i.e., it is debatable whether all native English-speaking writers are more proficient than non-native English-speaking writers living in non- Anglophone countries. Thus, while the acronym AAEW refers to Arab Academic English Writers working in Arab universities or organisations, AAW refers to academic writers working in Anglophone countries (i.e., the United States, United Kingdom, Canada, Australia, and New Zealand) although English is not necessarily their first language.

The present study aimed to investigate and compare the distributions and functions of hedges and boosters in the results and discussion sections of English RAs authored by AAEWs and AAWs. Thus, the study attempted to answer the following two research questions:

1. How do disciplinary paradigmatic variations affect the use of hedging and boosting strategies employed in the results and discussion sections of Law, Journalism, and Political Science RAs authored by AAEWs and AAWs?

2. What do these strategies reveal about their argumentative and negotiating practices in knowledge claim construction in academic writing?

This research study is part of a wider research project of interactional metadiscourse features of stance and engagement markers in the results and discussion sections of RAs written by AAEWs and AAWs.

THEORETICAL FRAMEWORK

Hedges and Boosters

Hedges enable writers to suppress complete commitment to a proposition, subjectify the claim and present it as an opinion rather than a credited fact. In this sense, claims are constructed based on probable reasoning rather than factual knowledge. They also enable writers to make claims and create a discursive space so that readers can debate their interpretations. Linguistic expressions for hedges include expressions such as "seem," "suggest," "might," "perhaps," and "to a certain extent." Boosters, in contrast, enable writers to express certainty in their claims, involvement with a presented proposition, and solidarity with their readers. Unlike hedges, they enable writers to declare their ideas with assurance and narrow the diversity of opinions. Boosters are expressed linguistically through various expressions such as "clearly," "prove," "show," "in fact," and "it is clear that." Both hedges and boosters allow writers to construct claims since both features balance objective information and create space for subjective evaluation and interpersonal negotiation (Hyland, 2005).

The present study was framed by Liu and Tseng's (2021) framework for the organisation of hedges and boosters, which is based on Hyland's (2005) list of interactional metadiscourse markers. Liu and Tseng (2021) proposed an analytical framework to account for some hedges and boosters not included in Hyland's (2005) list (e.g., "in a sense" and "some" for hedges; "exactly" and "none" for boosters). This framework provides a detailed functional interpretation of the uses and paradigmatic variations of these devices along four continuums: authorial voice, reasoning, consensus-building, and information evaluation. Liu and Tseng's (2021) study explored whether hedges and boosters differed in RAs adopting either narrative inquiry (NI) or grounded theory (GT) approaches to qualitative research. The NI approach involves deducing a hypothesis or a theory based on a participant's narrative, while the GT approach involves collecting and analysing data to construct a hypothesis or a theory. The findings revealed that narrative-based qualitative RAs employ boosters to enhance realities through the use of assertive stance (e.g., "should"), salience markers (or highlighted expressions, such as "highly"), and high truth value markers to assume shared knowledge (e.g., "it has been clear that …"). By contrast, grounded theorists use hedges to sketch realities by negotiating knowledge claims (e.g., "perhaps"), indicating humility (e.g., "would"), and accommodating vagueness (e.g., "in some cases"). Liu and Tseng (2021) argue that researchers' thinking and argu-

ments could be influenced by their approach to realities (or research paradigm).

Although Liu and Tseng's (2021) framework was developed in relation to qualitative RAs following NI or GT, it was suitable for our research purposes because it offers a detailed functional interpretation of hedging–boosting interactions and knowledge claim construction, as little attention was previously placed on the differences and paradigmatic variations of the functions of hedges and boosters in terms of Hyland's metadiscourse theory. Liu and Tseng (2021, p. 13) argue that their framework offers a detailed "holistic account of hedging and boosting features." This framework also accounts for hedging–boosting instances not documented by previous studies. In the current study, the lexico-grammatical features of hedges and boosters were categorised and then analysed, employing Liu and Tseng's (2021) framework for the organisation of hedges and boosters along four continuums (Table 1): authorial voice, reasoning, consensus-building, and information evaluation. There are two ends to each continuum representing the different conceptions of reality. One end of each continuum indicates certainty and the other end is moving towards uncertainty and attenuation.

The first continuum describes how writers' identities are reflected in their contributions to their research community. The second one pertains to the way writers approach truth conditions within their reasoning. The third relates to how writers build consensus with potential readers. The fourth one pertains to writers' positions towards admission of a knowledge claim. The four continuums were adapted and modified based on our data coding and data observation. In this way, the opposing yet moderately or highly negatively correlated aspects of hedges and boosters may be highlighted.

Table 1

Definitions and examples of the organisation of hedges and boosters along four continuums

		Definition	Example
Authorial voice	**Humility**	Writers show a sense of humility through reducing the force of suggestion and the contribution of their research.	Scholars *might* consider Silicon Valley an opportunity to explore discourse about an institution … (J.-AAW2)
	Assertiveness	Writers showcase their strong persona by enhancing the force of suggestions and contributions.	Scholars *should be* primarily concerned with estimating the existence and sign of effects, rather than their magnitude… (P.S.-AAW4)
Reasoning	**Assumptions**	Writers' reasoning is based on deductive conclusions from research findings using low truth value markers.	One *possible* explanation for this *could be* that respondents *migh***t** not have given much value to a statement by a "high-ranking government official" (P.S.-AAEW1)
	Facts	Writers' reasoning is derived from research findings using high truth value markers to indicate facts.	These findings … *demonstrate* a widespread connection between the United States' global standing and the relative status of the political parties … (J.-AAW11)
Consensus-building	**Knowledge negotiated**	Writers avoid misinterpreting the findings of prior research.	Scholars have *suggested* that commercial upheaval in the media sector *may* explain the declining standards of political reporting (Jones, 2009; Bennett, 2012; Ricketson, 2016). (J.-AAW7)
		Writers discuss findings against prior research.	Like Hollander (2006), the results *suggest* that substantive policy coverage was often supplanted by narratives … (J.-AAW7)
	Knowledge shared	Writers assume certain knowledge as shared among audiences.	the Arab Spring presents a *clear* example of the interaction and conflict … (P.S.-AAEW7)
Information evaluation	**Vagueness**	Writers tend to use vague language to avoid making definite claims.	… the theory presented here raises *certain* questions about the prevailing general… (L.-AAEW11)
	Salience	Writers explicitly assess the reliability of their claims.	… the increased costs have *undoubtedly* kept some previously registered individuals from voting … (P.S.-AAW2)

METHODOLOGY

Research Design

This contrastive corpus-based study aimed to pragmatically explore the distribution tendency of hedges and boosters in English RAs written by AAEWs and AAWs related to their disciplinary contexts (Law, Journalism, and Political Science) and cultural contexts (AAEWs and AAWs). A mixed-methods research design was employed.

Data Collection

We constructed a corpus of 90 RAs based on the selected disciplines and cultural groups. The corpus building procedures were divided into a series of stages for the selection of 1) academic disciplines, 2) academic journals from target disciplines, and 3) academic RAs from target journals.

The first stage for the selection of data, purposeful sampling, was used to choose the disciplines for the study. It involves "selecting units (e.g., people, groups, settings, artefacts) based on a specific purpose" (Tashakkori & Teddlie, 2003). The selection of Law, Journalism, and Political Science disciplines was motivated by two factors. First, metadiscourse studies have made comparisons between soft and hard fields (e.g., Hyland, 1998, 2005). The comparison in our study explores further dimensions of cross-disciplinary rhetorical features within the selected soft disciplines. Second, the selection was motivated by EAP/ESP syllabi and courses in which an awareness of the range of genres, and the ways genres span disciplines is required. Such insights into the relationships between language and its contexts of use are essential for ESP/EAP instruction. Second, the selection was motivated by the fact that metadiscourse studies of soft sciences are surprisingly under-researched although the argumentation, critiques, and viewpoints in soft disciplines are, especially in these three disciplines, shaped by writers' own experiences, passions, interests, and viewpoints. All the disciplines in the corpus shared a commitment to reporting empirical research that results from observations and measurements. They involved direct and indirect observations or experiences including surveys, case studies, ethnography, or observation. As an example, Journalism writers evaluated and interpreted a variety of events, situations, and people from specific contexts, Law writers investigated the potential impact of small claims courts, policies and regulations, and Political Science writers examined and interpreted political theories and governmental practices at the national and international levels. In all disciplines, the aim was to examine changing conditions, perceptions, and findings related to the phenomena under study. Thus, they combine inductive (qualitative) exploratory work with deductive (quantitative) data in order to examine the nuances and mechanisms that underlie the themes in more detail.

A two-step sampling procedure was employed in the second stage of selecting academic journals: (a) quota sampling and (b) purposive sampling. Our first step was to establish quotas for each stratum or subgroup (Gravetter & Forzano, 2018) and, in this case, some journals in each discipline. Thirty journals were selected from each of the three disciplines. Secondly, purposive sampling was implemented by selecting journals that are listed in Clarivate Analytics' Journal Citation Reports (JCR) to ensure the representativeness, quality, and relative journal prestige. JCR facilitates an efficient evaluation of research influence and journal impact in the chosen fields. A list of the selected journals is presented in Table 2.

A probability sampling method was implemented in the third stage of selecting RAs, involving a combination of both random and stratified sampling. By 'random' we mean that the articles were selected randomly from different volumes and issues. These samples are usually used when researchers want their samples to represent the entire population (Teddlie & Yu, 2007). Accordingly, all RAs written between 2010 and 2020 were taken out of their selected journals and added to the sampling pool. Because our focus was on the results and discussion sections, the other sections were excluded. Based on Gotti's (2012) study and using the Web of Science Core Collection, we selected 90 RAs written by AAEWs and AAWs. The status of the two group writers was determined by viewing their affiliations and presence on traditional and social media. The total number of words in the results and discussion sections was 163,443 (Table 3).

Data Analysis

In this contrastive corpus-based study, we followed four main phases; indexing and categorization, functional analysis, second coder analysis, and statistical analysis. First, instances of hedges and boosters were identified and categorised. In QSR NVivo, a text search query was run using Hyland's list of target items to check contexts and looked for hedge-booster items in the 90 results and discussion sections. Clause-by-clause annotations were also made to provide a full picture of the target features. Second, a functional approach specific to hedging–boosting interactions across disciplines and cultures was implemented using Liu and Tseng's (2021) framework (Table 1). A functional coding scheme in addition to previous existing classifications of hedges or boosters was adopted. Qualitatively, differences and variations in the pragmatic functions of hedges and boosters were identified and coded. Third, two samples of the results and discussions sections written by an AAEW and an AAW were selected from each of the three disciplines for the coding schemes of hedging and boosting functions. Each coder independently coded the six articles imported to QSR NVivo, using both Hyland's list and clause-by-clause annotations. Hedges and boosters were identified and their pragmatic functions in context were explained. The inter-coder agreement was 79.2% for hedges, and 83.6% for boosters.

Table 2
A list of selected journals from each discipline

Disciplines	Writers	Journals	Impact factor
Journalism	AAWs	Journalism Practice	2.537 (2020)
		Journalism Studies	3.741 (2020)
	AAEWs	International Journal of Communication	1.802 (2020)
		Digital Journalism	7.986 (2020)
		Journalism	4.436 (2020)
		Journalism Practice	2.537 (2020)
		Journalism Studies	3.741 (2020)
Law	AAWs	Journal of Empirical Legal Studies	1.610 (2020)
		Journal of Law and Society	1.029 (2020)
	AAEWs	International Journal of Law and Psychiatry	1.851 (2020)
		Computer Law & Security Review	2.980 (2020)
		European Journal of Law and Economics	1.108 (2020)
Political Science	AAWs	British Journal of Political Science	5.174 (2020)
		American Journal of Political Science	6.081 (2020)
	AAEWs	Political Research Quarterly	2.556 (2020)
		Mediterranean Politics	2.588 (2020)

Coding differences were minimized by discussion and negotiation through consensual coding (Kuckartz, 2014). Following the inter-coding scheme, the remaining data were coded and closely examined to determine hedges and boosters. Coding memos describing how existing categories might relate to certain codes during the coding phase were made to reflect on the coding scheme. It was an iterative, self-reflective process that checks the consistency of functional categorization (Miles et al., 2018). In the second week, the same coding scheme was used and all 90 results and discussion sections were coded. The intra-coder reliability between the two rounds was 83%. Wallace and Ross (2016) suggest a 70% level of agreement as a reasonable minimum. Finally, the frequencies of the coded hedges-boosters found in the six sub-corpora were normalized per 10,000 in each sub-corpus. Quantitatively, A two-way ANOVA test was run to compare disciplinary and cultural effects on the normalized frequencies (per 10,000 words) of hedges and boosters found in the six sub-corpora. Multiple comparisons Bonferroni test was run to examine the difference in hedging strategies between the writers. The Bonferroni test is an adjustment post hoc test used with ANOVA. It was run when the statistical result of hedges was significant to prevent it from appearing as a false significant result. Since the ANOVA result of boosters was non-significant, the Bonferroni test was not needed.

RESULTS AND DISCUSSION

To address the first research question, we compared the overall configurations of hedging-boosting strategies in the results and discussion sections of AAEWs and AAWs. (Appendices A-B). To address the second question, we conducted a qualitative analysis of hedging and boosting strategies to present the writers' argumentative and negotiating practices in knowledge claims construction along each continuum.

Quantitative Results

Table 4 presents descriptive statistics for hedging and boosting strategies employed in the results and discussion sections of RAs written by AAEWs and AAWs in the fields of Law, Journalism, and Political Science. The results for the use of hedging strategies revealed that the AAWs had higher mean scores in the three fields (M=9.12-9.39) than the AAEWs. The AAEWs scored the highest in Journalism (6.46) compared to the other two disciplines, Political Science and Law.

The results of the descriptive statistics for boosting strategies indicated that the AAEWs had slightly higher mean scores in the fields of Law and Journalism compared to the AAWs who had higher mean scores in Political Science. Specifically, the AAEWs boosting strategies were the highest

Table 3
Summary of key features of the data

Corpus	Disciplines	No. of Articles	No. of Words	Publication Date
AAWs	Journalism	15	28,999	
	Law	15	24,602	
	Political Science	15	28,259	2010-2020
AAEWs	Journalism	15	24,724	
	Law	15	25,077	
	Political Science	15	31,782	
Total		90	163,443	

in Political Science (5.38) compared to the other two disciplines. The AAWs' boosting strategies were also the highest in Political Science (6.22), followed by Law (5.06), and then Journalism (4.38).

The two way ANOVA result for hedging strategies showed a statistically significant difference between the AAEWs and the AAWs ($F(1, 84) = 54.36$, $p=0.018 < 0.05$, $\eta^2 = 0.965$). However, there were no significant disciplinary differences in hedging strategies across the three disciplines ($F(2, 84) = 1.014$, $p=0.496 > 0.05$, $\eta^2 = .504$). There was also no interaction effect between disciplinary variation and the writers' cultural background on the use of hedging strategies, ($F(2, 84) = .0759$, $p=0.759 > 0.05$, $\eta^2 = .007$). The two way ANOVA results for boosting strategies showed no statistically significant differences in boosting strategies between the two groups ($F(1, 84) = .045$, $p=0.851 > 0.05$, $\eta^2 = .022$). Similarly, no significant disciplinary differences in boosting strategies were found across the three disciplines ($F(2, 84) = 2.773$, $p=0.265 > 0.05$, $\eta^2 = .735$). The disciplinary/cultural interaction was also non-significant ($F(2, 84) = .501$, $p=0.608 > 0.05$, $\eta^2 = .012$).

The findings of the Bonferroni test showed that the mean difference in hedging strategies between both groups was 3.641 in favour of the AAWs who had a higher mean score (9.298) compared to the AAEWs (5.657). Since the ANOVA result for boosters was insignificant, the Bonferroni test was not needed. For effect size, measures of association (Eta Squared η^2) were performed to investigate the impact of culture on hedges, and a large effect ($\eta^2 = 0.965 > 0.80$) was recorded according to Cohen (2013) who defined effects as small at 0.2, medium at 0.5, and large at 0.8 or more.

Effect size is provided for the statistically significant results (in this case, hedges) to support the significant *p*-value. In other words, there is a great likelihood that this finding is robust; more likely that the same findings can be generalised (even if we expand the data). The results for boosters were insignificant. Reporting effect size is not necessary in their case.

Table 5 presents the statistical results for the functional uses of hedging and boosting strategies employed by AAEWs and AAWs in the three fields along the four continuums: Humility vs. assertiveness, assumptions vs. facts, knowledge negotiated vs. knowledge shared, and vagueness vs. salience.

Qualitative Results

Figure 1 presents distribution tendencies of hedges and boosters along Liu and Tseng's (2021) four continuums (authorial voice, reasoning, consensus-building, and information evaluation).

Scholars' Authorial Identity: Humility or

Table 4
Descriptive statistics for the use of hedging and boosting strategies by the AAWs and the AAEWs in the fields of Law, Journalism, and Political Science

	Journalism				Law				Political Science			
	AAWs		AAEWs		AAWs		AAEWs		AAWs		AAEWs	
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
Hedges	9.39[1]	5.58	6.46	5.41	9.37	4.58	4.78	1.77	9.12	4.63	5.72	3.54
Boosters	4.38	3.03	4.92	2.85	5.06	2.85	5.10	2.23	6.22	2.38	5.38	2.73

[1] *Words per 10,000 token words.*

Assertiveness

Findings indicated that in their results and discussion sections, AAEWs and AAWs tended to construct different authorial identities through either mitigating or enhancing the significance of their findings. Hedges and boosters emphasise the presence of authors or reduce their voices (Hyland, 1998). The use of modality markers moves towards the humility end for both AAEWs and AAWs across all the disciplines except for AAEWs in Law who tended to favour a sense of assertiveness (Figure 1).

One shared pragmatic function of hedges found in the data was reducing the force of recommendation/suggestion in scholars' communication to experts or researchers in their shared field. The writers adopted a less forceful unassertive stance and made their recommendations less persuasive (Example 1).

1. Analysing Future research *could* also consider whether other forms of communication such as ethnic radio and social media are more likely to mobilize Latinos. (P.S.-AAW9)

Humility-indicating functions of hedges also include presenting a writer's overall contributions to the researched field. Writers would mitigate the significance of their findings with hedges. Some of the most commonly used hedges are modal verbs (e.g., "might, may, etc.") Hedges were used to reduce research contributions and present them less boastfully (Example 2), and/or present their knowledge claims with an appropriate degree of confidence while humbling themselves before the entire disciplinary community (Example 3).

2. Analysing the 2019 federal election *may* provide further insights into the relationship between political campaigning, commercial upheaval, and news quality. (J.-AAW 7)

3. However, our study also shows that the need to maintain high morale is also prominent, a matter that *may be* unique to war and crisis situations. (J.- AAEW13)

The writers used boosters such as deontic modals (e.g., "must"), intensifier verbs (e.g., "confirm"), and emphatic expressions (e.g., "indeed") to build a strong voice and convey their assertive stance. These boosters were used to support their contributions to the research community and/or to promote their suggestions.Some writers presented their research implications by convincing readers that their suggestions should be considered. In this way, readers have no chance to negotiate and are forced to accept what the writer suggested (Examples 4-5).

4. Industries are heavily regulated in terms of maintaining data privacy, and they *must* adhere to specific regulations such as the Health Insurance Portability and Accountability Act (HIPAA) … (L.- AAEW5)

5. Finding an interactive approach to develop, implement and evaluate development programmes *should be* the focus of international donors … (P.S.- AAEW6)

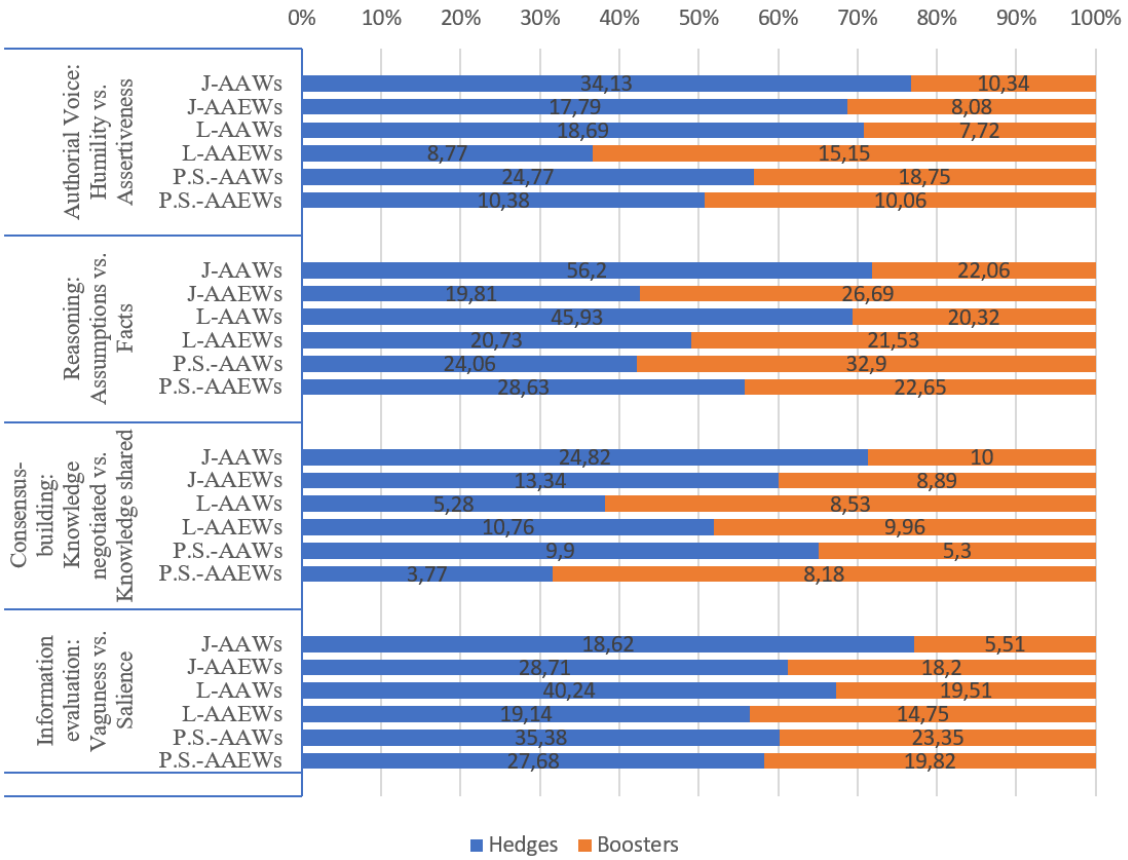
Table 5

The frequency of hedging and boosting strategies employed by the AAEWs and the AAWs along Liu and Tseng's (2021) four continuums

		Journalism				Law				Political Science			
		AAWs		AAEWs		AAWs		AAEWs		AAWs		AAEWs	
		Data	M	Data	M	Data	M	Data	M	Data	M	Data	M
Authorial voice	Humility	99	34.13	44	17.79	46	18.69	22	8.77	70	24.77	33	10.38
	Assertiveness	30	10.34	20	8.08	19	7.72	38	15.15	53	18.75	32	10.06
Reasoning	Assumptions	163	56.2	49	19.81	113	45.93	52	20.73	68	24.06	91	28.63
	Facts	64	22.06	66	26.69	50	20.32	54	21.53	93	32.9	72	22.65
Consensus-building	Knowledge negotiated	72	24.82	33	13.34	13	5.28	27	10.76	28	9.9	12	3.77
	Knowledge shared	29	10	22	8.89	21	8.53	25	9.96	15	5.3	26	8.18
Information evaluation	Vagueness	54	18.62	71	28.71	99	40.24	48	19.14	100	35.38	88	27.68
	Salience	16	5.51	45	18.2	48	19.51	37	14.75	66	23.35	63	19.82

Figure 1

The distribution tendencies of hedging and boosting strategies along Liu & Tseng's (2021) four continuums in the results and discussion sections of Journalism (J), Law (L), and Political Science (P.S.) RAs written in English by AAEWs and AAWs



The writers developed a strong voice through enhancing their contributions and emphasising their research significance by describing them as a recent breakthrough (Example 6) or firmly declaring them to be true (Example 7). In this way, the writers created a sense of conviction that contributed to a less tentative discourse with no reservation or hesitation.

6. Our in-depth interviews *offer* evidence that music therapists are comfortable using copyrighted music in private therapeutic sessions. (J.- AAW15)

7. Our field experiment is the first to *actually* increase the number of women elected to meaningful political offices." (P.S.- AAW 7).

The findings revealed the functional similarities and differences between AAEWs and AAWs in their authorial voice. The AAEWs tended to present their knowledge claims definitively and authoritatively by using boosters while the AAWs favoured more deference markers than the language of strong authorial presence. In line with the findings of Farrokhi and Emami (2008) and Vassileva (2001), the AAEWs seemed to associate the significance of their research with high truth values, while the AAWs seemed to be humbler, showing a tentative style in presenting their knowledge claims. Such differences clearly evince their differing approaches to realities (Atai & Sadr, 2008). Writers' experiences shape their argumentation and critiques and standpoints in the world. Culture strongly influenced AAEWs' articles, as they tended to persuade their audience through emphatic expressions rather than hedging (Akbas & Hardman, 2018; Connor et al., 1996; Farrokhi & Emami, 2008; Mirzapour & Mahand, 2012; Yagız & Demir, 2014).

Reasoning: Assumptions or Facts

The AAEWs and the AAWs constructed knowledge claims based on the inferences they drew from their findings. They either relied on or went beyond data to offer more general interpretations. It appears that some reasoning results were presented as assumptions and some as facts, showing two opposite authorial stances in reasoning claims. Both AAEWs and AAWs used a combination of assumption-loaded hedges and fact-based boosters in the three disciplines. The finding revealed a divergent tendency towards assumption-based reasoning by both groups (Figure 1). The AAWs relied more on assumptions in the fields of Journalism and Law than did the AAEWs who preferred a factual approach to reasoning. The opposite can be observed in Political Science where the AAEWs relied more on assumptions than facts compared to their counterparts.

The textual analysis showed that hedges could communicate palpable circumspection in authorial stance and reveal assumption-based deduction. As a result, these hedges reflect the writer's deductive reasoning instead of facts-loaded knowledge claims (Hyland, 1998), thus distinguishing assumption from reality. When reporting or interpreting their research findings, writers make inferences and draw conclusions using speculative language to imply the content reported is somewhat true, yet they hesitate to act on it. The use of hedges in this situation is associated with a low truth value and indicates the writers' attempts to avoid commitment to their assumptions (Liu & Tseng, 2021). Hedging was mostly achieved using epistemic modal verbs (Examples 8) and some epistemic expressions (Example 9).

8. One factor that *may* explain this trend is the increasing illiteracy rates that plague war-torn countries. (J.-AAEW10)

9. One *possible* explanation of the remarkably weak influence of ideological disagreement on institutional support … (L.- AAW1)

Boosters played an essential role in establishing the factual basis for reasoning in both the AAEWs and the AAWs' RAs through their use of epistemic verbs (e.g., "show," "demonstrate," "reveal"). This indicates that reasoning is derived from data rather than a writer's judgment when constructing a valid and credible knowledge claim. Boosting reasoning is realised in three ways. In one situation, the writers contextualised their research findings by emphasising the direct relation between reasoning and information sources (Example 10). By placing data in a defined context, the writers acknowledged the contextual specificity of data, thereby ensuring readers that the results are relevant, at least in their research context.

10. Answers to the five personal piety and social aspects of Islam *reveal* the strength of Lebanese Shi'i attachment to the basic requirements of their religion. (P.S.- AAEW2)

In another situation, however, the writers did not feel the necessity to contextualise their findings (i.e., "analysis/findings/results reveal") (Example 11).

11. The findings *reveal* that greater death penalty support among forensic psychologists was associated with increased disengagement of moral agency. (L.- AAEW2)

In the final situation, the writers tended to close off alternatives to their knowledge claims by stating their personal involvement. This pattern was more obvious in RAs written by political scientists, who tended to self-promote more than legal and journalism writers (Example 12).

12. We *show* that women have consistently lower levels of political knowledge when compared to men. (P.S.-AAW10)

Along the continuum of reasoning, both groups preferred to use hedges to modify their assumption-loaded reasoning methods (Figure 1). However, the analysis of specific hedging and boosting strategies revealed that the AAEWs tended to contextualize their findings more than the AAWs. This finding reflects the way both groups related the reality constructed in their knowledge claims to the broader real world, i.e., how generalisable their claims are. In Journalism and Law, the AAEWs paid more attention to their collected data and emphasised the direct relation between reasoning and information sources. In this way, they limited their claims and stressed their focus on the particular/specific to achieve reliability (Hinkle et al., 2012). Similarly, Al-Mudhaffari et al. (2020) found that Yemeni L2 writers tended to present their arguments as established facts, making assertive and unqualified knowledge claims. The AAWs in the same fields tended to be more speculative in their reasoning and put considerable emphasis on the generalisability of their research findings. In this way, they probably constructed their reasoning on the grounds of the whole research and avoided using context-constrained specifics to construct the scope for interpretation, thus indicating that their findings are applicable in other comparable situations.

Consensus-building: Knowledge Negotiated or Shared

The AAEWs and the AAWs built consensus with their readers and other researchers in the field through citations of previous research. The AAWs of Journalism and Political Science RAs tended to hedge more to negotiate knowledge with their readers compared to the AAEWs who preferred boosting to share knowledge (Figure 1). The AAWs conveyed partial agreement with the source's knowledge claims by emphasising their detachment from the sources (Atai & Sadr, 2008; Hyland, 2005), while the AAEWs tended to treat knowledge claims rooted in the literature as accepted factual information (Akbas & Hardman, 2018). By contrast, the AAWs of Law favoured knowledge sharing over knowledge negotiating as opposed to the AAEWs in the same field.

The writers tended to avoid confrontations, criticism, or challenges by using modal verbs or epistemic verbs when attempting to interpret past research. They hedged to suggest that their interpretation and understanding of previous research could possibly be inadequate (Example 13).

13. For high-quality facilitating conditions, firms *may* perceive external and internal pressure to genuinely comply with government regulations (Scholz and Pinney, 1995; Girard and Sobczak, 2012). (L.- AAEW 6)

The writers textually constructed knowledge negotiation when they compared their findings with prior research. Hedging devices associated with low truth values (e.g., "suggest") are commonly used by writers to create space for their findings and present either a similarity (Example 14) or discrepancy between their findings and those of previous studies (Example 15).

14. Both our data and those of Wahl-Jorgensen et al. *suggest* that the BBC has moved from a fairly even-handed approach during Labour years ... (J.- AAW4)

15. Participants would have more crystalized opinions less likely influenced by party cues (Tesler 2015). However, our results *suggest* that ease of issue is not strongly related to the party split treatment effect. (P.S.- AAW8)

The AAEWs and the AAWs shared knowledge through boosters in two ways. In one situation, they used boosters to argue that their knowledge claims have been widely accepted by others interested in the topic. Their arguments were not based on their personal views but rather on well-accepted knowledge within specialist communities (Koutsantoni, 2005). The shared information was regarded as highly acceptable (Example 16), or evident and apparent (Example 17). In this way, they positioned their readers as intelligent co-players who are likely to agree with them (Hyland, 1998).

16. Although Instagram is *widely* known for users posting their own personal photographs, in reaction to the Charlie Hebdo media event. (J.- AAEW3)

17. One could fix the problem by detaining a sufficiently large, random sample of lower-risk white juveniles. *Clearly*, this would be a policy nonstarter. (L.- AAW3)

In another situation, the writers treated knowledge claims rooted in the literature as accepted factual information. In this way, they showed a level of certainty and assurance concerning the other authors' work in the field (Example 18).

18. Studies have *found* that highly sexualized work environments negatively affect women's self-esteem, expose them to additional discrimination, and encourage harassing and non-harassing sexual behaviour, especially because men often misinterpret friendly and warm behaviour as sexual interest (Gutek et al. 1990; Harnish et al. 1990; Philaretou and Young 2007; Williams et al. 1999). (J.- AAEW4)

Both groups differed along the consensus-building continuum.The AAWs in Journalism and Political Science negotiated knowledge with their readers as opposed to AAEWs in these fields, who preferred sharing knowledge in the same fields.The opposite can be observed in the case of the AAWs of Law RAs who favoured knowledge sharing over knowledge negotiating as opposed to the AAEWs in the same field. Such differences are related to writers' approaches to reality and content reporting. The results here seem to be similar to the findings of Akbas and Hardman (2018) where the AAEWs of Journalism and Political Science RAs presented reported content as if it were accredited knowledge, thus making their knowledge claims inevitably part of reality co-constructed in research. By contrast, the AAWs in the same disciplines tended to employ speculative language to hold their knowledge claims as reflections of reality. Thus, hedging largely mitigates reviews of prior research, speculates about the importance of the study, and tentatively announces the findings (Hyland, 1996). When interpreting and comparing their research findings with knowledge claims in previous research, the AAWs of Journalism and Political Science tended to be cautious and detached. They were thus able to convey a partial agreement.

Information Evaluation: Vagueness or Salience

The fourth dimension concerns the writers' evaluations of information, i.e., which information aspects are emphasised or minimised? Hedges and boosters could serve a pragmatic function similar to evaluation when used in constructing knowledge claims. A knowledge claim, therefore, can be vague and its specification can be minimised through hedging. In contrast, a knowledge claim can be salient and its significance can be emphasised through boosters.

The AAWs and the AAEWs showed a clear preference towards hedges of vagueness in the three disciplines with the AAWs slightly taking the lead (Figure 1). Following this, we conducted a textual analysis to explore how the specific hedging-boosting strategies are employed in information evaluation. One shared hedging function in our data was minimising specification. Hedges of this type are expressed through vagueness markers, which minimise the degree of precision (Hyland, 1996, 1998). They were primarily epistemic adverbs (e.g., "almost") and epistemic expressions (e.g., "certain," "somewhat"). The writers tended to use fuzzy language to avoid making definite knowledge claims and modify the extent of a phenomenon that cannot be identified. When stating research findings in the participants' stories, the writers tended to be quantitatively vague regarding the number of people sharing the same experiences or attitudes (Example 19) or their "difficulties to quantify or describe "the variability of natural phenomena" (Hyland, 1996, p. 437) (Example 20). This indicates a lack of interest in the quantitative significance of their findings.

19. *Some* would criticize the forecasts as lacking "statistical parity" or lacking "demographic parity." (L.- AAW3)

20. The illusio is what urges *certain* newcomers of Arab journalists to break the doxa of the field. (J.- AAEW12)

On the other hand, the writers used boosters to emphasise their evaluation of certain parts of their propositions and convey a sense of salience. In this way, boosters are employed to explicitly assess the credibility and reliability of their knowledge claims. They were expressed through evaluative or intensifying adverbs (e.g., "in particular"), intensifying or evaluative adjectives (e.g., "essential"), and emphatic expressions (e.g., "it is noteworthy"). The pragmatic function of boosters in these situations is to specify and intensify the identified phenomenon (Example 21), amplify the topic discussed (Example 22), or prove research validity (Example 23).

21. In particular, this article has argued that contradictory policy outcomes resulting from the lack of coordination between different reform initiatives is manifested in persisting public sector entitlements. (P.S.- AAEW15)

22. Three of the participants pointed to fact-based reporting as an *essential* element of balanced reporting. (J.- AAW8)

23. It is *noteworthy*, in this context, to mention that *AJM* features several of the afore-mentioned World Association of Newspapers and News Publishers. (J.- AAEW10)

The textual analysis indicates no differences between the AAEWs and the AAWs in the three disciplines along the continuum of information evaluation. Both groups showed a clear preference in terms of their strategies to make vague knowledge claims as they tended to use the language of low specification in describing participants and phenomena. In these disciplines, this practice may be viewed as a norm that emphasises meaning over figures. How the world is constructed through words and phenomena is what matters to these writers (Liu & Tseng, 2021). Thus, specification contributed little to the interpretation of their research. However, both groups employed boosters which express "certainty or obligation or desirability or any of a number of other sets of values" (Hunston & Thompson, 2000, p. 5) to evaluate their propositions positively, to enhance the reportability of their findings, and emphasise the significance of knowledge claims.

Table 6 summarises the AAWs' use of key pragmatic functions of hedges and boosters in the three disciplines.

CONCLUSION

Constructing knowledge claims is crucial when writing a publishable RA. This study aimed to explore how disciplinary and cultural contexts may affect the way the AAEWs and the AAWs constructed knowledge claims in the results and discussion sections of English RAs from the fields of Law, Journalism, and Political Science. The results showed significant differences in hedges but non-significant differences in boosters used by both groups. The findings also revealed that culture might largely influence the AAEWs' articles, as they tended to persuade their audience through emphatic expressions rather than hedging. The AAWs often used more hedges to show humility, negotiate knowledge claims, and accommodate vagueness. This indicated their familiarity with the norms of academic writing or the essential characteristics of appropriate arguments. The study provides important insights for English-speaking writers living in non-Anglophonic countries and offers convenient tools for analysing, understanding, and modifying knowledge claims in academic writing.

Several significant pedagogical implications for the teaching of English for Specific/ Academic Purposes (ESP/EAP) can be drawn from this study, especially for advanced academic writers learning English as a foreign language. Academic writing requires not only synthesis and analysis skills, but also the interpretation and application of several rhetorical features to successfully socialize into the target discourse community. The findings can improve and enrich academic writing courses that tend to focus mostly on the text's structural features. The exploration of hedging/boosting features would assist in revealing how writers can manipulate these devices to make their texts more effective and persuasive. The results could aid ESP/EAP teachers, especially those teaching writing for publication purposes, in raising postgraduate students' awareness of epistemic modality markers in relation to academic writing (Table 6). Mere familiarity with words serving as hedges or boosters may not lead to their appropriate use. The ESP/EAP instructor can help students learn how to use hedges and boosters pragmatically by looking at excerpts from discussion sections and checking if the tendencies illustrated in Table 6 are also present. Researchers' reliability can be improved if students know the significance and mechanism for knowledge claims construction and follow the writing features compatible with their discourse community.

This cross-cultural study is limited to the investigation of hedges-boosters in the results and discussion sections of 90 English RAs from the fields of Law, Journalism, and Political Science Future studies could also investigate hedges and boosters and their pragmatic functions in RAs from other disciplines. Other science disciplines can be compared to the findings of the present study. Future research can compare the use of these markers and their pragmatic functions in RAs written by AAWs and non-AAWs other than Arabs. Finally, more corpus-based studies are needed to reveal how more specefice contextual factors might interact and shape hedging/boosting features in RAs, such as individual differences of RA writers, the role of academic gatekeepers (e.g., journal editors, reviewers) and reporting style manuals (e.g., Publication manual of the American Psychological Association).

Table 6

An overview of the AAWs' use of key pragmatic functions of hedges and boosters in Journalism, Political Science, and Law RAs

		Functions	Journalism	Law	Political Science
Authorial voice	**Humility**	- Reducing the force of suggestion/recommendation. - Reducing research contributions.	"Analysing the 2019 federal election *may* provide further insights into the relationship between political campaigning, commercial upheaval, and news quality" (J.-7).	"Pure" measure of moral disengagement *could* be developed as a standardized way of measuring moral disengagement across contexts…." (L.-2).	"a finding that *may be* worth revisiting in the era of Trump's presidency." (P.S.-12).
	Assertiveness	- Promoting writers' suggestions. - Enhancing writers' contributions.	"A model that reconnects communities and *strengthens* performance" (J.-9).	"Future research *should* examine how Americans make their judgments about the Court's politicization …" (L.-1).	"Our field experiment is the first to *actually* increase the number …" (P.S.-7).
Reasoning	**Assumptions**	-Reflecting writers' deductive reasoning.	"It *could* also be due to a new need to meet the audience, requiring changes to how the news has previously been distributed" (J.-9).	"One *possible* explanation of the remarkably weak influence of ideological disagreement on institutional support." (L.-1).	"Subjects are *likely* to have strong priors concerning the state of the world …" (P.S.-6).
	Facts	-Reasoning is derived from data.	Our innovative findings *confirm* that overbroad copyright undermines artistic contributions … (J.-15)	"The findings *reveal* that a greater death penalty support among forensic psychologists …" (L.-2).	"The initial VAR results *show* little evidence that changes in public support predict media coverage" (P.S.-1).
Consensus-building	**Knowledge negotiated**	-Avoiding misinterpretation of prior research. -Negotiating a space for their findings, and presenting either a similarity or discrepancy between their findings and the findings of previous studies.	"Both our data and those of Wahl-Jorgensen et al. *suggest* that the BBC has moved from a fairly even-handed approach during Labour years …." (J.- 4).	"Existing research *suggests* that gender becomes less relevant when voters have other information about candidates (Hayes, 2011)" (P.S.-7).	"Participants would have more crystalized opinions less likely influenced by party cues (Tesler, 2015). However, our results *suggest* that ease of issue is not strongly related to the party split treatment effect" (P.S.-8).
	Knowledge shared	-Assuming certain knowledge as shared among audiences. -Treating knowledge claims rooted in the literature as accepted factual information.	"Explaining the dearth in detailed policy analysis *clearly* requires further causal exploration that is beyond the scope of this article" (J.-7).	"As Morison and Leith *found*, barristers avoided spending too much time on certain unprofitable activities (such as legal research)" (L.-13).	"Fourth, while the income-party relationship appears unrelated to state-level income, race is an *obvious* lurking variable" (P.S.-6).
Information evaluation	**Vagueness**	-Using quantitatively vague language when stating research findings. -Presenting knowledge claims as "left open to readers' judgment'.	"It may *seem* obvious that partisans are willing to put their party's interest over the country" (J.-11).	"*Some* would criticize the forecasts as lacking "statistical parity" or lacking "demographic parity" (L.-3).	"The precise effect of an increased descriptive representation of women is *somewhat* unexpected" (P.S.-10).
	Salience	-Explicitly assessing the credibility and reliability of their knowledge claims.	"The most *noteworthy* characteristic of Egan's live tweets is how little they differ from…" (J.-14).	"Nonetheless, mis-fitting items *in particular* needed to be addressed" (L.-8).	"Furthermore, age is an *essentia***l** explanatory factor in terrorism" (P.S.-4).

DECLARATION OF COMPETING INTEREST

None declared. ■

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APPENDIX A

The frequency of hedging strategies by AAWs and AAEWs in the fields of Law, Journalism, and Political Science

A	Hedges											
Case Number	Journalism				Law				Political Science			
	AAWs		AAEWs		AAWs		AAEWs		AAWs		AAEWs	
	To-kens	per 10,000 words	To-kens	per 10,000 words	To-kens	per 10,000 words	To-kens	per 10,000 words	To-kens	per 10,000 words	To-kens	per 10,000 words
1	35	12.06	15	6.06	33	13.41	8	3.19	53	18.75	38	11.95
2	57	19.65	6	2.42	21	8.53	12	4.78	51	18.04	18	5.66
3	15	5.17	19	7.68	33	13.41	15	5.98	19	6.72	4	1.25
4	27	9.31	4	1.61	11	4.47	13	5.18	33	11.67	30	9.43
5	40	13.79	17	6.87	29	11.78	9	3.58	19	6.72	37	11.64
6	33	11.37	9	3.64	44	17.88	13	5.18	26	9.2	25	7.86
7	50	17.24	12	4.85	26	10.56	14	5.58	13	4.6	16	5.03
8	10	3.44	30	12.13	20	8.12	14	5.58	26	9.2	16	5.03
9	35	12.06	9	3.64	25	10.16	4	1.59	38	13.44	19	5.97
10	40	13.79	3	1.21	14	5.69	5	1.99	9	3.18	5	1.57
11	25	8.62	27	10.92	17	6.91	13	5.18	20	7.07	8	2.51
12	23	7.93	7	2.83	19	7.72	22	8.77	21	7.43	1	0.31
13	7	2.41	18	7.28	40	16.25	16	6.38	18	6.36	19	5.97
14	4	1.37	55	22.24	8	3.25	11	4.38	28	9.9	13	4.09
15	8	2.75	9	3.64	6	2.43	11	4.38	13	4.6	24	7.55

APPENDIX B

The frequency of boosting strategies by AAWs and AAEWs in the fields of Law, Journalism, and Political Science

B	Boosters											
Case Number	Journalism				Law				Political Science			
	AAWs		AAEWs		AAWs		AAEWs		AAWs		AAEWs	
	Tokens	per 10,000 words	Tokens	per 10,000 words	Tokens	per 10,000 words	Tokens	per 10,000 words	Tokens	per 10,000 words	Tokens	per 10,000 words
1	9	3.1	11	4.44	23	9.34	2	0.79	17	6.01	33	10.38
2	17	5.86	4	1.61	16	6.5	5	1.99	19	6.72	25	7.86
3	11	3.79	16	6.47	15	6.09	6	2.39	5	1.76	29	9.12
4	29	10	2	0.8	7	2.84	15	5.98	35	12.38	21	6.6
5	27	9.31	4	1.61	7	2.84	18	7.17	16	5.66	18	5.66
6	23	7.93	13	5.25	19	7.72	13	5.18	13	4.6	27	8.49
7	12	4.13	21	8.49	7	2.84	15	5.98	20	7.07	16	5.03
8	16	5.51	19	7.68	8	3.25	13	5.18	21	7.43	22	6.92
9	12	4.13	14	5.66	7	2.84	15	5.98	20	7.07	9	2.83
10	8	2.75	14	5.66	9	3.65	10	3.98	22	7.78	9	2.83
11	15	5.17	24	9.7	14	5.69	16	6.38	16	5.66	5	1.57
12	9	3.1	11	4.44	16	6.5	19	7.57	21	7.43	9	2.83
13	0	0	7	2.83	28	11.38	17	6.77	10	3.53	8	2.51
14	0	0	20	8.08	8	3.25	7	2.79	17	6.01	13	4.09
15	3	1.03	3	1.21	3	1.21	21	8.37	12	4.24	13	4.09