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ХЕДЖИРОВАНИЕ В ТЕКСТЕ НАУЧНОЙ СТАТЬИ (НА ПРИМЕРЕ АНГЛИЙСКОГО ЯЗЫКА)

Данная статья посвящена комплексному изучению реализации компенсационной коммуникативной тактики хеджирования в текстах научных статей, написанных естественными носителями и не носителями английского языка (в том числе русскоговорящими) с учётом их гендерной принадлежности.

Научная новизна данной работы заключается в том, что реализация компенсационной стратегии хеджирования рассматривается в текстах научных статей на английском языке, написанных естественными носителями английского языка, а также русскоговорящими исследователями, публикующими свои работы на английском языке.

Целью исследования является изучение и описание формы и функций хеджирующих средств, а также выявление различий в использовании хеджей носителями и русскоговорящими не носителями английского языка, принимая во внимания их гендерную принадлежность. Цель исследования предполагает решение следующих задач:

- 1) Описать существующие компенсационные стратегии, современные подходы к изучению концепта хедж и хеджирующая стратегия;*
- 2) Рассмотреть особенности реализации компенсационной стратегии хеджирования в тексте научной статьи, написанной на английском языке естественными носителями языка с учетом*

их гендерной принадлежности;

3) Изучить особенности реализации компенсационной стратегии хеджирования в тексте научной статьи, написанной на английском языке русскоязычными не носителями английского языка с учетом их гендерной принадлежности;

4) Сравнить хеджирование в текстах научных статей, написанных естественными носителями и русскоговорящими не носителями английского языка;

5) Выработать рекомендации для исследователей, пишущих на английском языке.

Результатом проведённого анализа являются разработанные автором рекомендации для авторов англоязычных статей. Полученные результаты могут быть использованы для дальнейших исследований в области изучения текста научной статьи.

Ключевые слова: хеджирование, компенсационная стратегия, хедж, компенсатор, научный дискурс, британский вариант английского языка, гендерный аспект.

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HEDGING IN ACADEMIC WRITING

The present article is aimed at studying the notion of hedging, the frequency of hedges and their functions in academic writing. It also focuses on their use by native speakers of the British variety of the English language and by non-native speakers. Attention is given to the writers' gender.

Relevance of the research topic. The notion of hedging has been investigated in many scholarly papers and approached in different ways over the past twenty-five years. The significance of the paper is also determined by the fact that hedging is an integral and indispensable part of academic writing. The paper presents particular interest for non-native researchers who contribute to English research journals. The scientific novelty of the paper includes comparison of the

use of hedges by native and non-native English speakers. The writers' gender is also taken into consideration.

The principal objective of the paper is to study hedging devices in research articles written by native and non-native speakers of English with attention to the authors' gender. It also aims to trace the differences in the use of hedges by the two above-mentioned groups.

The objective of the paper implies the following tasks:

1) To study the notion of hedging, approaches to the study of hedges, the existing definitions of hedges, their properties and functions;

2) To analyse hedging technologies used by native speakers of English (female and male) in writing research articles;

3) To analyse hedging technologies used by non-native speakers of English (female and male) in writing research articles;

4) To conduct a statistical and comparative analysis for both groups of speakers;

5) To work out recommendations for inexperienced non-native writers of scientific articles in the field of linguistics.

The results obtained in the analysis can be used for teaching theoretical and practical courses of English grammar, stylistics and discourse analysis.

Key words: hedging, compensatory strategy, hedging device, academic writing, scientific discourse, British English, gender.

Introduction

The research is aimed at studying the notion of hedging, the frequency of hedges and their functions. The paper focuses on the use of hedges in academic writing by native and non-native speakers of the British variety of the English language.

The notion of hedging has been investigated in many scholarly papers and approached in different ways over the past twenty-five years (Biber, 2016; Brown, & Levinson, 2014; Fraser, 2010; Lakoff, 1972; Larina, 2009; Maryukhin, 2010; Osipiv, 2012). Hedging is an integral and indispensable part of academic writing. The paper presents particular interest for non-native researchers who contribute to English research journals. The scientific novelty of the paper includes comparison of the use of hedges by native and non-native English speakers. The writers' gender is also taken into consideration.

Material and methods

There is general agreement that hedging should be regarded as a rhetorical strategy, which enables people to interact effectively in different spheres of life. Hedging is considered to be a means of mitigating the illocutionary force of the utterance, which reduces the speaker's commitment to avoid possible face-threats in order to protect the interlocutor from potential harm or negative effects caused by the speech act. The term hedging is also used with reference to a range of textual strategies which apply hedges in a context to fulfill different communicative purposes such as politeness, mitigation, vagueness and modality. Hedging is one of the most essential features of written texts. Unhedged statements and conclusions are open to criticism and could even be treated as intellectually dishonest.

Hedging can be expressed with the help of various lexical items, grammatical devices and syntactic structures, depending on the speaker's or writer's purposes. Because of the fact that hedging is mostly treated as a socio-pragmatic phenomenon, there is still no absolute agreement on the issue concerning what linguistic devices should be referred to as hedges. That is why it is quite problematic to find one universal classification of hedging devices that would include and describe all the existing forms of hedges. Nevertheless, many researchers point to major features of hedges which should be taken into account. Therefore, it is relevant to divide the existing classifications into two groups: the former are based on the forms of hedges and the latter describe their functions.

For the purpose of the research, the functional approach to classifying hedges suggested by Prince, Frader and Bosk (1982) was chosen. They divided hedges into two classes according to their functions in the text: approximators and shields and described their functioning. The first one was based on propositional content solely and was also subdivided into two subclasses: adaptors and rounders. Adaptors, such as *somewhat*, *kind of*, *sort of*, *some*, *a little bit*, *largely*, *relatively* applied to class membership and contributed to the interpretation of an utterance.

e.g., You seem to be **somewhat** disappointed.

The timetable in Oslo is still **a little bit** unclear.

Rounders, such as *about*, *approximately*, *something*, *around*, *almost* were supposed to denote a range, where the notion is approximate.

e.g., Newborn pandas weigh **around** 100 to 200 grams and measure **something** 14 to 17 centimeters long.

His blood pressure was **about** 150/95 mm Hg.

Both subclasses indicated that the situations given in the examples were close to the expression modified, but not exact.

The second class, shields, implicated a level of uncertainty in terms of the speaker's involvement. There were two subclasses, too: plausibility shields and attribution shields. Plausibility shields such as *I think, I suggest, probably, I take it, as far as I can tell, I have to believe, right now, I don't see that*, were expressions that conveyed doubt.

e.g., But **I don't see that** we have any other options.

I wish I had an umbrella **right now**.

As far as I can tell, they don't have this one.

Prince et al. (1982) underscored that unhedged statements implicated that the indicated information was drawn from logical reasoning, while messages marked by plausibility shields demonstrated that the speaker exercised plausible reasons.

The second subclass, attribution shields were expressions such as *according to somebody's estimates, presumably, at least to somebody's knowledge*, which ascribe the responsibility of the statement to someone other than the speaker, often applying plausible reasoning.

e.g., She was not very arrogant, **according to his estimates**.

She'll **presumably** come later.

He hasn't spoken to them since Friday, **as far as I know**.

Making use of attribution shields, the speaker usually contributes to the truth of the message.

The Journal of Pragmatics was used as the main source of research articles. It is an interdisciplinary journal of language studies, which was first released in 1977. It comprises a wide range of academic research articles on pragmatics (cognitive, experimental, historical, interpersonal, multimodal, theoretical and etc.) and related fields such as discourse analysis, semantics, sociolinguistics, linguistic anthropology, interactional linguistics, psychology, media studies, sociology, and the philosophy of language. There are about 950 contributions from all over the world in the online archive of the journal.

For the purpose of the paper, 20 research articles were collected from different volumes of the Journal of Pragmatics that were released

in 1992-2018. The word count for each article comprises 6000-8000 words. The articles belong to the spheres of linguistics and sociolinguistics and represent results of scientific research. For the purpose of statistical and comparative analysis, the authors of the articles were chosen on the basis of the following criteria, which also determined the next three stages of analysis of the collected articles:

- Origin (10 research articles are written by British native speakers of English, and the authors of the rest 10 articles are characterized as non-native English speakers. From there, the collected articles were divided into two groups.);
- Gender (Within each group of both native and non-native authors of the research articles there are 5 female and 5 male writers. It determined the further subdivision of the articles for the analysis.)

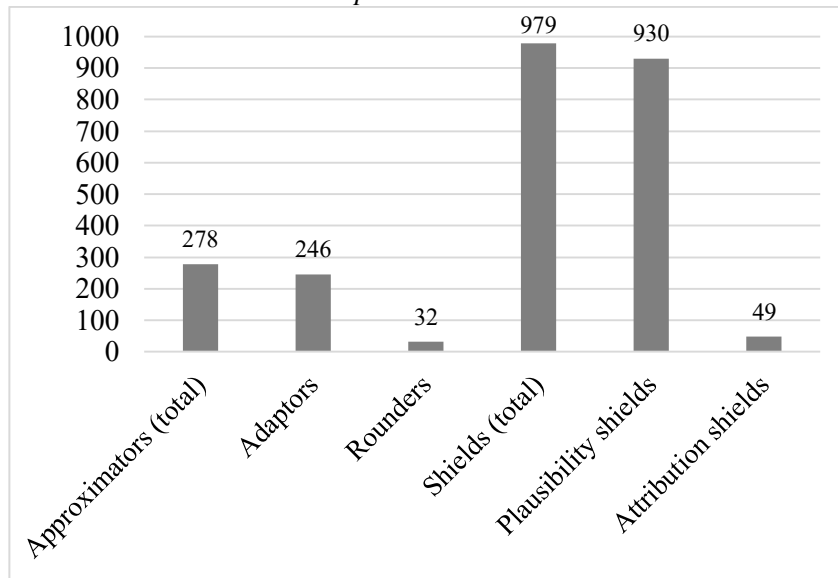
After the research articles were collected and sorted out, they were subjected to thorough statistical and comparative analysis. First, hedges were identified and collected from those articles. Second, the gathered hedging expressions were counted and classified according to their functions and what parts of speech functioned as hedges. And finally, the obtained results were compared with the regard to the authors' origin and gender.

The search of hedging expressions resulted in 1257 tokens in 10 research articles (60000-80000 words). The collected examples were first classified according to their functions in the text: approximators and shields.

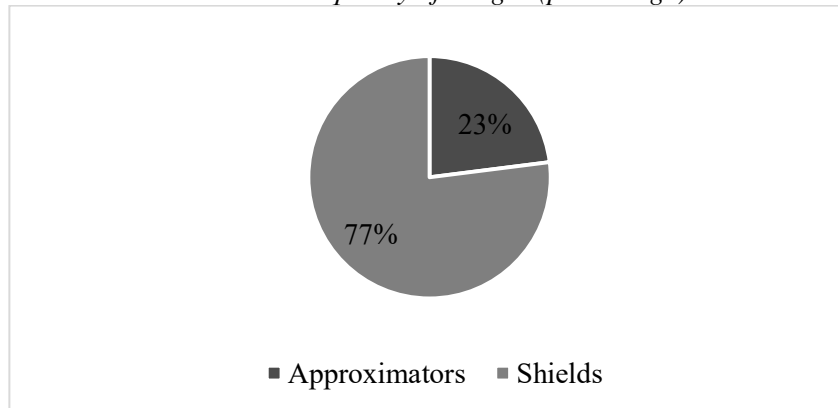
Results

The present research shows that the most frequent class of hedges employed by **native speakers** of English in academic writing is shields. The number of tokens in each class is given in figure 1 below. The percentage of their use is demonstrated in pie-chart 1 below. The figures illustrate the frequency of the two classes of hedges and their four subclasses.

Figure 1. Frequency of hedges in research articles written by native speakers



Pie-chart 1. Frequency of hedges (percentage)



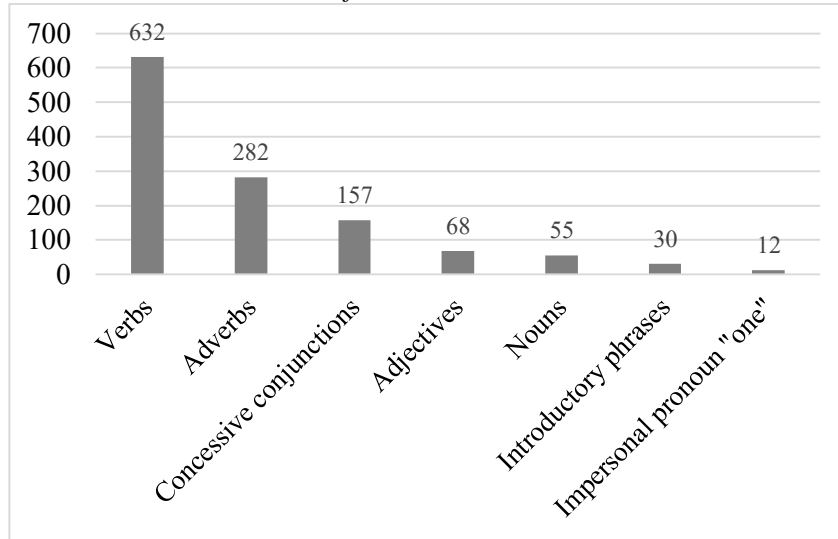
As is seen from the above figures representing hedging devices employed by native speakers of English in academic writing, shields are almost three times as frequent as approximators (979 and 278

tokens respectively). This demonstrates that the authors avoid using exact figures and characteristics, often referring to opinions of other acknowledged researchers. Examples of the two types of hedges are given below.

1. “**While** (*plausibility shield*) the precise nature of that role is still subject to continuous investigation, interactional phoneticians **seem** (*plausibility shield*) to agree that clusters of specific prosodic cues **can** (*plausibility shield*) be described for different linguistic varieties which occur in the vicinity of turn-endings, and are treated by conversationalists as potential signals for turn-completion or turn continuation, respectively.”;
2. “As a result, syllable duration and rate of articulation **may** (*plausibility shield*) vary across intervals, **according to** (*attribution shield*) the number of syllables in each interval.”;
3. “Our perception of a stretch of British English speech as rhythmic is created by the distribution of its stressed syllables at **roughly** (*rounder*) regular intervals of time.”;
4. “This explains the observation in this data set and in others that participants tend to rhythmicise their speech **particularly** (*adaptor*) strongly towards the end of their turns.”.

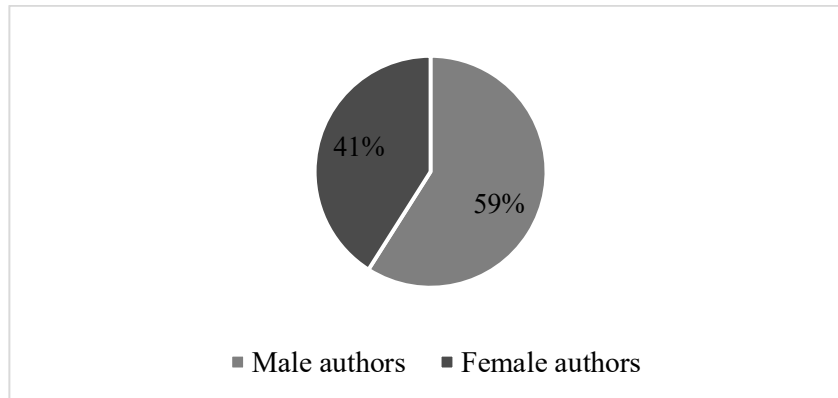
According to the part-of-speech classification, it is possible to differentiate between hedging nouns (e.g., assumption, suggestion), verbs (modals (e.g., may, could) and epistemic verbs (e.g., suggest, assume), adverbs (e.g., mostly, generally), adjectives (e.g., probable, possible), impersonal pronouns (e.g., one), concessive conjunctions (e.g., even though, although) and introductory phrases (e.g., according to, to my knowledge). When the part-of-speech distribution is taken into consideration, it is easy to determine whether hedges are mostly employed in propositional content or embrace the whole speech act. The results obtained are presented in figure 2 below.

Figure 2: The use of different parts of speech in the hedging function



For the purpose of the comparative analysis, gender of the authors was also taken into consideration.

Pie-chart 2. Percentage of hedges employed by male and female researchers

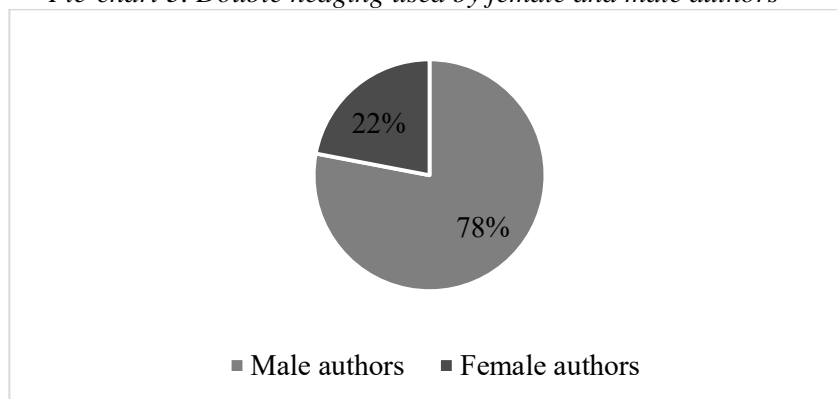


As is seen from pie-chart 2, male researchers employ hedging expressions more often in comparison with female authors. There are about 80-100 hedges

Occurrences of double hedging can also be found in research articles by female authors.

1. “However, **one could** argue that the rhythmic pattern is not disrupted by an absence of speech...”;
2. “This finding **seemed to suggest** a state of affairs in which phonetic boundaries do not enact interactional ones...”;
3. “The effect of role **seems relatively** minor, and unlikely to be practically meaningful.”;
4. “This is **probably especially** true of role-related rights and obligations”.

Pie-chart 3. Double hedging used by female and male authors

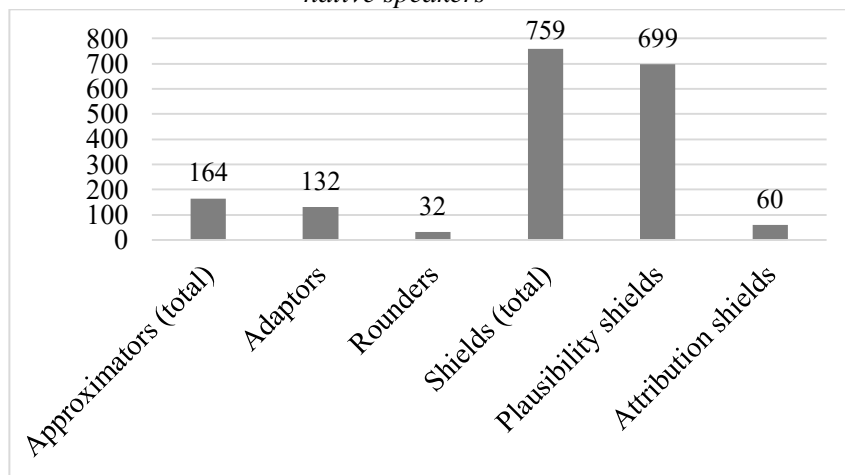


As is seen from the above pie-chart, male researchers use double hedging more frequently, thus making their research findings less categorical and restricted.

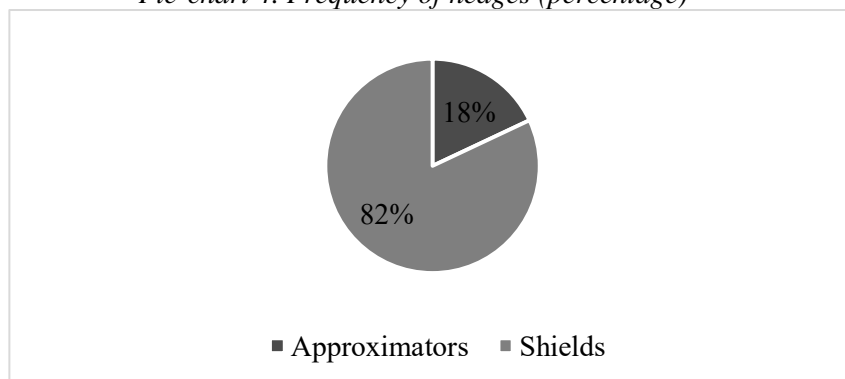
The statistical and comparative analysis of the articles written by native English speakers has shown that hedging expressions are used quite frequently in academic writing. Researchers often employ hedges while presenting their findings and making conclusions in order to avoid prospective criticism. The most frequently used hedges are plausibility shields, namely modal and epistemic verbs, which enable authors to regulate the truth value of their statements. Speaking of gender characteristics, the analysis has shown that male researchers tend to employ hedges more frequently. Double hedging is also used more often by male authors. On the average, there are about 80-100 hedging expressions to 7000 words.

The present research shows that shields are employed by **non-native writers** more frequently than approximators (759 and 164 token respectively). The results are reported in figure 3 and pie-chart 4 below. They show graphically the relative frequency of 923 tokens sampled in the articles written by non-native authors.

Figure 3. Frequency of hedges in research articles written by non-native speakers



Pie-chart 4. Frequency of hedges (percentage)

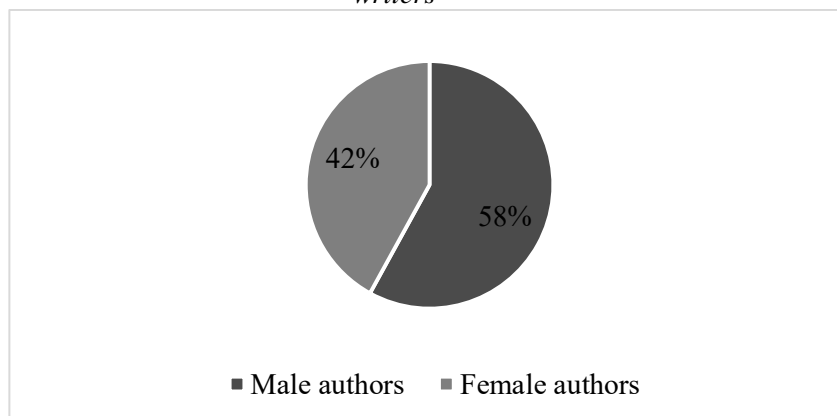


The above figure and pie-chart demonstrate that non-native speakers tend to use shields more often, thus avoiding categorical statements,

reducing responsibility for the statement and referring to some other recognized researchers. Examples of different types of hedging expressions extracted from the articles are given below:

1. “In the following example (2), the pattern is **basically** the same as in (1) but knowledge is not explicitly mentioned in the enclitic clause.” (adaptor);
2. “They are difficult to square with the functional categories used here, but ‘external’ is **roughly** equivalent to information-seeking functions.” (rounder);
3. “At the same time, the scope of -gi/-ki has been **claimed** to be the whole sentence, not a single word or phrase” (plausibility shield);
4. “It was shown above that the enclitic pattern can involve epistemic as well as other kinds of verbs, that the crucial new information may be obtained from verbal or non-verbal sources, and that the pattern occurs across both polarities, **even though** it is more common in negative clauses that already express that the matter is counter to expectations.” (plausibility shield);
5. “They analyzed 504 metaphors in some transcripts of the MacNeil/Lehrer News Hour **according to** a nine-category taxonomy.” (attribution shield).

Pie-chart 5: Percentage of hedges employed by female and male writers



Pie-chart 5 demonstrates graphically the discrepancy between the number of hedges used by male and female non-native speakers in the articles. Shields prevail over approximators in every article.

Speaking of double hedging, it is important to highlight that there are no occurrences of these in the research articles written by female non-native authors, while the number of double hedging used by male writers comprises 7 tokens (100%). Examples of double hedging are presented below.

1. “In addition, interlocutors **should generally** avoid dedicated means for asking questions (polar and constituent interrogatives) altogether in favor of more covert means of procuring information.”;
2. “In this respect, **one should** bear in mind that self-repairs are a very special kind of linguistic input.”;
3. “An imperative form, for example, makes relevant the immediate fulfilment of the request and is used when the requester **can assume** the requestee’s compliance.”.

The use of double hedging contributes to making statements sound more tentative thus less open to criticism.

The statistical and comparative analysis of the research articles written by non-native speakers of English has shown that hedging expressions are employed quite often. The most frequently used types of hedges are shields, namely plausibility shields, which enable researchers to appear less categorical and restricted. As for gender characteristics, the articles written by male authors turned out to be more hedged.

The comparative analysis of the hedging behavior of native and non-native speakers has shown that although there are a lot of common features in organizing research articles, there are still many more differences.

Discussion

The main objective of the present study was to identify the frequency and functions of hedging devices used by native and non-native authors in academic writing. The research was conducted on the basis of the British variety of the English language.

The linguistic investigation into hedging enables us to conclude that it is one of the salient features of English scientific discourse, which abounds in hedges. Hedging should be regarded as a rhetorical strategy,

which enables people to interact effectively in different spheres of life. Hedging is considered to be a means of mitigating the illocutionary force of the utterance, which reduces the speaker's commitment in order to avoid the possible face-threat and protect the interlocutor from the potential negative impact of the speech act. For the purpose of the paper, the functional approach to classifying hedges was chosen.

To analyse hedging devices in academic writing, 20 research articles (140000 words) written by native and non-native speakers of the British variety of English were collected from the Journal of Pragmatics and used as the main source for the analysis. Special attention was given to the gender of the authors.

The statistical analysis of the 10 research articles written by native speakers of English has shown that shields are almost three times as frequent as approximators (77% and 23% respectively). This demonstrates that the authors avoid using exact figures and characteristics and they also avoid unequivocal statements, often referring to opinions of other acknowledged researchers. As for the part-of-speech distribution, verbs in the hedging function are the most numerous in research articles written by native speakers. This signals the authors' choice to reduce their involvement into the propositional context, ascribing the responsibility for the statement to someone else. As the research shows, modal verbs are used more often than epistemic verbs (69% and 31% respectively), as they allow to express certainty or uncertainty about what is being described. It enables authors to sound less categorical, disclaim responsibility and show openness to any other new research findings.

The gender analysis of the native speakers shows that male authors employ hedging devices more often than female researchers (59% and 41% of the total number of tokens respectively). The occurrence of hedges is more than 100 tokens in every article by the male writers. Plausibility shields are the most numerous hedges in both male and female research articles. They enable authors to demonstrate a certain degree of doubt, to appear tactful and, as a result, to avoid prospective criticism. The number of hedging introductory phrases is higher in articles written by female researchers. This proves that female authors tend to appeal to somebody else's opinions more often while presenting their findings in research articles. The analysis of parts of speech also showed that modal verbs, adverbs and concessive conjunctions can be

found among the most frequently used shields. An interesting feature can be observed: the number of double hedging used by male writers comprises 21 tokens, which results in 78% of the overall number of double hedging employed in the 10 research articles (27 tokens in total).

The statistical analysis of the 10 research articles written by non-native speakers has given identical results: shields prevail over approximators (82% and 18% respectively), which enable researchers to sound less categorical and more tactful. The most frequently used hedges are plausibility shields, namely modal and epistemic verbs, which can affect the truth value of the propositions.

When the gender of the authors was taken into consideration, the analysis showed that researchers tended to use hedges more frequently in their articles. Nevertheless, the number of attribution shields is higher in comparison with those in the articles written by male authors (35 and 27 tokens respectively). This proves that female writers tend to refer to opinions of other recognized researchers more often thus making their statements more trustworthy.

The comparative analysis of the 20 research articles written by native and non-native speakers of English has shown the similarities and differences in the use of hedges by native and non-native authors. All the researchers use shields more frequently in order to reduce their commitment to their statements and conclusions. Verbs in the hedging functions, namely modal verbs, are the most numerous hedges in the analysed research articles, as they enable to affect the truth value of the proposition and disclaim responsibility for what is being described most successfully. Speaking of gender characteristics, the number of hedges employed by male authors is higher than that of female writers. As for differences in the use of hedging devices, it is necessary to note that native authors apply hedges naturally, systematically and frequently, giving special attention to making hedged conclusions, which proves that hedging is an integral and indispensable part of the English language. Non-native researchers are unaware of underlying rules of the use of hedges, that is why they employ them at random, sometimes overusing them which makes them sound redundant or omitting at all thus they appear categorical. An interesting feature can be observed here: although non-native speakers use hedges less in their research articles, German-speaking authors employ hedges as

frequently as native speakers of English and in much similar ways. Attribution shields, namely introductory phrases such as *according to*, *to smb's knowledge*, are employed more often by non-native authors of research articles. This demonstrates that non-native speakers refer to other acknowledged researchers more often in order to appear trustworthy. Occurrences of double hedging are found in every analysed research article written by native authors, which shows that double hedging is a widespread phenomenon in academic writing. As for non-native writers, German-speaking male authors only employ double hedging.

Conclusion

The conducted analysis enables us to give recommendations for inexperienced non-native writers of scientific articles in linguistics:

1. Focus on the use of hedges, as hedging is an indispensable part of the English language, and research articles abound in hedges.
2. Focus on plausibility shields, as they will allow you to avoid prospective criticism.
3. Do not overuse hedges in order to avoid sounding redundant.
4. Remember about double hedging, as it is a salient feature of research articles written by native speakers.

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