

Writing comparison over Hedges

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Abstract: Hedges have qualified themselves as appealing linguistic phenomenon which is evident from the work over them which indicates that the majority of hedge studies are concerned with academic or scientific writings. In the present work, a database of Hedges has been compiled. Frequently used hedges in highly cited articles are categorized based on the paradigms proposed by Hyland and Yu. Next, an endeavor has been made to compare the usage and effects of hedges in the novels 'Midnight's Children' and 'The Satanic Verses' by Sir Ahmad Salman Rushdie. Occurrences of various hedges in the source text of both novels have been recounted through a computer program. Each category of hedge is assigned a weight and the hedge category with highest weight is identified in the above mentioned literary works. The two works are then compared over the usage of hedges by the author. Finally, the role of highly frequent hedge categories used by the author in his writings is studied.

Keywords: Hedges, Hedges categories, Assignment of weights, C program.

1. Introduction

A hedge is a sign or token of uncertainty in a language. Let us make this clear by imaging the following situation: A boss questions an employee on a Monday morning. He asks, “What time did you go home last Saturday?” The employee might respond in many different ways: “I left the office at 10 PM”; “I left the office at around 10 PM.”; “I left office at 10 PM, I think”. There is no hedge in the first answer. The rest of the two answers employ hedge in them: ‘around’ and ‘I think’. Both of these hedges are a way of saying that the answer is approximate and it may not be exactly correct. A hedge in linguistics is defined as a mitigating word used to lessen the impact of an utterance. Whether used intentionally or unintentionally, hedges may be exercised in both spoken and written communication and therefore, hedges are vitally important in it. Hedges help writers to indicate more precisely how the cooperative principle¹ is observed in assessments.

The notion of hedging was brought into light by Lakoff², which means: words which make things more or less fuzzy. For example, words or phrases like ‘I think’, ‘perhaps’, ‘might’ and ‘maybe’ etc which are routinely used to qualify categorical affirmations. A hedge can be defined as a linguistic tool to indicate either:

- a lack of full commitment to the truth of a statement, or
- a longing not to express that commitment categorically

Hedges bring tentativeness and flexibility in communication, and their proper use in academic or scientific writings is crucial. Hedges help writers to express propositions with greater nicety in areas often characterized by rapid reinterpretation. The question of the significance of hedging was explored by Liu and Tree³. The authors suggested that hedges might call attention to the information that has been stated so that it might be well remembered by listeners. At the same time, hedges may quantify information as unreliable and so the information might not be restated by listeners later. Hedging, therefore, is an important means of attesting to the degree of fidelity or reliability of a claim and accurately stating uncertain statements with appropriate care.

In scientific writings, a statement is a balance of fact and estimate as the writer tries to present some information as accurately, completely, and objectively as possible. Thus, writers often state “A may lead to B” rather than saying “A leads to B” to specify the actual state of knowledge on the subject. Here comes the function of hedges: they differentiate the actual

from the potential or the known from the inferential. Hedges imply that a proposition is based on the author's presumptive reasoning, rather than his specific knowledge. In such assertions, it is expected from readers to understand that the proposition made by the author is true. Another benefit of employing hedging in writing concerns with the writer's desire to anticipate the possible negative consequences of being proved wrong and the eventual overthrow of a claim (Salager-Meyer⁴, Hyland⁵). Hedging enables writers to be open to different perspectives on their statements, to present unproven claims with caution, and to let their audiences interact with them.

2. A Brief Literature Review

Since hedges have qualified an appealing linguistic phenomenon, several researchers worked over them. Yu⁶ states that the majority of hedge studies deal with academic or scientific writings. This includes genres such as Economics (Pindi and Bloor⁷, Channell⁸), Science Digest (Fahnestock⁹), Medical discourse (Salager-Meyer¹⁰, Salager-Meyer¹¹, Salager-Meyer⁴, Adams-Smith¹²), articles related to Molecular Genetics (Myers¹³), and News-writing (Zuck and Zuck^{14,15}). Lyons¹⁶ presented theoretical work on modality. Corpus studies focus on modal verbs and draw on non-academic resources (Coates¹⁷, Palmer¹⁸). Research works on written academic corpora included generalized commentating tools (Skelton¹⁹), modal verbs (Butler²⁰), and numerical expressions (Channell⁸)s or to locate hedges in pre-determined explanatory categories (Salager-Meyer⁴). Therefore, we feel that there is a significant gap in our knowledge of this important area of pragmatic competence in the work of fiction.

In the present work, an effort is being made to compare the usage and effects of hedges in the novels 'Midnight's Children' and 'The Satanic Verses' by Sir Ahmad Salman Rushdie, a British Indian novelist and essayist. The former is the second novel of Sir Rushdie for which he won the Booker Prize in 1981. Latter was his fourth novel, which eventually became the subject of a major controversy, provoking protests from Muslims in several countries. We first exploit the taxonomy of hedges given by Yu⁶ to develop a hedging database. We incorporate frequently used hedges in various research articles into the taxonomy due to Yu and other researchers. A program is written in the 'C' language for counting the frequency of hedges of various categories. Section 3 consists of the development of the hedge database. In section 4, we count hedge frequencies and assign weights to them. In section 5, we discuss the

significance of some hedges types that were mostly exploited by the author in the novels of the present case study. Section 6 presents the conclusion of our research work.

3. Methodology: Development of Hedging Database

In this section, a hedge database is presented. Research work by Yu⁶ is exploited to categorize the types of hedges. The author classified hedges into five groups namely Modal Hedges, Mental Hedges, Pragmatic-Marker Hedges, Quantificational Hedges, and Tag Questions, Subjunctives and Depersonalization. Literary works of comparative analysis and hedge classification (such as Holmes^{21,22}, Hyland^{5,23,24,25} Hyland and Milton²⁶, Yu⁶) have been exercised to select frequently used hedges for various categories (see Appendix A.1).

We develop a computer program in 'C' language to count the frequency of different hedges in a given corpus. This program reads two text files: 'source.txt' and 'dictionary.txt' and writes the output values in a file named 'OutputFrequency.txt'. The file 'source.txt' contains the corpus, the novel under study. The two novels being studied were downloaded from the Internet in PDF form (the reader can view and download these PDFs at the URLs given in Appendix A.2) and converted into a text file. These text files can then be copied into 'source.txt'. In 'dictionary.txt', we copy hedges in category wise manner. Our program takes one hedge at a time from 'dictionary.txt', searches it in 'source.txt', and if found, it increments the count value. Finally, the hedge read from 'dictionary.txt' and its corresponding frequency in 'source.txt' are written in 'OutputFrequency.txt'. We repeat this procedure for each hedge category for both the novels separately. The program counts two matrices category wise: hedge frequencies, and the total frequency of all hedges. Thus, we have compiled frequencies of various hedges from our hedging database in the two novels under study: 'Midnight's Children' and 'The Satanic Verses'. Next, a weighting system is utilized based on these frequencies.

Every category of the hedge is given a weight to extract the correlated results in analysis. The weights are defined as the ratio of the frequency of hedges of the given category to the number of hedges in that category. For instance, we have 105 hedges in the Pragmatic-Marker category in our hedge database. The overall frequency of these 105 hedges is found to be 13716 in Midnight's Children. By taking the ratio of 13716 to 105, we get a weight of 130.63 for Pragmatic-Marker category of hedges. In this way,

the determination of weights can provide an adequate ratio of the hedges used in the writings. The greater number of hedges in any category does not necessarily imply that the category will get more weight. For instance, it is evident from Table 1 that 32 Modal hedges weigh 63.84 whereas 82 Quantificational hedges weigh only 44.76.

4. Experimental Design and Results

In this section, with the help of computer program, the frequencies of various hedges have been counted and weights to each category of hedges are assigned for the two novels being studied. Beneath, Table 1 and Table 2 present the experimental data for five basic categories of hedges for 'Midnight's Children' and 'The Satanic Verses' respectively.

Table 1. Empirical data for Midnight's Children: Primary classification of hedges

S. No.	Hedges category	No. of Hedges	Total Frequency	Weight
1.	Modal	32	2043	63.84
2.	Mental	19	660	34.74
3.	Pragmatic-Marker	105	13716	130.63
4.	Quantificational	82	3670	44.76
5.	Tag questions, Subjunctives and Depersonalization	8	145	18.13

Table 2. Empirical data for The Satanic Verses: Primary classification of hedges

S. No.	Hedges category	No. of Hedges	Total Frequency	Weight
1.	Modal	32	1819	56.84
2.	Mental	19	619	32.58
3.	Pragmatic-Marker	105	11371	108.30
4.	Quantificational	82	3606	43.98
5.	Tag questions, Subjunctives and Depersonalization	8	204	25.50

In Figure 1 below, two bar diagrams, one each for 'Midnight's Children' and 'The Satanic Verses' are plotted between the categories of hedges and their corresponding weights.

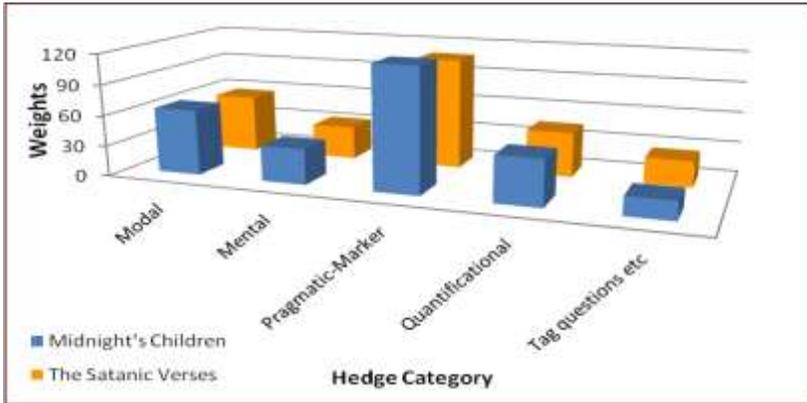


Figure 1. Weight comparison of five types of hedges

First, consider front bars in blue; the longest third blue bar reflects frequent use of Pragmatic-Marker hedges by Sir Rushdie in ‘Midnight’s Children’. Further analyzing the results, it can be seen clearly that the second-highest and the third-highest hedge types used by him are of type Modal hedges (first blue bar) and type Quantificational hedges (fourth blue bar) respectively in ‘Midnight’s Children’. Now, consider the back bars in orange. Surprisingly, the top three hedges categories used by Sir Rushdie in ‘The Satanic Verses’ are same as those are in ‘Midnight’s Children’!

Modal hedges are further categorized by Yu⁶ into Epistemic, Deontic, Dynamic and Evidential Hedges. Similarly, Quantificational hedges are further classified by him into Simple Quantificational hedges, Polar Positions, Negations and Intensifiers. Table 3 and Table 4 represent the experimental data for the subcategory of hedges in ‘Midnight’s Children’ and in ‘The Satanic Verses’ respectively.

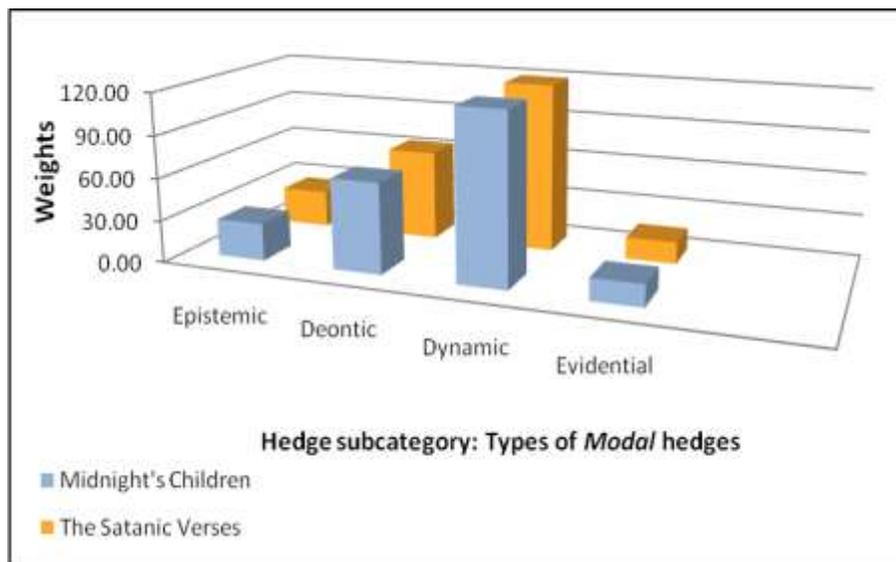
Table 3. Empirical data for Midnight’s Children: Secondary classification of hedges

S. No.	Hedges subcategory	Hedges category	No. of Hedges	Total Frequency	Weight
1.	Epistemic	Modal	15	485	32.33
2.	Deontic		3	346	115.33
3.	Dynamic		3	1066	355.33
4.	Evidential		11	146	13.27
5.	Simple	Quantificational	47	3047	64.83
6.	Polar Positions		26	613	23.58
7.	Negation and Intensifier		9	10	1.11

Table 4. Empirical data for The Satanic Verses: Secondary classification of hedges

S. No.	Hedges subcategory	Hedges category	No. of Hedges	Total Frequency	Weight
1.	Epistemic	Modal	15	398	26.53
2.	Deontic		3	193	64.33
3.	Dynamic		3	1057	352.33
4.	Evidential		11	171	15.55
5.	Simple	Quantificational	47	2990	63.62
6.	Polar Positions		26	608	23.38
7.	Negation and Intensifier		9	8	0.89

Now, we compare the weights of these subcategories of hedges. The weights of four subcategories of Modal hedges are compared in Figure 2 below. Two bar diagrams are drawn for both 'Midnight's Children' and 'The Satanic Verses'. From Figure 2, it is evident that the type Dynamic of the Modal hedge has been used most frequently (and the type Evidential has been used least frequently) by Sir Rushdie in both of his works.

**Figure 2.** Weight comparison of four types of *Modal* hedges

Similarly, the three types of Quantificational hedges are compared in Figure 3 below for both the novels. It is apparent from the figure that the Simple Quantificational type of Quantificational hedge has been used most

frequently (and the type Negation and Intensifier has been used least frequently) by the author in both the novels.

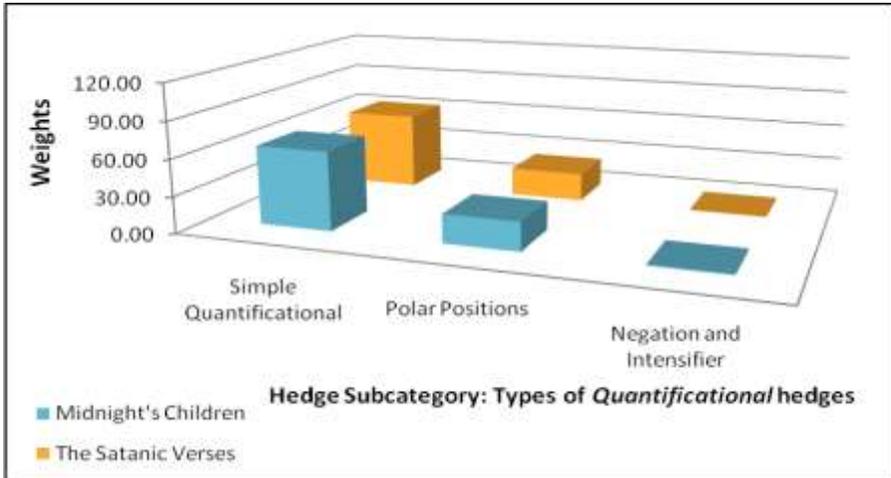


Figure 3. Weight comparison of three types of Quantificational hedges

5. Discussions

In this section, we discuss the use of hedges in ‘Midnight’s Children’ and in ‘The Satanic Verses’. Hedges are generally used to mitigate the impact of the writings and to make the matter more or less fuzzy. In our study, it is observed that hedges are used comparatively lesser in ‘The Satanic Verses’ as compared to ‘Midnight’s Children’ (except for the hedge category Tag questions, Subjunctives and Depersonalization). Table 5 presents weights of five types of hedges in both the novels and their differences

Table 5. Weight usage and difference in two works of Sir Rushdie

S. No.	Hedges category	Hedge Frequency Weights		Frequency Weight Difference
		Midnight’s Children	The Satanic Verses	
1.	Modal	63.84	56.84	7
2.	Mental	34.74	32.58	2.16
3.	Pragmatic-Marker	130.63	108.30	22.33
4.	Quantificational	44.76	43.98	0.78
5.	Tag questions, Subjunctives and Depersonalization	18.13	25.50	-7.37

Further, we observe that in both of the works of Sir Salman Rushdie considered in this paper, Pragmatic Marker hedges have got the highest weight (refer to Table 1 and Table 2). Though, the use of Pragmatic Marker hedges in 'The Satanic Verses' is not as much as that in 'Midnight's Children', but still their highest weights in both the novels reflect the style of Sir Rushdie. Modal hedges and Quantificational hedges are used at second and third positions in both the novels. In fact, the order of hedge usage in terms of their frequency is exactly same in both the novels. That is, Sir Rushdie used the following order of hedge categories in both 'Midnight's Children' and 'The Satanic Verses':

Pragmatic Marker hedges > Modal Hedges > Quantificational Hedges > Mental Hedges > Tag Questions, Subjunctives and Depersonalization.

Beneath, we discuss the role of the top three hedges used by *Sir Rushdie* in his works.

(a) Role of Pragmatic-Marker Hedges: Yu⁶ says that the Pragmatic-Marker are considered as marginal forms, and they are not extracted from a single grammatical source. They possess a heterogeneous set of forms which might not fall in a traditional word class. Fujiki et al.²⁷ suggested that the membership of Pragmatic Marker hedges can be resolved by observing scholarly attention they catch. Many researchers consider Pragmatic Marker hedges as the salient feature of oral discourse. Some Pragmatic-Marker hedges have little or no propositional meaning and they do not contribute in the propositional contents of utterance. It is considered that because of their semantic shallowness, it is difficult to translate them into other languages. Some scholars believe that the Pragmatic-Marker hedges are optional and their absence does not make a sentence unintelligible, but some important clue may be missed. If such markers are dropped, the discourse would be acceptable grammatically, but it might be rendered awkward and unnatural.

(b) Role of Modal Hedges: Researchers divide dynamic modality into two: the volitional and abilitive modality. Dynamic Modal hedges represent an intention to perform a speech act. They are used to ask the hearer indirectly for his permission to perform the speech act. Therefore, this phenomenon requires explicit permission of the hearer and explicit performance of the speaker. They enable the communicative agents to attain a state of affairs.

(c) Role of Quantificational Hedges: These hedges are realized by quantifying linguistics devices at scalar positions. They intentionally play

the role of observing and minimizing the impact of claims and assertions. Use of Quantificational Hedges helps to determine the author's intention to approximate the views instead of highlighting vivid claims.

6. Conclusions

The calculations done in the preceding sections has led to the conclusion that Sir Ahmad Salman Rushdie has used hedges in the same order for both the novels which reflects his style of writing. Pragmatic-Marker hedges are the most used hedges which justify the work to be a form of oral communication. Since the works have fictional human characters and the use of Pragmatic-Marker hedges makes the communication natural and just. Sir Ahmad Salman Rushdie used the maximum number of pragmatic marker hedges for the sections where key elements of the account are introduced. Some satire and fanatic expressions which aroused resentment among a few groups of people have been presented with maximum use of Pragmatic-Marker hedges. Furthermore, the frequent use of Pragmatic-Marker hedges or discourse marker hedges in those parts of the novels where the majority of oral communication takes place justifies the role of Pragmatic-Marker hedges in literary writings. The maximum use of Pragmatic-Marker hedges in both the works somewhere reflects the intention of the writer to mitigate the effects of the points revealed through these works. If the controversy is kept aside, the popularity of the works among the literary circle even being based on sensitive issues proves the capability of the writer to mitigate the harsh truth.

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Appendix A

A.1 Database of hedges:

(1) Model Hedges:

(a) Epistemic Hedges: afraid, appropriately, impossible, likely, may, may be, might, obvious, perhaps, possible, presumably, probable, probably, sure, surely.

(b) Deontic Hedges (shifting responsibilities to necessity and obligation): have to, must, ought to.

(c) Dynamic Hedges (per formative ability to perform acts): can, could, would.

(d) Evidential Hedges: apparently, certain, certainly, clear, clearly, essentially, evident, evidently, explicitly, objectively, obviously.

(2) Mental Hedges: appear, appropriate, assume, believe, certain, doubt, feel, guess, imply, indicate, know, possible, probable, seem, suggest, suppose, suspect, tend, think .

(3) Pragmatic Marker Hedges: According to, actually, admittedly, after all, ah, almost, and, anyway, as a matter of fact, as a whole, as far as, as for me, as is well known, as long as, as most people do, as people think, as we all know, as we know, as you can see, as you know, as you many know, as you mentioned, as you mentioned just now, at least, at most, at present, basically, because, but, by the way, considering, for me, for us, frankly speaking, generally, generally speaking, hopefully, however, I am afraid, I am quite sure, I feel, I mean, I suppose, I think, if, if I am not mistaken, if time permitted, if you like, if you would not mind, in a way, in a word, in my belief, in my opinion, in other words, in part, in that case, it is likely, it was argued, just, just now, kind of, like, mentioning about, mind you, more likely, moreover, naturally, no, now, obviously, of course, oh, oh my god, ok, on average, on the base of, one may speculate, or, or exactly say, or say, personally, personally I think, really, say, seeing that, so, so far, sort

of, strictly speaking, that is, that's to say, then, therefore, this tends to mean, to be frank, to be honest, to be precise, to be true, to me, well, what has really happened, yes, you can see, you know, you see

(4) Quantificational Hedges:

(a) Simple: a bit of, a few, a little, a number of, about, all, almost, almost nothing, always, approximately, barely, everything, frequently, fully, generally, hardly, just, kind of, largely, many, many of the things, many things, most, most of them, much, much of the time, much time, nearly, never, none, not at all, nothing, occasionally, often, one of, partly, quite, seldom, some, some of the people, some people, somehow, sometimes, somewhat, sort of, to some extent, usually.

(b) Polar positions: about, almost, approximate, completely, entirely, fairly good, good enough, kind of, nearly, neither very bad nor very good, not really that big, not so bad, not so important, not so much, not too bad, not too many, not very bad, not very important, quite, somehow, somewhat, sort of, tentatively, to some extent, totally, wholly.

(c) Negation with Intensifier: if not, never ever, not really that big, not so much, not too bad, not too many, not very important, too bad, very important.

(5) Tag questions, subjunctives and depersonalization: are you, as if, as though, did you, if I were, it looks, no one can, won't he

A.2: URLs of the PDFs of the novels being studied

(a) Midnight's Children:

<https://drive.google.com/open?id=0B6Bxpkw8MiO-QkNJOS1vOUIyVlk>

(b) The Satanic Verses:

<https://drive.google.com/open?id=0B6Bxpkw8MiO-a1AtU2ZrSG00Ukk>