HEDGING IN WRITTEN ACADEMIC DISCOURSE: A REVIEW OF THE EARLY LITERATURE

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Abstract: The article reviews the early literature on hedging in written academic discourse by focusing on research carried out in the 1970s and 1980s. This theoretical analysis reveals how the study of hedges extended from a semantic to a pragmatic perspective that included context and cultural variables as crucial factors for the appropriate use and interpretation of hedges. The first definitions and classifications contributed to shaping the current concept of hedges as rhetorical strategies with polypragmatic functions aimed at facilitating the acceptance of knowledge claims in written academic discourse.

Keywords: hedging, written academic discourse, context, pragmatic functions, knowledge claims.

This paper reviews the early literature on hedging by focusing on the initial definitions and classifications of hedges in a general linguistic context as well as by highlighting how these have shaped the currently accepted concept of hedges in written academic discourse. Such a chronological perspective aims to provide a thorough theoretical foundation for a better understanding of the evolution of hedging in both general and specific contexts.

Finding a commonly recognized definition of hedges in general, and in academic writing in particular has proven problematic. Various definitions, approaches and taxonomies had been put forward only to be later criticized by other researchers who analyzed hedges from a different angle, or in a different period. Most linguists concerned with their study pointed out the difficulty in providing a clear definition or an exact taxonomy of hedges.

An initial, school-like approach would be to look up the word *hedge* in an English dictionary. Besides the first meaning of the noun, i.e. "a row of small bushes or trees growing close together, usually dividing one field or garden from another", the second entry is more relevant for the topic under discussion: "something that protects you against possible problems, especially financial loss" (Longman Exams Dictionary, 2010: 714). Although this explanation already suggests the protective value of a hedge, the word "something" denotes its vagueness and the difficulty in clearly grasping it. "Something" could be expressed through anything; hence, the issues surrounding the categorization of hedges from the point of view of their linguistic realizations or pragmatic functions.

The same protective value can be inferred from the entry for the verb *to hedge* found on the same dictionary page: "to avoid giving a direct answer to a question; to reduce your chances of failure or loss by trying several different possibilities instead of one". As we shall see further on, the second part of this explanation refers more explicitly to the use of hedges in academic writing, as it implies a connection between their use and a possible insurance against loss.

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Hedge as a linguistic term is routinely connected with the highly cited initial work carried out by Lakoff (1972), although Fraser (2010: 16) pointed out that the first reference to hedging in the linguistic research literature was made in 1966 by Weinreich, who discussed the existence of metalinguistic operators such as *true*, *real*, *so-called*, *strictly speaking* or *like*, which "function as instructions for the loose or strict interpretation of designate".

However, Lakoff's study of hedges in connection with meaning criteria and Zadeh's logic of fuzzy concepts is regarded as the most relevant pioneering work in the field. This opened up a new line of research and generated further studies by raising valuable research questions. Lakoff argued that, contrary to what logicians had mostly held true, sentences in natural language are not only true, false or nonsensical, but have certain degrees of truth (true/false to a certain extent or in certain respects), similarly with the way concepts have fuzzy, instead of sharply defined boundaries or edges while category membership has matters of degree.

Therefore, by describing his research interest, Lakoff also provided the first definition of hedges as "words whose job it is to make things more or less fuzzy" (1972: 195). Thus, he showed how predicate modifiers such as *sort of*, *par excellence*, *typical*, *strictlyspeaking*, *loosely speaking*, *in essence* or *technically*, but also predicate adjectives and predicate nominals in declarative sentences influence category membership. One of his first examples is presented below:

"a. A robin is sort of a bird. (False – it is a bird, no question about it)

b. A chicken is sort of a bird. (True, or very close to true)

c. A penguin is sort of a bird. (True, or close to true)

d. A bat is sort of a bird. (Still pretty close to false)

e. A cow is a sort of bird. (False)" (Lakoff, 1972: 195)

By investigating how such words modify the truth-value of the terms and propositions they accompany, i.e. the truthfulness of the content expressed, Lakoff focused on what Prince *et al* (1982) and Fraser (2010) later called *propositional hedging*. Similarly, the pragmatic category of content-motivated hedges suggested by Hyland (1996a, 1996b, 1998a), which includes the appropriate use of hedges so that scientific claims can meet adequacy conditions in research articles in order to be accepted by the target audience can be traced back to Lakoff's initial approach. Hyland's extensive work constitutes one of the most comprehensive approaches to the study of hedges, which has generated probably the most pertinent and readily applicable classification of hedges in academic writing (1996a, 1996b, 1998a). Therefore, several references to his research will be made throughout this paper.

Although Lakoff only studied propositional hedging, he acknowledged that the interpretation of hedges depends on the context in which they occur, as well as on the connotations of words, which are regarded as belonging to the field of pragmatics. At the same time, context, besides involving pre-existing knowledge on the part of the receiver for the appropriate interpretation of meaning, may also be influenced by different cultural variables. These observations, together with Lakoff's belief that semantics and pragmatics are two inseparable fields and that, consequently, hedges should be studied as pragmatic phenomena, greatly contributed to widening the scope of further research in the field.

Context as a deciding factor for the appropriate use and interpretation of hedges was also mentioned later by numerous authors who studied them from a pragmatic perspective within written academic discourse, among whom, Salager-Meyer (1994, 1998), Hyland (1996a, 1996b, 1997, 1988a, 1988b, 2003), Markkanen and Schröder (1997), Varttala (1999) or Alonso Alonso *et al* (2012). The role of cultural factors was also approached in connection with the use of

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hedges by Crystal (1988), Hyland (1997, 2002), Markkanen and Schröder (1997), Salager-Meyer (2000), Lewin (2005), Hyland and Salager-Meyer (2008) or Millán (2010).

Besides extending the study of hedges from a semantic to a pragmatic perspective, Lakoff (1972) opened up another line of research by agreeing with Robin Lakoff (personal communication) that hedges interact with performatives, thus creating hedged performatives, as well as with felicity conditions and rules of conversation. Later, Fraser (1975) focused on hedged performatives and noted that the modal verbs *can*, *must* or *should* act as hedges when they accompany a performative verb such as *to apologize*, *to request* or *to promise*, thus decreasing the illocutionary force of speech acts.

However, an even more relevant area of research is the use of hedges as a possible politeness strategy. Although the connection between hedges, speech acts and conversational rules was initially established by Lakoff, Brown and Levinson (1978) studied the way hedges reduce the user's commitment to propositions thus diminishing the strength of the accompanying speech acts. This type of hedging refers to what Prince *et al* (1982) and Fraser (2010) called *speech act hedging*, as well as with Hyland's (1996a, 1996b, 1998a) reader-oriented hedges, whose pragmatic function is to show the user's degree of commitment to the truth of propositions for meeting the acceptability conditions that favor the acceptance of claims.

The above-mentioned propositional hedging and speech act hedging were similarly interpreted by Prince *et al* (1982), who divided hedges into *approximators* and *shields*, and later by Salager-Meyer (1994), who also added other categories. According to Prince *et al*, *approximators* influence the content of propositions by modifying class membership through *adaptors*, such as *some*, *somewhat*, *sort of*, *almost* or through *rounders*, like *about* or *approximately*. On the other hand, *shields* are used to modify the speaker's commitment to the truth of propositions either by expressing doubt through *plausibility shields* such as *I think*, *as far as I can tell*, *probably*, which suggest the opinion expressed is personal and therefore possibly subjective or interpretable, as well as through *attribution shields* like *according to*, which shift responsibility away from the speaker by attributing it to someone else. Lakoff's (1972) contribution to the classification of hedges consisted in his mention of *intensifiers*, such as *very*, which strengthen membership to a certain category or the degrees of truth of accompanying content, as well as *deintensifiers*, such as *sort of*, which do the opposite.

To continue the literature review with a research line derived from Lakoff (1972), the already-mentioned contribution brought by Brown and Levinson (1978) will be discussed next. Lakoff's observation that hedges influence conversational rules has been linked with Brown and Levinson's approach to hedges as politeness strategies. Their view also values the role context plays in the correct usage and interpretation of hedges. Thus, according to Brown and Levinson, speakers employ modal auxiliaries, hedged performatives, conditionals or impersonal structures in order to reduce the strength of propositions, save face, avoid denial, and ensure the hearer's acceptance. Although this approach derived from Goffman's (1967) concept of *face* and face-saving behavior was initially applied to spoken interaction, it was later extended to the analysis of written scientific discourse in connection with hedged knowledge claims by authors such as Myers (1989), Varttala (1999, 2001), Paltridge (2006), or Alonso Alonso *et al* (2012).

Although Lakoff's study provided a first definition of hedges that was later criticized by authors such as Crompton (1997) for offering too little information on the form and function of hedges, and thus for being too fuzzy itself, as well as a first classification of hedges into intensifiers and deintensifiers, which was further refined by other linguists, his contribution remains a valuable starting point in the study of hedges.

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Chronologically speaking, after Lakoff's initial approach to the concept of hedges in general, Adams Smith (1984) and Skelton (1987, 1988) also expressed interest in what they called *comments* when referring to the distinction between propositions and the comments people make on them, with reference to written academic discourse. Adams Smith (1984) tackled the issue from a teaching perspective as she investigated authors' comments, such as modal verbs and attitudinal markers using articles published in the *British Medical Journal*. She started from the premise that the main difficulty students have is distinguishing between facts and opinions or subjective elements in academic writing. Her results indicated that the *Introduction* and *Discussion* sections of medical research articles are the most heavily author-marked sections while her final suggestion was the creation of "an authentic speech-act syllabus" focusing more on language functions than on forms (Adams Smith, 1984: 36).

The term *comment* was also preferred by Skelton (1987, 1988) in order to distinguish between *propositions* and the *comments* people make on them due to his perceived pejorative connotations of the term *hedging* in ordinary language. Skelton did not attempt to define *comments*, but instead focused on the functions of expressions such as *it cannot be denied*, *it seems likely* or *it was presumed*, and concluded that, since commentative language is "associated with hypotheses, probabilities and evaluation rather than certainties or descriptions", it is used differently in the academic prose of various disciplines, thus leading to disciplinary variation (Skelton, 1987: 99). He also pointed out, like numerous other researchers did later on, that the main distinction is between the hard and soft sciences, and that comments most frequently occur in the *Discussion* sections of scientific articles, where they are used to express three types of certainty: "information that is taken for granted; the purely hypothetical; and logical deduction" (Skelton, 1987: 97). The appropriate use of comments by learners in order to enhance meaning in academic prose, despite possibly scarce linguistic resources was also acknowledged, thus proving that the importance of hedges in academic writing and the teaching implications associated with their correct use was perceived as early as the 1980s.

The link between hedges and modality on the one hand (Coates, 1983; Palmer, 1986), and evidentiality (Chafe, 1986), on the other hand, should be mentioned due to the relevance of these two concepts for the future development of the research on hedges. As far as modality is concerned, the work carried out by Coates (1983), who acknowledged the polysemous nature of modal verbs and insisted that context plays a major role in the accurate interpretation of their pragmatic functions was later taken over by Hyland (1998a). Coates' theory was based on the assumption that the meaning of modals is to be found in the utterances that contain them, rather than in the modals themselves. Thus, her analysis revealed that "the modals relating to assumption are *must*, *should* and *ought*, and those relating to possibilities are *will*, *may*, *might* and *could*. *Shall* and *would* represent hypothetical epistemic uses. Only affirmative *can* and *need* have no epistemic senses." (Hyland, 1998a: 107).

Hyland later used Coates' classification of modal verbs according to epistemic function and primary meaning in his comparative analysis (1996a, 1996b, 1998a) of hedging devices used in a corpus of scientific journal articles vs. general academic corpora. However, his analysis was not restricted to hedging modals but covered a wide range of lexical realizations.

Hyland's analysis and description of two other linguistic realizations, namely epistemic lexical verbs and epistemic adverbs (1996a, 1996b, 1998a) was based on research carried out by Palmer and published in *Mood and Modality* in 1986. Palmer stated that the non-factual status of propositions can be expressed in writing in four main ways: speculative, deductive, quotative and sensory, according to whether writers wish to introduce new information as subjective opinion,

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deductive conclusion, hearsay or conclusion supported by their senses. According to these types, Hyland divided epistemic lexical verbs into judgemental and evidential, while epistemic adverbs were labeled as certainty content disjuncts, truth content disjuncts and sense content disjuncts.

Chafe (1986) contributed to the research on hedges mainly through his study of evidentiality in spoken discourse vs. academic writing. His view of hedges as words or expressions which show that "the match between a piece of knowledge and a category may be less than perfect" (1986: 270), although in agreement with Lakoff (1972) seems incomplete at this point. However, his study of evidentiality, regarded as "any linguistic expression of attitudes towards knowledge" (1986: 271) constituted the grounds of further research in the field of hedges.

According to Chafe's scheme, the reliable or unreliable status of knowledge is expressed through markers of evidentiality. Therefore, he studied expressions that indicate the speaker's/writer's assessment of the degree of knowledge reliability (which pragmatically function as content-motivated hedges according to Hyland, 1996a, 1996b, 1998a). The linguistic realizations of Chafe's markers of evidentiality, such as *suggest* or *speculate*, *probably*, *could* or *should*, were later included in Hyland's detailed classification of hedges under epistemic lexical verbs, adverbs and modals.

In Chafe's view, knowledge can be acquired via different modes: belief, induction, hearsay and deduction. Each of these is provided by different sources: an unknown one for belief (almost never present in academic writing), evidence for induction (more frequent in academic writing than in spoken discourse), language for hearsay (corresponding to citations and references in academic writing) and hypothesis for deduction (greater incidence in academic writing than in conversation). In this context, the question of whether knowledge is reliable or unreliable depends on the match between knowledge and the verbal resources used, on the one hand, and between knowledge and the expectations of the hearer/reader, on the other hand. Although Chafe did not dwell on this, the introduction of expectations (through words such as *in fact, actually, at least, even, only, but, however or nevertheless*) shifts the focus towards the target audience and indicates that he had actually described Hyland's reader-motivated hedges.

Crystal (1988) and Myers (1989) also contributed to the research on hedging. Crystal suggested the need to study linguistic imprecision, thus siding with the half of Lakoff's definition which implies that hedges are meant to increase fuzziness. He pointed out the high frequency of hedges in informal speech, which is usually characterized by a balance between precision and imprecision, as well as in popularization literature, where the audience only needs the "half-truth" (opinion also expressed by Varttala, 1999). Although Crystal mainly referred to spoken interaction, his acknowledgement of the existence of personal and cultural factors involved in hedging could be extrapolated to academic prose, thus becoming relevant for the topic of this paper.

One year later, Myers (1989) started from the assumption that the pragmatic of politeness could be extended from conversational data to written genres despite difficulty defining relevant cultural variables. He considered hedging to be a negative politeness strategy in scientific articles when hedges assign a provisional character to a claim until the respective claim gains the acceptance of the readers in the target discourse community, in this way underlining the interactive nature of scientific written discourse.

Further on, he explained that in scientific writing "the hedging of claims is so common that a sentence that looks like a claim but has no hedging is probably not a statement of new knowledge" since "the form of the statement reflects a relation between the writer and the

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readers, not the degree of probability of the statement" (Myers, 1989: 13; 15). In other words, according to this theory, hedges do not signal that the newly introduced information or statement is provisional, possibly inaccurate or incomplete, but they serve as a polite invitation to the readers, who thus have the liberty, which they can exercise based on their subject knowledge and experience, to regard such information as a relevant and appropriate new claim in their respective fields. On the other hand, if the frequency of hedges is so high, it could be interpreted that they are routine conventions of academic writing rather than politeness strategies. Anyway, Myers' approach to hedges seems to be one-dimensional as it only refers to what later Hyland (1996a, 1996b, 1988a) considered to be the reader-motivated function of hedges, i.e. hedges used to introduce information in a less categorical way in order to stimulate writer-reader interaction and ensure the acceptance of new knowledge claims, although Hyland rejected the politeness theory. Content-motivated hedges, whose role is to increase the accuracy of claims by introducing them in mitigated form, were not part of Myers' study.

However, Myers's observation that hedging, in his study under the form of modal verbs, modifiers and indefinite articles mainly occurs in the *Discussion* sections of articles is in agreement with other literature data (Adams Smith, 1984; Swales, 1990; Hyland, 2006; Salager-Meyer, 1994; Varttala, 1999; Martín-Martín, 2008), thus suggesting that hedging reflects the writer's need to establish social interaction, as well as the probability of the statements expressed.

Myer's approach, although regarded as valuable for the study of hedges was later criticized by Hyland (1996b, 1997) for having provided an incomplete view of the role of hedging devices because it only focused on their role in mitigating knowledge claims and minimizing impositions, without acknowledging the influence of institutional norms and discourse communities in the creation of scientific knowledge, the polypragmatic nature of hedges, or the possible differences between various cultures or registers. Therefore, Hyland (1996b: 453) strongly suggested that "hedges can only be understood in terms of a detailed characterization of the institutional, professional and linguistic contexts in which they are employed", meaning that sociological, discourse analytic and linguistic perspectives should be integrated for their successful analysis and understanding.

Although not directly concerned with the study of hedges, but rather with how scientific facts are constructed in written academic discourse, Latour and Woolgar (1986: 75-81) classified scientific conclusions into five distinct statement types according to the level of facts and speculation they contain, also reflected in the use of "modalities". In their view, modalities were not confined to the use of modal verbs but represented one way of expressing non-definitive assertions in the form of "statements about other statements". Their examples of modalities included adverbs (*generally*) or passive constructions (*wasreported to be*) that would normally fall under the category of hedges.

According to Latour and Woolgar's classification, type 5 statements denoting commonly accepted knowledge among scientists, and type 4 statements containing specialist facts usually occurring in textbooks are presented without any modalities. On the other hand, modalities accompany type 3 statements expressing non-definitive assertions common in review discussions, type 2 statements referring to tentative suggestions that require further investigation, and type 1 statements, which represent the most speculative assertions. They also drew attention to the importance of contextual knowledge for correctly perceiving how changing a type of statement reflects the status of the fact it refers to, scientists aiming for type 4 statements that equal universal social constructs, i.e. scientific facts. Although difficult to apply to text analysis

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without solid scientific background knowledge, such a distinction between statement types could be useful in analyzing the importance of claims according to their degree of hedging.

To summarize, research in written academic discourse in the 1980s revealed the following trends: hedging propositional content prevailed over hedging writer commitment (Adams Smith, 1984; Skelton, 1987, 1988; Crystal, 1988); modality and evidentiality studies were introduced (Coates, 1983; Palmer, 1986; Chafe, 1986) mainly in connection with the hedging of propositional content; didactic issues were raised and solutions suggested (Adams Smith, 1984); and hedging was studied as a politeness strategy (Myers, 1989) aimed at inviting the reader into the discourse for reasons of politeness, rather than as part of a convention established within an academic genre.

This review revealed how the study of hedges extended from a semantic to a pragmatic perspective that included context and cultural variables as crucial factors for the appropriate use and interpretation of hedges. The first definitions and classifications provided in the 1970s and 1980s contributed to shaping the current concept of hedges as rhetorical strategies with polypragmatic functions used by scientific writers in order to facilitate the acceptance of new knowledge claims in today's highly competitive and demanding academic environment.

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