

Strategic features of ESP from a socio-cognitive perspective

Ana María Roldán Riejos

Universidad Politécnica de Madrid

Abstract

It has been observed that the analysis of elements traditionally associated with the English for Specific Purposes (ESP) area, grammatical, lexical or rhetorical, has not sufficiently covered so far the variability and complexity of ESP communication. Nevertheless, since the 1990s, an emergent line of investigation has been contributing and offering new insights into this field (White, 1998, 2001; Cameron & Low, 1999a; Roldán, 1999; Draaisma, 2001; Roldán et al. 2001; Úbeda, 2001). This trend of research adopts the cognitive/experientialist approach proposed in Lakoff (1987), Sweetser (1990), or Fauconnier (1997), among others. Given the importance of social and cognitive components in communication, the aim of this paper is to explore strategic features of professional and academic technical discourse. Accordingly, we have attempted to show the interconnection of genre and register features in ESP communication in a selection of authentic texts. The communicative role that metaphoric and metonymic aspects play has also been considered. In addition to this, the function of hedging as evidence of reader/writer interaction and viewed as a social and cognitive phenomenon is illustrated and discussed and, finally, future research points are suggested.

Key words: ESP cognitive approach, ESP register use; cognitive discourse interpretation; ESP communication; hedging in ESP

Resumen

Es un hecho observable que los estudios que han abordado el área del Inglés para Fines Específicos (IFE) no han cubierto hasta la fecha todos los aspectos inherentes a la comunicación académica y profesional en este campo. Recientemente ha surgido, sin embargo, una nueva perspectiva que intenta cubrir esta temática (White, 1998, 2001; Cameron & Low, 1999a; Roldán, 1999; Draaisma, 2001; Roldán et al. 2001; Úbeda, 2001). Estos estudios siguen una tendencia cognitiva, según proponen Lakoff (1987), Sweetser (1990) o Fauconnier (1997), entre otros, y que, asimismo, se ha elegido en este artículo. Por tanto, dada la importancia de los componentes sociales y cognitivos, el objetivo principal del trabajo es ofrecer una perspectiva distinta de los aspectos estratégicos

comunicativos presentes en el discurso técnico de la ingeniería de acuerdo con el marco de la lingüística cognitiva. El papel del registro, así como el de los delimitadores del discurso (*hedging*) en el discurso ha sido examinado y finalmente, se sugieren posibles líneas de seguimiento de la investigación.

Palabras clave: enfoque cognitivo en IFE, uso del registro en IFE, comunicación en IFE, estudio de *hedging*

Introduction

Generally speaking, the study of communication is likely to include textual, rhetorical, sociolinguistic or pragmatic aspects (Canale & Swain, 1980; Bachman, 1990). In this work, however, we try to explore the possibilities of studying ESP communication from a cognitive approach. By cognitive we understand the experientialist line applied by cognitive linguists like Lakoff (1987, 1993), Sweetser (1990), or Varela et al. (1991). Our goal is to bring forward strategic features of ESP communication whose choice and function may depend on the common knowledge of sociocultural factors shared by the writer and the addressee, and also on the intentionality of the former. ESP literature has so far been mainly concerned with textual and pragmatic elements that have sometimes included sociocultural aspects (Swales, 1990, Crompton, 1997; Salager-Meyer, 2000; Alcaraz, 2000; Durán, 2000; McGinity, 2001); however, they have not been treated from an all-encompassing perspective. McGinity, for example, does suggest the adequacy of intercultural research for “an effective communication in ESP”, the process would be to start from a correct comprehension of the differences between cultures in order to achieve better linguistic competence. The approach proposed here implies looking at the communicative phenomenon as a whole, i.e. considered as a combination of textual, cognitive and sociocultural aspects interactively working and simultaneously influencing each other. As Fauconnier (1997: 38) points out: “The unfolding of discourse is a succession of cognitive configurations”. This mutual dependency means that to draw a sharp line among the components that make up communication could actually hinder their study. Instead, the holistic and comprehensive outlook that the cognitive view offers can provide an appropriate research method for ESP communication. Our main concern will be then the study of relevant aspects in ESP communication, such as register use, which includes strategic features that show the degree of commitment, politeness or solidarity of the speaker/writer in discourse, as well as genre and discipline variation in the use of genre in ESP.

Register has been broadly classified as formal and informal. It has also been traditionally assumed that formal language would be more suitable for written English, whereas an informal register would be more appropriate in spoken language. Nevertheless, informal forms of written English are not infrequent, especially in fiction and in the popular press, including the language of advertising. Similarly, formal ways of spoken English can be found, particularly in monologic speech, not to mention its use in special academic and professional situations. In addition to this, some types of written technical discourse may present interactive communicative features often typical of informal speech, as will be shown below. Therefore, generalisations claiming that formal ESP discourse is mostly written and that informal ESP language is mainly spoken need to be previously contrasted, since it may prove otherwise. As Bell (2001: 143) indicates: “Speakers design their style primarily for and in response to their audience ... Style is a responsive phenomenon, but it is actively, so not passively”. The importance of this statement lies in emphasising the attitude of the speaker/writer (SP/W) as being well aware of the addressee/reader’s (AD/R) presence and possible response. Interaction between them, then, acquires a prominent place that Bell corroborates: “Dialogue is the natural instantiation of language. We should no more conceive of language without audience than of language without speaker” (Bell, 2001: 144).

In the first section of this paper, the use of the term ‘register’, at times conceptually associated or even confused with ‘style’ and ‘genre’, will be examined, and furthermore, some interesting contributions on this issue from the sociolinguistic area will be commented on. As it is well known, the social sphere is considered basic in register studies, in addition to this, the importance of the social dimension has been lately highlighted in cognitive studies, accordingly, this paper suggests that the analysis of register in Languages for Specific Purposes (LSP) should integrate cognitive and social factors as mutually influential, since both aspects often interact in communication. In this sense, it is suggested that the role of hedges (term used, for example, by Lakoff, 1972; Crompton, 1997; Salager-Meyer, 2000), and similar to ‘mitigators’ or ‘downtoners’ (Holmes, 1984), or ‘*delimitadores del discurso*’ (Cuenca & Hilferty, 1999) as typical and strategic categories of communication, should be contemplated as subjects of research. In addition, cognitive elements, as metonymy and metaphor are also interesting phenomena to consider. The reason for grouping them together arises out of the attitudinal and subjective function of hedging, not very dissimilar from the rest of strategic elements forming part of communication

(Salager Meyer, 2000; Closs Traugott & Dasher, 2002). This point is practically shown in the next section, which deals with subjective, intersubjective and objective features of communication (Closs Traugott & Dasher, 2002). Three representative examples of advertisements from the field of construction have been selected for analysis. Since many of the intersubjective, subjective and objective features they include (such as discourse markers) are common to most technical magazines advertisements, they have been taken as prototypical cases of their class. As shown below, intersubjective and subjective parameters can be observed in examples 1 and 2, whereas objective factors prevail in example 3. Likewise, the use of metaphor and metonymy seems to play a twofold function. On the one hand, they appear to be linked to background and specialised group knowledge; on the other, they serve to reinforce the visual content of the examples, giving a holistic and integrated dimension to the message. The last part of the paper deals with the analysis of hedging in abstracts and in the conclusion sections of specific engineering research articles, in order to highlight and contrast the role of interactive communicative factors in another ESP genre.

Register, style and genre

Style and register

In sociolinguistics, a discipline closely involved in register research, most authors speak of register and style without making any difference between them. Therefore, it could be useful to try to clarify these concepts. Bell (2001: 139-141), for instance, applies the same considerations to both terms, highlighting the elements of the question: “Why did this speaker say it this way on this occasion?”, i.e. the communicative goal (why), the speaker/writer, the message (it), the style (this way) and the situation (this occasion). He prefers to choose ‘style’ rather than ‘register’, suggesting the following definition for it: “Style is what an individual speaker does with a language in relation to other people”. Finnegan and Biber (2001: 259), by contrast, pinpoint a distinction between the two terms:

The term style and register, while united in their focus on situational varieties, differ in scope. In usage among sociolinguists, style is typically limited to a certain range of spoken varieties such as those encountered in sociolinguistic interviews, while register encompasses all spoken and written situational varieties.

Accordingly, the concept of ‘register’ would be more generic than the concept of ‘style’. Irvine helps to clarify the issue by stating that the use of ‘style’ or ‘register’ is essentially a geographic question: “Register being a term originating in British schools of linguistics, some American authors have simply used the term ‘style’ in its place, though ... ‘register’ is gaining currency in American sociolinguistic parlance today” (Irvine, 2001: 27). Irvine also mentions Halliday as the principal proponent of the term ‘register’ in the 1960s and 1970s. Giménez (1997: 41) looks at this question from the ESP sphere, turning to the concept of idiolect, and points out that a speaker uses ‘stylistic features’ in a conscious and deliberate way, and that they depend on the speaker’s education, personality and objectives in communication, whereas ‘idiolectal features’ are unconscious or product of ‘a reflex action’, according to the speaker’s family background, character and education. Finally, she comes to the conclusion that even though idiolectal and stylistic features can be indistinctively used according to the situation by any speaker, they need to be distinguished from the concept of register, which involves adjusting to the situation and needs to be respectful with social conventions. Nevertheless, the concept of register seems to be more appropriate to encompass the social dimension of communication, conceived as a group or community that has accepted, and therefore, shares and follows, a particular way to communicate, whereas the concept of style would preferably be more focused on individual traits.

Genre and register

So far, little attention has been dedicated to register use in ESP genre analysis. Taking, for example, Swales’ (1990) seminal work, he points out that, historically, language analyses for specific purposes began in quantitative studies of the linguistic properties of ‘functional varieties’ or registers and he mentions Barber’s study on continuous tenses frequency in scientific prose published in 1962, as well as other investigations into sentence length, voice, vocabulary, etc. Swales also quotes Halliday’s traditional variables to analyse register, i.e. field (type of activity where discourse operates, its content, ideas and institutional focus), tenor (status and role of participants) and mode (channel of communication). However, his aim is mainly directed to make a distinction between genre and register by placing the former at discourse level and the latter at the lexical and syntactic level and thus ‘dissociating’ them.

Biber et al. (1998: 157-160) understand by register “varieties defined by their situational characteristics”, emphasising the importance of the situation against all other different aspects (participants). They argue for a corpus-based approach as the best way to research on register in ESP. They advocate a ‘multi-dimensional’ description of register in the comparative analysis carried out between biology and history research articles published in specialised journals, taking into account subject matter, evidence and methodologies. Their findings indicate the interrelation between subject matter and the occurrence of linguistic features such as verb tenses. Being a linguistic corpus-based approach, their study is mainly directed to pointing and analysing quantifiable features, such as grammatical and lexical-grammar features, the frequency of verbs with *that* or *to* clauses or the use of dependent clauses in spoken or written registers. Giménez (1997) remarks that if discourse is seen as process and production, then it should be associated with register, whereas if text is seen as product and result, it should be associated with genre. Following a more encompassing view, however, it could be useful at this point to look at what sociolinguistic research has to say on genre and register. Bauman (2001: 58-60), for example, investigating the language of selling in a Mexican market, favours the idea of bringing both concepts nearer by defining register as: “A speech style associated with recurrent situational contexts is what we usually identify as a register”. He argues that the most noticeable difference between them has to do with the systemic and formal nature of genre, typically associated with text typology: “we conceive of genre as one order of speech style, a constellation of systemically related, co-occurrent formal features and structures that contrasts with other such constellations”. Bauman’s objective, then, is to prove that this widely accepted assumption about genre is incomplete, since other important factors entailed in the communicative process have not been considered; therefore, he proposes a new approach: “To conceptualize genre in the terms I have outlined is to shift the primary focus of attention from typology or classification of message forms –the dominant concern of most genre-oriented investigation– to discursive practice”. Bauman’s major contribution then is to situate the role of the speaker/writer (SP/W) at the same level as the role of the addressee/reader (AD/R), being both of them, not just the SP/W, protagonists of the communicative act. In accordance with this, the structural or textual expectations that a given utterance or text may arise in the AD/R need to become primary objects of research. This means that the conception of genres as generic frameworks, whose major function is to distribute texts in different ‘hangers’, according to their formats, may be leaving out crucial discursive aspects, among these, the experiential cognitive and social

background of people involved in the communication, as well as their goals, context and expectations which together make up social interaction and are responsible for the success or failure of the communicative act. As Bauman (2001: 59) puts it: “In a word, other pragmatic and metapragmatic frameworks in addition to genre must be brought into play in shaping production and reception”.

Consequently, to establish a clear-cut distinction between genre and register, could be misleading in ESP communication, unless our goal is restricted to analyse genre only as a tool containing formal properties. If we admit that genre and register work interactively and complementarily together, then it would not be practical to separate them in the analysis of the communicative act, simply because they frequently overlap. Thus, how can technical reports be considered as such if typical register parameters, such as hedging, or communicative strategies that show solidarity with the discourse community addressed, and which reflect aspects of the prototypical features of the genre, are not taken into consideration? It is true, though, that much research is needed to look at the way all these factors tend to coalesce, how they work together and also how they differ in the variety of ESP disciplines. From a didactic point of view, we believe that only giving indications about the general layout of a particular genre, say an abstract, a report, or a CV covering letter, can prove to be insufficient. In the linguistic continuum, genres are not closed systems but genuine pieces of discursive creation and are therefore open to the introduction of elements (attitudinal, contextual, cognitive or social) that are not formally closed or predictive when the actual communication occurs, since they depend on the context or on the author's intentions. Students need to be aware of the existence of these factors and ideally to be able to deal with them in a practical way. Therefore, apart from pointing out at the prototypical features of each genre, the study and practice of register communicative aspects that cannot be easily generalised, reduced to a format, or a set of conventions, for being context dependent, should not be left out.

Subjectivity, intersubjectivity and objectivity

When analysing the main elements that can make an influence on linguistic change, Closs Traugott & Dasher (2002: 19-21) propose the study of subjective, intersubjective and objective features in communication that may vary according to the linguistic perspective, i.e. the attitude, intention and goal, of the speaker/writer (SP/W) towards the message and towards the addressee/reader (AD/R). These

features are strategic choices related to content and to expression, that may be consciously or unconsciously taken and that can be included within the sphere of register. Although Closs Traugott & Dasher analyse subjective, intersubjective and objective expressions to indicate which ones turn out to be more salient in the process of semantic change, in the present study, it has seemingly been considered relevant the application of those parameters to explore the use of register in typical advertisements published in engineering construction magazines that are intended for a specific engineering audience. As will be seen, the common factor for all these examples lies in the full awareness of the writing subject of the possible response of the addressee, possibly due to the persuasive goals of this type of language. This awareness is so pervasive in the examples that it can be said that the more aware the writer is, the more subjective or intersubjective features can be found in the propositional content. For reasons of space, one model for each group of features (intersubjective, subjective or objective) has been included, the results, however, could be extended to other examples of this genre, since most of the advertisements in this field appear to follow the same criteria.

- Spatial and temporal deixis,
- Explicit markers of SP/W attitude to what is said,
- Explicit markers of SP/W attitude to discourse structure,
- Use of the relevant heuristic (rich interpretations) predominates.

Figure 1. Features associated with subjectivity in communication
(based on Closs Traugott & Dasher, 2002)

According to figure 1, when subjective features prevail, the use of reference (deixis) is very important, i.e. spatial and temporal deixis: *here/there, this/that, now/then*, etc., as the SP/W tries to establish a degree of linguistic intimacy with the AD/R. There are also a high number of attitudinal markers, such as *because, so, anyway* which reflect the SP/W attitude to what is said and also to the structure of discourse. Similarly, the SP/W puts himself in the AD/R place and hence predicts and replies possible questions in order to supply and anticipate specific information. Even though the audience is, in a way, strategically 'led' throughout the message, inferences are not at all closed, as the use of the idiomatic metaphor REACH FOR THE SKIES demonstrates, opening the way to more than one interpretation (relevant heuristic), as can be seen in figure 2.

REACH FOR THE SKIES

Got a demolition job where you need to reach for the skies? We have the answer.

Our range of demolition machines weighing up to 105 tonnes gives you incredible reach, maximum productivity and, even better, you choose which bits of equipment you need to attach for each job, not us. So they're flexible, too.

Flexible because they'll take you from ground level all the way up to an astonishing 40m if you need to r-e-a-c-h that far.

Flexible because you attach the boom length you need for the height you have to reach.

Flexible because you choose between using Komatsu's shears or crushers depending on the job in hand. And afterwards the machine will help you sort the rubble which goes for recycling.

It goes without saying that our demolition machines are reliable. But we'll say it anyway. They're reliable, productive - and very flexible. And they'll reach for the skies.

Figure 2. Sample text from <www.Komatsu.Europe.com>

Markers like *because*, *so*, *anyway*, *although* are here used to conveniently convey conviction, or distance from the content of the proposition, depending on their situation in discourse. On the other hand, when intersubjective features prevail, communication becomes more interpersonal, i.e., expressions arise directly from a kind of virtual interaction between both participants, as can be seen in figure 3.

- Social deixis
- Explicit markers of SP/W attention to AD/R: hedges, politeness markers
- Use of relevant heuristic (rich interpretation) predominates

Figure 3. Features associated with intersubjectivity in communication (based on Closs Traugott & Dasher, 2002).

The main feature of intersubjective language is social reference, typical of conversations and dialogues, which is illustrated in the below example with the use of the first/second person (*we-our/you/your; us/you*). Interaction is shown with the use of conversational implicatures which may encode social politeness and also work as markers of attention: *you'll find...*; *you'll be glad to know...* At the same time, these features contribute to mitigate the degree of formality and distance by expressing solidarity with the AD/R possible problems, as shown in figure 4.

At the risk of appearing immodest, our new Swellex Manganese Line combines higher load capacity and greater elongation than any other range of rock bolts in history. How?

The clue lies in the name. The Manganese Line features a special steel with higher manganese content and a new manufacturing process – for greater strength and deformability. The result is a strong and tough rock bolt that can absorb strain that would make a lesser product break.

Stretching the limits of rock reinforcement

Once installed, Swellex Manganese Line reacts to the strain immediately – with margin to spare. And should there be further movements in the rock, you'll find its maximum load potential and 30% elongation capacity will be more than enough to absorb them.

Although this is a radically different product, you'll be glad to know some things remain the same. Like productivity, reliability and controllability. And the high level of technical support from Atlas Copco.

Always play it safe, visit www.swellex.com



Figure 4. Sample text from <www.swellex.com>

Whereas subjective features are more oriented to the speaker/writer and their choice of rhetorical strategy, intersubjective features may show the type of rhetorical strategy being used as well as expressing concern for the addressee's 'face' -by the choice of some textual strategies. Thus, in example 2, the use of modality with *would*, *will*, *should* can be seen as actually hedging their corresponding propositional content. Even more interestingly, the connector *although* in the last paragraph carries out the function of anticipating and also mitigating possible objections coming from the AD/R, like in a real dialogue, illustrating thus the function of intersubjective features more clearly.

In addition to the intersubjective and subjective patterns, we have to consider another prototypical example in the genre of technical advertisements. In this case, information is delivered through the application of features associated with objective language, included in figure 5.

- Declarative expressions
- Lexical items are minimally concerned with the AD/R perspective
- The use of quantity heuristic (informative content) predominates

Figure 5. Features associated with objectivity in communication
(based on Closs Traugott & Dasher, 2002)

As we can see in figure 5, the use of declarative expressions requires fewer inferences depending on the SP/W-AD/R. Similarly, lexical items are not chosen with the intention of showing concern with the AD/R perspective; instead, quantity heuristic, which produces informative content, predominates, as illustrated in figure 5. When objective features prevail, the SP/W is not directly appealing to the solidarity of the AD/R in the communication; therefore, the statement is assumed to be more 'neutral' and 'objective', where informative considerations predominate. However, communication is rarely completely neutral, as Carter & Nash (1990) remark: "writers entertain, whether consciously or not, particular kinds of designs on readers and these are in important ways realized by an exploitation of available linguistic choices and of available text conventions".

The Grindex story began in 1940. Since 1960 we have been supplying pumps for heavy-duty applications such as mining, construction and quarries - to name just a few examples. Today we are a market leader, producing electrical submersible pumps for a wide range of sludge, drainage and dewatering applications.

There are some 8.000 Grindex pumps for rental throughout Europe. Hiring one is easy. Simply contact your local rental company or an established rental firm. Grindex has pumps for a variety of needs and applications.

For more information about this service, check out our web-site at www.grindex.com.



Figure 6. Sample text from "Grindex".

By contrast, in subjective or intersubjective features, the SP/W takes the AD/R's response into consideration and, at the same time, anticipates a possible response.

There are a number of strategies that the writer/speaker may choose in order to be interpreted as desired. The interpersonal strategy that implies anticipating and considering the receiver/addressee's possible response seems to be particularly used where intersubjective features predominate. Closs Traugott and Dasher (2002), concluded that by far intersubjective and subjective features occupy a more relevant role than objective ones in semantic change. Amongst the former ones, 'discourse markers' seem to be included. These can often summarise, or, as we have seen above, express attitude and evaluation in the propositional content. In their words, discourse markers (*in fact, actually, then*) or connectives (*and, but*) "are clearly subjective and procedural in that they indicate the speaker/writer's rhetorical, metatextual stance towards the cohesiveness of the discourse being developed- elaboration of or counter-argument to what preceded, continuation of or change in topic" (Closs Traugott & Dasher, 2002: 155).

The use of metaphor and metonymy

As we have seen when dealing with subjective, intersubjective and objective features in the previous examples, the SP/W is usually fully aware of the AD/L's interactive role throughout the communicative act. Moreover, despite the importance of social interaction in the specific examples of technical discourse discussed above, they do not constitute an isolated case. Interaction represents a basic constituent of communicative acts, and is therefore present in practically any genre in a greater or lesser degree. The social factor has been recently acquiring a leading role in metaphor studies. For instance, when arguing that the future of metaphor studies lies precisely in researching language in use, Cameron (1999b: 4) remarks: "[i]t is precisely the interaction between the cognitive and social in language use that produces the language and behaviour that we observe and research". Likewise, recent work on the subject (White, 1998; Roldán, 1999; Úbeda, 2001) have tried to show that the use of metaphors and metonymies in ESP can be an ideal way to make communication more effective, since their use has to be previously shared and accepted by the discourse community addressed, whose members will not interpret them as elaborated resources, but as constitutive of their corresponding subject matter. That is why the social, interactive factor turns out to be crucial in dealing with metaphor studies and ESP. According to Draaisma (2000: 14), in metaphor formation there is "a union of opposites: they combine concrete and abstract, visual and verbal, graphic and conceptual". The language of advertisement is one of the channels in which this union becomes more explicit. In figure 2, for example, the text

was originally presented with a picture of a high escalating platform foregrounded against the sky. The title of this advertisement is “Reach for the skies”, which can be analysed as follows: the source domain is based on the spatial mapping UP IS MORE, which is metonymically covered with the “skies” formulation. This in turn is mapped onto the target domain of being more successful, or getting to the top, if the client takes the decision of choosing this type of machines. The image is furthermore visually reinforced by the superimposition of the tall machine as the right tool to make the sky (and hence success) reachable. Therefore, in both the target and the source domain, the height mapping has been metonymically highlighted, thus evidencing the interaction between metonymy and metaphor, which happens to be a frequent combination in ordinary linguistic expressions (Goossens et al., 1995). In addition, ‘to reach for the skies’ is also a salient metaphoric idiom, which also serves to summarise and possibly to evaluate and intensify the propositional argument (Cameron, 1999b: 86).

In figure 4, a typical engineering metaphorical mapping (Roldán, 1999) A METAL IS A LIVING BEING is used. The recurrence of this or similar metaphors in engineering construction or architecture as well (Úbeda, 2001) is such that in Cameron’s words: “speaker and listener are communicating within a constructed discourse world, in which the language is not metaphorical although it may appear so when viewed from the outside” (Cameron, 1999a: 117). Consequently, the use of ‘coined’ metaphors is one effective way to activate the speech community solidarity factor in order to make communication successful as well as appealing to the shared knowledge of the engineering community particularly addressed.

Hedging

The importance of connectors or markers as *anyway, then, so, although* (examples 1 and 2 above) as real links of communication highlighting socio-cognitive features in the propositional content has been considered above. Similarly, there are other elements that can express politeness, mitigation, commitment or vagueness in discourse and that have already been pointed out in linguistics mainly from a pragmatic perspective. These elements have been designated as ‘hedges’ (Lakoff, 1972; Crompton, 1997; Salager-Meyer, 2000; Closs Traugott & Dasher 2002) or ‘delimitadores del discurso’ (Cuenca & Hilferty, 1999). Among them, there are more simple cases: *much, little, very, often, probably, roughly, approximately, sort of, slightly*, or more complex ones: *somewhat, theoretically, practically*; some of them may either be modal or lexical verbs *suggest, indicate, consider*, as will be seen

below. Lakoff was the first linguist that used the term ‘hedges’, describing them as “words whose job is to make things fuzzy or less fuzzy”. This definition already suggests the relevance of context and meaning in hedging. According to Varttala (2001), hedges are “linguistic devices indicating less than complete certainty or commitment regarding information put forth”. Salager-Meyer adopts a mentalistic view on the phenomenon, when analysing scientific and academic English, and depicting hedging as “first and foremost the product of a mental attitude, i.e. it is a typically mental phenomenon that we express linguistically by resorting to certain forms expressions containing elements of tentativeness and possibility”. More interestingly still, she also highlights the social dimension of hedging and its role in communication:

Hedging is a concept that gives clear evidence of the intersubjective essence of language and of its social function insofar as it reveals how life in community compels us to modulate, camouflage, mitigate and adapt our language according to the situation we find ourselves involved in. (Salager-Meyer, 2000: 176)

Crompton (1997), however, questions the generalisation of hedging to most examples of linguistic vagueness and fuzziness, defending the need to be more specific, and takes into account ‘epistemic modality’, i.e. taking knowledge as a continuum that needs to be modulated. He also highlights the fact that most authors concerned with the study of hedging do not coincide in their appreciation of hedging categories. Therefore, he proposes a ‘functionalist’ test “for determining whether or not a proposition is hedged” which consists of removing or changing the hedging items used. Crompton’s major focus of interest in hedging, however, seems to be restricted to the measurement of the grade of commitment that writers assume for their propositions, although it is not clear that this may not depend itself on subjective, or attitudinal factors. This work, however, would rather look at the implications of using strategic features of hedging from a larger scope, i.e. the criteria adopted intend to point out cognitive, social and contextual features that may express politeness, solidarity or identification with the target group, and that the writer introduces out of consideration with the discourse community addressed. It is important, then, to comprehend the hedging phenomenon in a socio-cognitive dimension and not only as a set of textual and rhetorical strategies. Thus it would be interesting to note the different components that are likely to introduce variables on the choice of hedges as well as on the communicative strategies being chosen, among them, we propose the following:

- The type of audience
- The type of discipline
- The speaker/writer
- The type of genre

To illustrate this point, a specific sample of ESP academic language has been examined. The examples selected belong to the genre of civil engineering research articles that have been recently published. Their audience would be mainly composed of academic and professional civil engineering groups. All the authors of the articles investigated use English as a first language. This is an interesting point, since the study of hedging in non-native authors, who perhaps use hedging in English in a particular way, may be worthwhile. In addition, most research on hedging so far has been applied to the English language, but there is still little research on hedging in other languages. What follows below is a tentative approximation presented only for illustrative purposes, whose results are not claimed to have statistical but just orientating value. Given the fact that the intentionality of the author tends to be more explicitly and directly expressed either in the abstracts or in the conclusions sections of research journal articles, our attention has been particularly directed to these parts. Figures 7 and 8 below reproduce authentic examples of hedging that were found in the examined material and subsequently organised according to categories taxonomy. Categories are arranged according to their prototypical level and quoting a whole expression was considered more representative than only including the actual hedging item.

1. **Passives:** (1) the model dimensions *were selected*; (2) an empirical method of analysis *was developed and presented*; (3) design relations *were based* on the assumption; (4) local scour *was to be avoided*; (5) earlier research on submerged vanes *has been performed*; (6) design feasibility *was examined*; (7) systems with continuous drop panels *are often used*; (8) strips referred in clause 13.12.2 *must be modified* for these systems; (9) continuous drop panels *must not be designed*.
2. **Approximators:** (1) there are myriads of complex and *sometimes* conflicting regulations; (2) their effects are *often further* complicated; (3) *little* is known about them; (4) *perhaps* more limited spring restrictions; (5) *indeed*, taking into account the span ratios; (6) a coefficient of 0.55 is *always* obtained; (7) square panels *consistently* yield a coefficient of about 0.75.
3. **Modal verbs:** (1) weight restrictions *could* shorten the life of a pavement; (2) seasonal weight limit policies *can* have significant pavement cost implications; (3) they *may* not be directly applied; (4) continuous drop panels *must* not be designed; (5) factors ranging from 0.80 to 1.00 *should* be used.
4. **Expressions of shared knowledge:** (1) *it is well known* that the trucking industry is an integral part of the prairie economy; (2) *it is based on the application* of failure criteria to our results.
5. **Expressions that summarise the research carried out:** (1) *This paper presents* sample results of a physical model-testing programme; (2) *an empirical method of analysis was developed and presented*; (3) *the key parameters identified in this study were vane height...* (4) *the results obtained in the direction parallel to the drop panel indicate that ...*

Figure 7. Examples of categorisations of hedging in conclusions according to their prototypicality degree.

As can be observed in Figure 7, in the conclusions section, expressions including approximators like: *sometimes, often, little, perhaps, indeed, always, consistently*, which modulate

the writer's degree of commitment with the propositional content, as well as seeking identification with the target group expressing facts already accepted, are frequently used; expressions containing modal verbs: *could, can, may, must, should*, are common, either attitudinally or epistemically used, sometimes indicating the provisionality of knowledge, and more often attempting to save the writer's face when proposing a claim; finally, expressions denoting a shared knowledge with the discourse group community like: *it is well known; it is based on; it is considered that* are not rare, as well as expressions that summarise the research carried out above: *this paper presents; ... was developed and presented; the results obtained show...* The first example: *this paper presents* can both be considered a case of metaphor: A RESEARCH ARTICLE IS A PERSON and of metonymy (taking essays for their producer or author). It seems that the aim of using this strategy is for "avoiding or reducing subjectivity" (Low, 1999), and, being very frequent, it reinforces the group shared discourse conventions. Cases of compounding of hedges are also relatively frequent in conclusions: *are often used, is always obtained, are often further complicated, perhaps more limited*. In addition, the use of passives in the conclusions section merits comment here, so that it could be said that the more technicalities conclusions include, i.e. abstract formulae, numerical data and results, the higher the proportion of the passive construction, reaching about 75% of the total number of verbs reviewed. This would help to prove the importance of passivization as a basic category and a key strategic feature in this particular section of engineering journal research articles, being a vehicle to summarise the previous points shown in the article as well as presenting facts and results as an achievement for the whole target group, not just for the author as an individual subject, manifesting thus some degree of group awareness and solidarity.

- | |
|--|
| <p>1. Passives: (1) the proponents of lean construction <i>are considered</i>; (2) the contribution to knowledge <i>is defended</i>; (3) if these criteria <i>were applied</i>; (4) contributions <i>have been published</i>; (5) it <i>must also be recognized</i> (6) it <i>was found</i> in this study.</p> <p>2. Approximators: (1) it is <i>often</i> necessary to establish (2) this will do <i>little</i>, (3) <i>only if</i> data indicate, (4) <i>only under</i> the limiting assumption (5) AAC products can resist fire for <i>approximately</i> 1 hour.</p> <p>3. Modal verbs: (1) designs <i>can</i> benefit from these systems; (2) construction zones <i>would be</i> great advantageous; (3) flow rates <i>could be</i> utilized to maintain; (4) it <i>must</i> also be recognized that there are; (5) this <i>will</i> do little to attract; (6) products <i>should be</i> analyzed prior to design</p> <p>4. Expressions of shared knowledge: (1) <i>Counter-criticisms are considered</i>; (2) it <i>must also be recognized</i>; (3) The Earned Value Method <i>is considered an advanced project... however...</i></p> <p>5. Expressions of claims of knowledge: (1) <i>the study suggests</i> a new cost measure; (2) <i>this paper shows</i> that EVM does not differentiate ...</p> <p>6. Emotionally charged intensifiers: (1) the industry <i>so badly</i> needs; (2) construction academics have <i>strangely</i> ignored.</p> |
|--|

Figure 8. Examples of categorisations of hedging in abstracts according to their prototypicality degree.

In the case of the abstracts, as shown in Figure 8, the passive load is not as heavy as in the conclusions and usually goes as a compound with a modal: *can be taken, could be utilized, should be analyzed, would not have been published*, etc. The use of modal verbs *can, would, should, could, must, will*, is slightly more restricted than in the previous conclusions section, whereas the use of expressions that reflect a knowledge claim: *the study suggests, this paper shows*, a typical feature of abstracts, is now quite frequent. Additionally, clauses stating a shared knowledge with the discourse group: *it is often considered this way, ... however ... it is proposed ...* and hence making a new claim, are also common. This type of expressions attempts to draw solidarity from the reader and save the writer's face when a new claim is going to be presented. Approximators like: *little, only if, only under*, are equally used, but in a significantly smaller proportion. Finally, we have also found examples of what Salager-Meyer calls 'emotionally charged intensifiers', that may directly reflect the author's point of view, like *so badly, strangely*.

The percentage of hedging in the conclusions section has to do with the grade of technical data of the article, as stated above. There is a direct progression between the use of passives and the communicative technical load of the section, otherwise, the proportion of passives significantly decreases. Although the total hedging rate in conclusions seems to be slightly higher than in the abstract section, especially in the passive case mentioned above, the hedging rate in each section is very similar. It would, however, be interesting to examine and compare data taken from the language of other engineering specialities and from other genres.

Conclusions

In this paper we have attempted to highlight the importance of including strategic communicative features in ESP studies, by examining discourse markers and hedging devices. These may express attitudinal factors and the degree of politeness, commitment or solidarity in professional and academic ESP discourse. We have carried out a contrastive analysis of strategic features in technical advertisements and research articles with the aim of pointing out the usefulness of applying a cognitive and social approach for research and for pedagogical purposes in ESP.

We have tried to show that these strategic features comprise background and social knowledge and that their use mainly depends on context, type of audience, type of genre

and type of discipline involved. Since it is considered that the study of these elements would fall within the sphere of register, the interrelation of register with genre has been treated. Thus, the use of passivization used as a basic hedging device in conclusions and abstracts of engineering research articles seems to have become a predictable and conventional feature within this genre. In the analysed advertisements, strategies that have to do with cognitive factors and the interaction between reader and writer also appear to have a considerable relevance. These elements seem to be so well integrated that it could be difficult to disassociate them from the genres they belong to. Therefore, we suggest that further research on the function and the role of communicative factors in other ESP disciplines and genres could greatly contribute to clarify this emergent new area.

REFERENCES

- Aguado de Cea, G. & P. Durán Escribano (eds.) (2001). *La Investigación en lenguas aplicadas: Enfoque multidisciplinar*. Madrid: Fundación Gómez Pardo, Universidad Politécnica de Madrid.
- Alcaraz Varó, E. (2000). *El inglés profesional y académico*. Madrid: Alianza Editorial.
- Bachman, L. F. (1990). *Fundamental Considerations in Language Testing*. New York: Oxford University Press.
- Barber, C. L. (1962). "Some measurable characteristics of modern scientific prose" in *Contributions to English Syntax and Philology*, 21-43. Acta Universitatis Gothoburgensis, Goteburg. Reprinted in J. M. Swales (ed.) (1988), *Episodes in ESP*, 1-16. New York: Prentice Hall.
- Bauman, R. (2001). "The ethnography of genre in a Mexican market: form, function, variation" in Eckert & Rickford (ed.), 57-78.
- Bell, A. (2001). "Back in style: reworking audience design" in Eckert and Rickford (ed.), 139-170.
- Biber, D., S. Conrad & R. Reppen (1998). *Corpus Linguistics: Investigating Language Structure and Use*. Cambridge: Cambridge University Press.
- Cameron, L. (1999a). "Identifying and describing metaphor in spoken discourse data" in Cameron & Low (eds.), 105-135.
- Cameron, L. (1999b). "Operationalising 'metaphor' for applied linguistic research" in Cameron & Low (eds.), 1-29.
- Cameron, L. & G. Low (1999a). "Metaphor". *Language Teaching* 32: 77-96.
- Cameron, L. & G. Low (eds.) (1999b). *Researching and Applying Metaphor*. Cambridge: Cambridge University Press.
- Canale, M. & M. Swain (1980). "Theoretical bases of communicative approaches to second language teaching and testing". *Applied Linguistics* 1: 1-47.
- Carter, R. & W. Nash (1990). *Seeing through language: a guide to styles of English*. Oxford: Basil Blackwell.
- Closs Traugott, E. & R. B. Dasher, (2002). *Regularity in Semantic Change*. Cambridge: Cambridge University Press.
- Crompton, P. (1997). "Hedging in Academic Writing. Some theoretical Problems". *English for Specific Purposes* 16,4: 271-278.
- Cuenca, M. J. & J. Hilferty, (1999). *Introducción a la lingüística cognitiva*. Barcelona: Ariel.
- Draaisma, D. (2000). *Metaphors of Memory: A history of ideas about the mind*. Cambridge: Cambridge University Press.
- Durán Escribano, P. (2000). "Los géneros lingüísticos científicos y técnicos: aspectos pragmáticos y convencionales" in *The grove. Working Papers on English Studies* 7: 53-79.
- Eckert, P. & J. R. Rickford (eds.) (2001). *Style and Sociolinguistic Variation*. Cambridge: Cambridge University Press.
- Fauconnier, G. (1997). *Mappings in Thought and Language*. Cambridge: Cambridge University Press.
- Finegan, E. & D. Biber (2001). "Register social variation: the Register Axiom" in Eckert & Rickford (eds.), 235-268.
- Giménez Moreno, R. (1997). "The boundaries of the concepts of genre, register and style in academic discourse" in J. Piqué & D. J. Viera (eds), *Applied Languages: Theory and practice in ESP*, 37-45. València: Servei de Publicacions de la Universitat de València.
- Goossens L., P. Pauwels, B. Rudzka-Ostyn, A. M. Simon-Vandenbergen & J. Vanparys (1995). *By word of mouth: metaphor, metonymy and linguistic action in a cognitive perspective*. Amsterdam: John Benjamins.
- Holmes, J. (1984). "Hedging your bets and sitting on the fence: some

- evidence for hedges as support structures". *Te Reo: Journal of the Linguistic Society of New Zealand* 27: 47-62.
- Irvine, J. T. (2001). "'Style' as distinctiveness: the culture and ideology of linguistic differentiation" in Eckert & Rickford (eds.), 21-44.
- Lakoff, G. (1972). "Hedges: a study in meaning criteria and the logic of fuzzy concepts". *Chicago Linguistics Society* 8: 183-228.
- Lakoff, G. (1987). *Women, Fire and Dangerous Things: What Categories Reveal about the Mind*. Chicago: University of Chicago Press.
- Lakoff, G. (1993). "The Contemporary Theory of Metaphor" in A. Ortony (ed.) *Metaphor and Thought*, 2nd ed. Cambridge: Cambridge University Press.
- Low, G. (1999). "This paper thinks ...": Investigating the acceptability of the metaphor AN ESSAY IS A PERSON" in Cameron & Low (eds.), 221-249.
- McGinity Travers, M. (2001) "Transcultural communication strategies in ESP: cross cultural and cross linguistic awareness for an effective communication in ESP" in Aguado & Durán (eds.), 153-169.
- Roldán Riejos, A. (1999) "Applications of cognitive theory to interdisciplinary work in Languages for Specific Purposes". *Ibérica* 1: 29-37.
- Roldán Riejos, A., P. Úbeda Mansilla & A. Martín Castillejos (2001). "The impact of visuals: using a poster to present metaphor". *European Journal of Engineering Education* 26,3: 301-310.
- Salager-Meyer F. (2000) "Procrustes' recipe: hedging and positivism". *English for Specific Purposes* 19: 175-187.
- Swales, J. M. (1990). *Genre Analysis: English in Academic and Research Settings*. Cambridge: Cambridge University Press.
- Sweetser, E. (1990). *From Etymology to Pragmatics: Metaphorical and Cultural Aspects of Semantic Structure*. Cambridge: Cambridge University Press.
- Úbeda Mansilla, P. (2001). "Estudio de un corpus de textos conversacionales en inglés realizado en estudios de arquitectura: su aplicación al diseño de un programa de inglés para arquitectos". Unpublished Doctoral Dissertation. Madrid: Universidad Complutense.
- Varttala, T. (2001). "Hedging in scientifically oriented discourse. Exploring variation according to discipline and intended audience". *Acta Electronica Universitatis Tampereensis*; 138. Tampere University Dissertations (Finland). URL: <http://acta.uta.fi/pdf/951-44-5195-3.pdf> [accessed 12/10/04]
- Varela, F. J., E. Thompson & E. Rosch. (1991). *The Embodied Mind: Cognitive Science and Human Experience*. Cambridge: Massachusetts Institute of Technology.
- White, M. (1998). "A cognitive linguistics view of the use of metaphor and metonymy in headlines, leads and news stories" in A. Downing, J. Moya Guijarro & J. A. Albentosa Hernández (eds.), *Patterns in Discourse and Text*, 31-61. Cuenca: Ediciones de la Universidad de Castilla-La Mancha.
- White, M. (2001). "Metaphor and Metonymy in Thought and Expression" in Aguado & Durán (eds.), 47-63.

Source material used:

- Canadian Journal of Civil Engineering* 29,1 (2002).
- Construction Europe* 12, nos. 6-10 (Jul. 2001- Jan. 2002).
- Journal of Construction Education* 6,3 (2001) & 7,1 (2002).
- Journal of Construction Research* 3, 1 (2002).

Dr. **Ana María Roldán Riejos** is a senior lecturer at Escuela Técnica Superior de Ingenieros de Caminos, Canales y Puertos (Universidad Politécnica of Madrid) and holds a PhD in English Philology (Madrid Complutense University). She has participated in various international conferences and published papers in several journals on Cognitive Linguistics and ESP.