

AN ANALYSIS OF HEDGING IN “ORIGINS OF THE SOLAR SYSTEM”

Nguyen Thi Thanh Huyen, M.A.

LSD Division

1. INTRODUCTION

It is often believed that academic writing, particularly scientific writing, is factual, simply to convey facts and information. However it is now recognized that an important feature of academic writing is the concept of cautious language, often called “vague language” or “hedging”.

This paper aims to analyze how the discourse device known as hedging is signaled and why it is used in the scientific text of “*Origins of the Solar System*”. Starting from a summary of significant lexico-grammatical devices which signal hedging, the illustrations will be then given to describe the certain hedging strategies and main hedging functions. The paper also aims to identify which maxim among four Gricean maxims is the most frequently hedged.

2. Hedging in Academic Discourse

The use of hedge as a linguistic term goes back at least to the early 1970s, when G. Lakoff (1972: 270) published his article *Hedges: A Study in Meaning Criteria and the Logic of Fuzzy Concepts*. Lakoff argues that the logic of hedges requires serious semantic analysis for all predicates. He defines hedges as follows:

For me, some of the most interesting questions are raised by the study of words whose meaning implicitly involves fuzziness - words whose job it is to make things fuzzier or less fuzzy. I will refer to such words as “hedges” (1972:195)

Vande Kopple (1985) categorized hedges as the elements providing “*lack of full commitment to the propositional content of an utterance*”. In other words, hedges (e.g. *perhaps, seem, might, to a certain extent*) are seen as modifying the truth-value of the whole proposition, not as making individual elements inside it more imprecise.

In academic/scientific writing, there has been a growing interest lately in hedging and the motivation for its use. The interest is focused on that hedges are actually

used in scientific discourse, which is supposed to be above all rational and neutral. Varttala states in his work (2001: 67) that the reasons for the use of hedges in academic writing lie in the fact that this type of writing must be prepared to confront a rather not sympathetic response of the audience. Academic writing should be able to enhance the author's credibility constructing a reliable description of the researcher's analysis. In this manner, persuasion becomes a rather fundamental ingredient for the consecution of this purpose.

2.1. Hedging maxims

H.P. Grice (1975) proposed four conversational maxims which speakers should abide: (1) Maxim of Quantity, that is, to make the contribution as informative as required, and not to make it more informative than is required, (2) Maxim of Quality, that is, not to say what the speaker believes to be false and not to say things that the speaker lacks evidence, (3) Maxim of Relation, which tells speakers to be relevant, and (4) Maxim of Manner, which tells speakers to be perspicuous: (a) avoid obscurity, (b) avoid ambiguity, (c) be brief, and (d) be orderly.

In real world, speakers do not always abide the four maxims mentioned above. In other words they often flout and/or hedge the maxims. “

3. METHODOLOGY

3.1. Taxonomy of hedging

The analysis of this paper is mainly based on the taxonomy of hedges suggested by **Salager-Meyer (1994)**. His taxonomy is presented as follows:

- **Modal auxiliaries**

may, can, might, could, would

- **Modal lexical verbs** (“speech act verbs” expressing doubt and evaluation)

to seem, to appear (epistemic verbs), to believe, to assume, to suggest, to estimate, to tend, to think, to argue, to indicate, to propose, to speculate

- **Adjectival, adverbial and nominal modal phrases**

probability adjectives: e.g., possible, probable, un/likely

nouns: e.g., assumption, claim, possibility, estimate, suggestion

adverbs: e.g., perhaps, possibly, probably, practically, likely, presumably, virtually,

- **Approximators** of degree, quantity, frequency and time

approximately, roughly, about, often, occasionally, generally, usually, somewhat, somehow, a lot of..

- **Introductory phrases**

I believe, We feel that, As far as I/we know, To our knowledge/standpoint...

- **Certain “if” clauses**

If true

If anything

3.2. Research material – “Origins of the solar system”

The material for the analysis – *Origins of the solar system* – was taken from Newsademic.com, an international newspaper for the younger reader, released in **25th August 2011**.

4. FINDINGS AND DISCUSSIONS

The main goal of this paper is to analyze how hedging is signaled in a scientific discourse and why it is used. I will start from a general catalogue of the lexico-grammatical items that signal hedging and continue with a description of the different hedging strategies they serve. Finally, I will identify the main communicative functions fulfilled by these strategies and the most frequently hedged maxim. Each of these points is illustrated with a compilation of examples taken from the chosen text.

4.1. Lexico-grammatical items that signal hedging

Hedging devices	<i>Frequency</i>	%
<i>Passive voice</i>	10	23.5
<i>Modal auxiliaries</i>	9	21
<i>Approximators of quantity</i>	7	16
<i>Modal Lexical verbs</i>	6	14

<i>Pronoun “We”</i>	5	11.5
<i>Introductory phrases</i>	3	7
<i>Questions</i>	2	4.5
<i>That – clause</i>	1	2.5
Total	43	100

Hedging devices in “Origins of the Solar System”

4.2. Hedging strategies

4.2.1. Depersonalization

This writer-oriented strategy of depersonalization mainly signaled by the passive voice serves to “shield the writer from the possible consequences of negotiability” (Hyland, 1998:170) or eliminate the author’s presence, which confirms the objectiveness of the scientific discourse. Here are some extracts from the text:

- (1) It sounds like a fairy tale or romantic idea, but it’s a scientific fact that we are all made of stardust.
- (2) Lighter substances were flung farther away from the Sun.
- (3) Some asteroids, including Ceres, seem to be made up of the original ‘stardust’ from which the Solar System was made.

4.2.2. Indetermination

The content-oriented indetermination used to reduce accuracy level and the semantic weight of the information is done thanks to vague expressions for qualifying or quantifying the information. Approximators of quantity are normally used for this strategy.

- (4) Although we already know the basic facts of how the Solar System formed, there are a lot of unanswered questions about it.
- (5) Recently, scientists have been doing several investigations to try to find more answers.

4.2.3. Solidarity

This is of *reader-oriented* strategy which deals mostly with the relationship between author and audience and “confirms the attention writers give to the

interactional effects of their statements and solicit collusion by addressing the reader as an intelligent colleague capable of participating in the discourse with an open mind” (Hyland, 1996:446). In “Origins of the Solar System”, questions and the use of pronoun “*We*” are used to serve this strategy. Examples are provided as follows:

- ***Questions***

(6) Will this large asteroid provide more information about the start of life in the Solar System?

(7) But why did Vesta melt, and not Ceres?

- ***The use of pronoun “We”***

(8) Although we already know the basic facts of how the Solar System formed, there are a lot of unanswered questions about it.

(9) These gradually grouped together to make the planets we call gas giants—Jupiter, Saturn, Uranus and Neptune.

4.2.4 Reliability and accuracy level

- ***Modal auxiliaries:*** These are the lexical items most typically associated with the phenomenon of hedging in scientific discourse, especially by authors who identify hedging exclusively with the epistemic mode, or the idea of probability or possibility.

(10) After studying Vesta it will aim for Ceres, an even bigger asteroid.

(11) The scientists think a planet, moon or asteroid might have to be bigger than a certain size to be able to retain, or hold, water.

(12) The Dawn spacecraft will not reach Ceres until 2015, so we will have to wait to find out.

(13) New research suggests our Moon’s shape may be the result of a collision between two smaller moons.

- ***Introductory phrases***

(14) Although we already know the basic facts of how the Solar System formed, there are a lot of unanswered questions about it.

(15) It sounds like a fairy tale or romantic idea, but it's a scientific fact that we are all made of stardust.

(16) Some asteroids, such as Vesta, are like miniplanets, with a core, mantle and crust.

- **Modal Lexical verbs:** This lexical category yielded by far the most instances. The texts are full of lexical verbs – and their corresponding derived nouns – which serve the function of rhetorical attenuation in the sense that they are used to convey different degrees of tentativeness, as the following examples show:

(17) The scientists think a planet, moon or asteroid might have to be bigger than a certain size to be able to retain, or hold, water.

(18) Some asteroids, including Ceres, seem to be made up of the original 'stardust' from which the Solar System was made.

(19) Ceres appears to contain carbon and water.

4.3. Hedging functions

The analysis of this group of different and diverse hedging strategies seems to indicate that they fulfill three main communicative goals. Firstly, these strategies seem to express the author's wish to show defense and politeness towards the audience; secondly, some are an indication of the author's need to protect him/herself against the potential negative consequences of being wrong; and finally, they are evidence of the author's consideration of the degree of precision deemed necessary in his/her text.

4.4. Hedging Gricean maxims in "Origin of the Solar System"

According to Grice (1975), Maxim of Quality requires the message senders not to say what they believe to be false and not to say things lacking evidence.

From the analysis of hedging in "Origins of the Solar System" above, it can be said that *quality* maxim is most frequently hedged by the author. In "Origins of the Solar System", hedges of quality can be recognized in the way the author uses modal auxiliaries, introductory phrases, modal lexical verbs, and passive voice to show that the author is aware of the level of reliability and accuracy of the

information. Take the assertion of “*Ceres appears to contain carbon and water*” as an example. In this assertion if the author of the text just says “Ceres contains carbon and water”, he/she may violate the maxim of quality since he/she says something that he/she does not know to be true or false. Nevertheless, by using “*appear*”, the author indicates that he/she is observing the conversational maxim of quality.

5. CONCLUSION

This paper has presented eight major devices of hedging utilized in “*Origins of the Solar System*”, namely, *Passive voice, Modal auxiliaries, Approximators of quantity, Modal lexical verbs, Pronoun “We”, Introductory phrases, Questions, and That – clause*. The results of the hedging analysis also indicates that hedging, which is normally used to provide lack of full commitment to scientific content and modify the truth – value of the proposition, is one of typical features of scientific discourse. Finally, from the obtained results, the paper goes to a conclusion that maxim of quality is the most frequently hedged by the author of the text.

It can be said that to the writer of this paper, the short text “*Origins of the Solar System*” is a great interest. Through a brief analysis of the text, some very basic concepts of discourse and discourse analysis have been realized in practice, which is really a worthy and interesting experience.

REFERENCE

In English

1. Austin, J.L. (1962) *How to Do Things With Words*, Oxford, Clarendon Press.
2. Brown, G., and George Yule (1983). *Discourse Analysis*. Cambridge: Cambridge University Press.
3. Clyne, M. (1994). *Inter-cultural Communication at Work: Cultural Values in Discourse*. Cambridge: Cambridge University Press. Cook, G. (1989) *Discourse*, Oxford: O.U.P.

4. Cook, G. (1989) *Discourse*, Oxford: O.U.P.
5. Crystal, D. (1992) *Introducing Linguistics*, London: Penguin
6. De Beaugrande and Dressler. (1981). *Introduction to Text Linguistics*. London: Longman
7. De Beaugrande, R. (1980). *Text, Discourse and process*. London: Longman
8. Finch, G. (2000) *Linguistic Terms and Concepts*. New York: Palgrave.
9. Grice, H. Paul (1978) Further Notes on Logic and Conversation. In Peter Cole (ed.) *Syntax and Semantics*, Volume 9 (pp. 113-127). New York: Academic Press.
10. Halliday, M.A.K. 1977. *Text as Semantic Choice in Social Context*. In Teun A. van Dijk and János S. Petofi. Berlin: Walter de Gruyter, Grammars and Descriptions. Reprinted in full in M.A.K. Halliday, 2002. *Linguistic Studies of Text and Discourse*. Edited by J.J. Webster. London: Continuum.
11. Halliday, M.A.K. and Hasan, R. (1976). *Cohesion in English* London: Longman
12. Hatim, Basil & Ian Mason (1990): *Discourse and the Translator*, London: Longman.
13. H. Paul Grice (1975). *Logic and conversation*. In Cole, P., and J.L. Morgan, eds. *Speech Acts*. New York: Academic Press, 41–58
14. Hübler, Alex. (1983). *Understatements and Hedges in English*. Amsterdam: John

In Vietnamese

1. Hoàng Phê. (2002). *Từ điển tiếng Việt (Vietnamese Dictionary)*. Vietnam Lexicography Centre, NXB Đà Nẵng, VN.
 2. Nguyễn Thiện Giáp (2000), *Dụng học Việt Ngữ*, NXB Đại học Quốc gia Hà Nội.
- Trần Ngọc Thêm. 2000. *Hệ thống liên kết văn bản tiếng Việt*. NXBGD