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***Lexical Chains, their discorsal values and  
cognitive effects***  
*explorations in the setting of a short story by Edgar Allan Poe\**

**Dr. Kazem Lotfipour-Saedi\*\***

E-mail: [k\\_lotfipour\\_saedi@hotmail.com](mailto:k_lotfipour_saedi@hotmail.com)

**Shahin Moghaddassi-Sarabi \*\*\***

E-mail: [sh\\_moghaddassi@yahoo.com](mailto:sh_moghaddassi@yahoo.com)

**Abstract:**

*According to the discorsal view of language, any move or variation in the textualization process is considered to be discorsally motivated. The present paper would focus on the lexicalization as one dimension of this textualization process and examine the lexical strategies employed by discourse producer. The paper would take a specific piece of text (a short story by Poe) as its data and look at the way lexical choices attempted there and the lexical networks produced thereby would contribute to the texture of the text, affect its cognition, and enhance its intended literary value. It would also discuss the cognitive value of the lexical strategies and the interaction among the lexical chains in a text drawing implications for the pedagogy of language.*

**Key words:** *discourse analysis, lexicalization, lexical strategies, lexical chains, cognitive effects, literary value.*

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\*\* - Professor of Tabriz University

\*\*\* - Lecturer at the Azarbaijan University of Tarbiat Moallem

## INTRODUCTION

Texture, which creates a text and distinguishes it from non-text, is a function of a set of ties or agencies. Halliday and Hasan (1976) and Halliday (1985) classify these formal ties or textual agencies into grammatical, lexical and conjunction. The present paper will focus on lexical cohesion and look at the way the lexical choices made by the discourse producer within the boundary of a text would create lexical chains and how such chains would be cognitively functional in the textual processing. It would present an actual analysis of such lexical chains in a specified piece of text, namely *The Fall of the House of Usher* by Edgar Allen Poe and try to demonstrate how the lexical chains therein would enhance the interactive and dialogic (cf. Bakhtin 1981) negotiation, by the reader, of a message from the text.

## THE DISCOURSAL VALUE OF LANGUAGE

According to the discorsal approach to the characterization of communication process, text is only a surface manifestation of the underlying discourse process; and the discourse process, as a mental pre-textual process, embodies a set of discorsal strategies initiated and prompted by the underlying factors operating in any discourse situation or speech event, including the topic, the participants and type of interpersonal relationships between them, and the socio-cultural conditions. The textual choices or strategies would all represent these discorsal strategies and any, even very minor, variations in them would certainly represent variations in the underlying discorsal factors. This, indeed, is the essence of the functional approach to language; and discourse analysis, the way we define it, subscribing to such an approach, would consider every choice made in the textual presentation to be discorsally motivated and would thus attempt to describe the relationship between textual variations and their underlying discorsal motivations (cf. Candlin & Lotfipour-Saedi 1983).

### TEXTURE AND LEXICAL CHAINS

It has been argued that in discourse analysis we deal with text as the unit of communication rather than with individual sentences. This is because communication and negotiation of meanings are achieved within the framework of text ( Lotfipour-Saedi, 1997). Text has been defined as a set of sentences which are related to one another textually. Such a relationship is usually referred to as texture. It is a semantic feature and a text forming property in the light of which a text 'functions as a unity with respect to its environment' (Halliday and Hasan, 1976). Such a property is created by a set of features including cohesion (cf. Lotfipour-Saedi 1997). One of the cohesion-making agencies, as we noted above, is lexical cohesion. Halliday and Hasan (1976) classify lexical cohesion into 'reiteration' and 'collocation'. By 'reiteration' they mean the repeating of a concept within the framework of a text and this act of repeating is carried out by various textual strategies including the same word, its near synonym, a superordinate word, a general word or a reference item. Reiteration as a textual strategy contributes to the texture of a text by activating the preceding relevant notions in the mind of the text receiver which in turn has cognitive effects on him/her and his/her discourse comprehension process. Halliday and Hasan (ibid) define collocation as the co-occurrence of certain lexical items relating to the topic of the text. Such co-occurring lexical items would create lexical chains which are normally referred to as the collocation chains of the text. Every text may, of course, involve several sub-topics ; and it would be viewed as embodying a set of lexical chains interacting with one another. One may argue that in the process of comprehension, the perception of these chains by the reader or listener is a major factor for the perception of the overall textual cohesion and thereby the underlying discoursal coherence. Lotfipour-Saedi (1997) further argues that apart from the mode of repetition of a concept at each node in a lexical chain, many other factors can be operative including the

physical as well as semantic distance between nodes. All of such factors which, as argued above, are discoursally motivated and would affect the information processing operation in the comprehension process. Lotfipour-Saedi further argues that 'the type of the information activated by each node from the reader's background knowledge, the images associated with the lexical choices made [...] would also determine the mode of reader discourse processing ' (Lotfipour-Saedi, 1997).

### **EXAMINING THE LEXICAL CHAINS IN A TEXT**

In this section, we report our actual analysis of a piece of text in terms of mainly describing the lexical nodes, examining the type of meaning relations existing between them, the arrangement of the nodes in the chains, the distance between them in terms of the number of the intervening words and the interaction among the chains.

A piece of *The Fall of the House of Usher*, a short story written by Edgar Allan Poe, is the text chosen for this purpose. The whole story centers around the nervous agitation and malady of Rodrick Usher, a friend of the writer and the owner of the house, which leads to his death, and the description of the mysterious atmosphere surrounding the house especially the stormy night in which Usher and his sister, Madeline, died and the house collapsed. As mentioned earlier, in this examination, the text will be analysed in terms of the lexical chains and interrelations among them in order to describe the hidden patterns which, we argue, would contribute to the cognitive and aesthetic effect of the text, as well as to the development of the theme of the story which is *disintegrating effect of fear and the resulting depression of soul*.

We begin our task by looking at the first paragraph of the story. As usual in the narratives, the writer in the first paragraph establishes the setting (of time and place) of the story. The list of the lexical nodes located in the introductory section of the narrative is presented in (Table 1). We have classified the nodes into nine semantic fields. These nine semantic fields, especially the first one, the distribution of

the relevant lexical items throughout the paragraph and the meaning relations existing among the semantic fields will be examined next. To do this, we find it useful to draw a figure for the distribution of the nodes of each chain in the text while omitting other chains and other items. This, we believe, would help to demonstrate the nodes and the resulting chains more vividly.

**Table 1**

Semantic Field	Lexical Item
1	dull- dark- soundless- oppressively- dreary- melancholy- insufferable gloom- sternest- images- desolate- terrible- bleak- vacant- decayed - depression- opium- bitter lapse- hideous- iciness- sickening- unredeemed- dreariness-torture- unnerved- mystery- insoluble- shadowy fancies- unsatisfactory- sorrowful- lurid- ghastly- unruffled
2	day- autumn- year- evening
3	clouds- heavens- shades- earthly- country- tarn- trees- tree stems- sedges
4	dark- black- gray yellow (indirectly expressed in 'sedges')- white- lurid
5	alone- singularly- mere- simple- a few- a few- simple- precipitous
6	House of Usher- the building- it- The desolate- the mere house- the bleak walls- the vacant eye-like windows- the House of Usher- the vacant eye-like windows
7	The scene- landscape- the domain- the scene- the picture
8	sense- spirit- feeling- sentiment- mind- soul- sensation- heart- thought- imagination- fancies- impression- idea
9	I know not- I looked upon- I paused to think- I pondered- I reflected- I gazed down

The first semantic field constitutes the first longest lexical chain, extending from the first to the last line of the paragraph. This is an outstanding characteristic of this chain. It contains the largest number of nodes (33 nodes) and as the nodes reveal, it is directly related to the central theme of the story: *depression and disintegrating effect of fear*. According to Hoey(1991) , "the nets(in a text) have something to tell us about the way topics are introduced and dropped in the course of a text." Nearly all the nodes in this chain are adjectives relating either to the time or place in which the story begins. In this way they have interactions with the members of the second (field of time) and the sixth (field of place/location) semantic fields and function as the chain which activates the scene in the mind of the reader; and in this way it develops and reinforces the theme of the story in the reader's cognitive system. Because it is a macro-chain, all other chains should have direct or indirect interaction with this first main chain if they are to be related to the theme of the text and if they are to contribute to the texture of the paragraph. The textual locality of the nodes of this chain and their distribution in the text has been illustrated in figure 1.

The second lexical chain created by the lexical items of the second semantic field sets the time of the story. Both the second and the fourth nodes in this chain, i.e. 'autumn' and 'evening' , while being related to the other nodes in the chain, have connotations which are in some way related to the first semantic field and thus have interactions with the first lexical chain. Both 'the autumn' and 'the evening' express gloom, decay of the day and decay of the year. They also connote the end of a stage or state. So they make the reader cognitively ready for the acceptance of the death of Usher and his sister and *the fall of the House of Usher*. In this way, the two nodes are related to the topic and theme of the story. In fact, by connoting depression they are indirectly involved in the development of the theme of the story (Figure 2).

The third semantic field which constitutes the third chain contains elements of the nature: *clouds, heavens, and the shades of evening,*

*tract of country, tarn, trees and tree stems.* These lexical items function in the description of the scene and in the activation of the image in the mind of the reader. Unlike the other chains, the nodes in this chain have little interaction with the nodes of the other chains. In fact the relationship between this chain and other chains is more indirect. The rationale behind the introduction of this chain seems to be widening the scope of the meaning potentials in the text and keeping the reader in suspense of the forthcoming events especially the storm which causes *the Fall of the House of Usher* and the tarn which swallows the fragments of the House (Figure 3).

The fourth semantic field is related to colors used by the writer in the description of the scene: *dark, black, gray, lurid, and yellow.* This last color has been expressed indirectly in the use of the word 'sedges' referring to a kind of yellow flower. It is obvious that the colors are pallid and express unhappiness, dreariness and slanginess. They, thus, have semantic relationships with the nodes in the First chain and some nodes of the second chain contributing to the texture of the text and reinforcing its theme i.e. fear and depression. These colors exert a negative psychological effect on the reader and smoothly prepare him or her to face the hideous events in the story (Figure 4).

The fifth lexical field, which we have named the field of 'loneliness', contains the following nodes: *alone, singularly, mere, simple, a few, a few, simple and precipitous.* Psychologically, loneliness brings gloom and even fear and it is this fear which causes depression of soul and the sickening of the heart. In this story, both the House and the owner of the House are lonely and would both eventually come under the oppressive effect of this loneliness. Loneliness brings fear, fear causes malady, malady brings shadowy fancies and melancholy pervaded in the spirit of Usher which in turn makes him a victim of terror (Figure 5).

Most of the nodes in the sixth chain extend their textual domain through reiteration. This repetition makes the reader keep the image of the House in his mind and not forget it since it is the House in which





prepares the scene and the reader to face the terrible events of the story (Figure 9).

An interesting point is the arrangement and distribution of so many nodes (103 nodes) in just one paragraph and within a limited number of sentences. The distance of the nodes of each chain from each other and from the nodes of other chains is also important. These two points would have cognitive effects on the reader and on his discourse processing machinery (Lotfipour-Saedi, 1997). The abundance of the nodes, the internode distance and the interrelatedness of the chains, all contribute to the texture of the text. According to Hoey(1991) treating the sentences of a text as interrelated packages of information connected by multiple repetition makes us expect those sentences that contribute to the development of the theme of the text to make a number of connections with other sentences. They also help the reader to have a better interaction with the text and prepare him or her indirectly to face the events of the story and explore smoothly the topic and theme of the narrative.

The following figures represent our nine lexical chains and their dispersion mode in our data:

پروپشگاه علوم انسانی و مطالعات فرهنگی  
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Figure 3

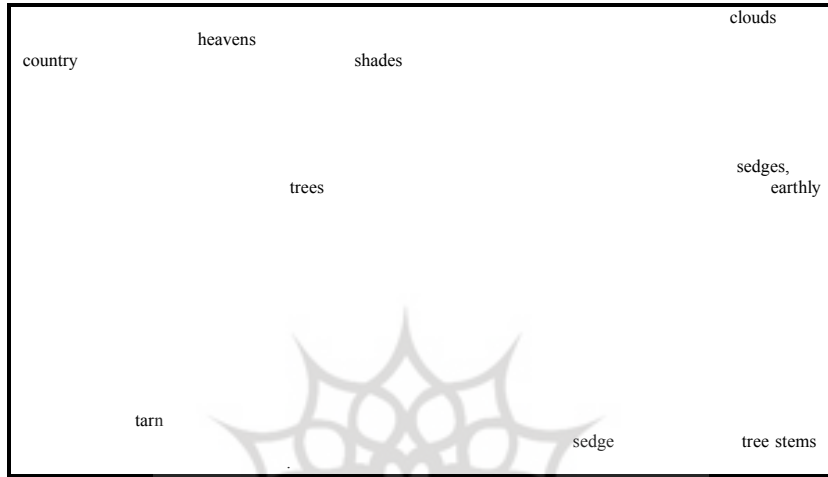


Figure 4

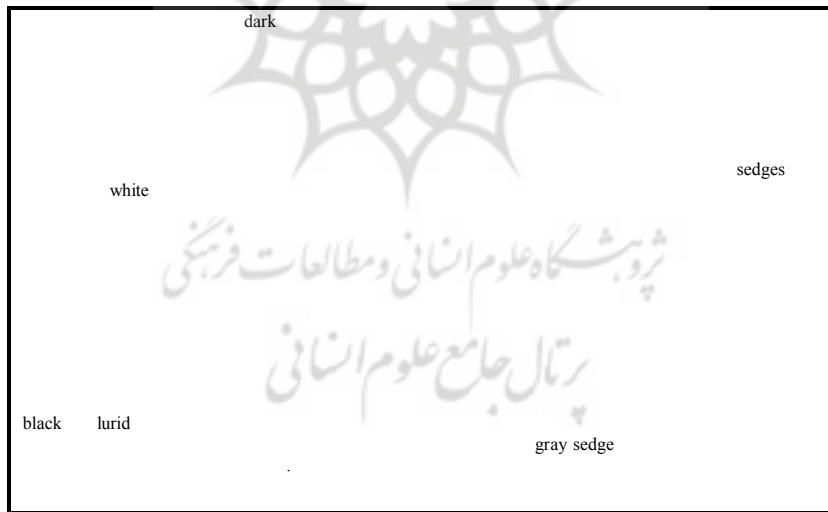




Figure 7

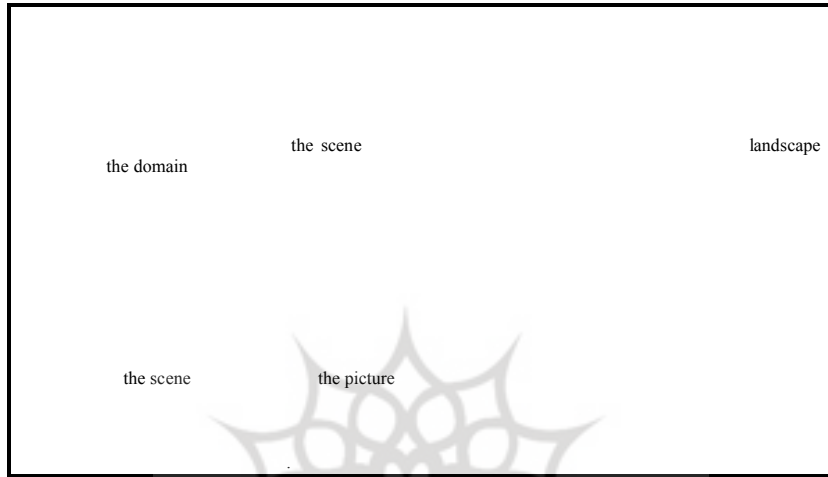
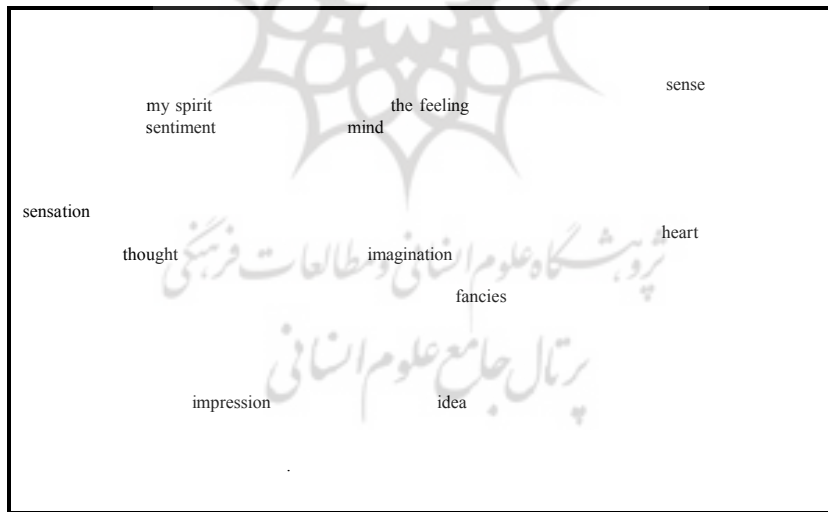


Figure 8





### CONCLUDING REMARKS

A brief look at these figures would manifest that the first lexical chain is the longest and the most densely populated one. Its nodes have the most direct relationship with the global theme of the narrative. We call it the *macro-chain* of the text. Since it is the main chain and has direct relationship with the central theme of the story, all the other chains assume importance depending on their interaction with this macro-chain. In other words, those nodes which have meaning relationship with the nodes of this chain receive importance and are involved in the texture and development of the text. They can be considered as indices which affect cognition and are thus involved in the negotiation of the meaning by the reader. We also propose that wherever the chains are densely populated, i.e. there is little distance between the nodes, the message is to some extent directly stated and its negotiation requires little cognitive effort on the part of the reader. In literary discourse, this reduction of the cognitive effort, it is argued, reduces the aesthetic effect of the text on the reader, because according to Shklovsky (1965), the aesthetic value of a text can be a function of the prolongation of its perception. To put it in other words, the longer the perception of a literary text takes, the more aesthetic effect it may produce on the reader. In the case of our data, we can argue that the more the semantic and physical distance between the nodes of a lexical chain, the longer its perception, and the stronger the aesthetic effect of the text.

As for the implications of this study for language education, we quote Hoey (1991) as saying that speakers and writers normally provide and listeners and readers perceive patterns in text. Among such patterns, we discussed the lexical chains and noted how the perception of such chains and the interaction among them in the target text would enhance the information processing operation and the meaning making process. Language teachers can promote the readability of texts by trying to make their lexical chains more transparent to their students

without using other mechanisms which are said to disrupt the authenticity of the text. The study would also have implications for the way literature text differs from non-literature text offering ways of handling literature in EFL classes.

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**APPENDIX**

During the whole of a dull, dark, and soundless day, in the autumn of the year, when the clouds hung oppressively low in the heavens, I had been passing alone, on horseback, through a singularly dreary tract of country; and at length found myself, as the shades of the evening drew on, within view of the melancholy House of Usher. I knew not how it was- but, with the first glimpse of the building, a sense of insufferable gloom pervaded my spirit. I say insufferable; for the feeling was unrelieved by any of that half-pleasurable, because poetic, sentiment with which the mind usually receives even the sternest natural images of the desolate or terrible. I looked upon the scene before me- upon the mere house, and the simple landscape features of the domain, upon the bleak walls, upon the vacant eye-like windows, upon a few rank sedges, and upon a few white trunks of decayed trees- with an utter depression of soul which I can compare to no earthly sensation more properly than to the after-dream of the reveler upon opium; the bitter lapse into everyday life, the hideous dropping off of the veil. There was iciness, a sinking, a sickening of the heart, an unredeemed dreariness of thought which no goading of the imagination could torture into aught of the sublime. What was it- I paused to think- what was it that so unnerved me in the contemplation of the House of Usher? It was not a mystery all insoluble; nor could I grapple with the shadowy fancies that crowded upon me as I pondered. I was forced to fall back upon the unsatisfactory conclusion, that while, beyond doubt; there *are* combinations of very simple natural objects which have the power of thus affecting us, still the analysis of this power lies among considerations beyond our depth. It was possible, I reflected, that a mere different arrangement of the particulars of the scene, of the details of the picture, would be sufficient to modify, or perhaps to annihilate, its capacity for sorrowful impression; and acting upon this idea, I reined my horse to the precipitous brink of a black and lurid tarn that lay in unruffled luster by the dwelling, and gazed down- but with a shudder even more thrilling than before- upon the remodeled and inverted images of the gray sedge, and the ghastly tree stems, and the vacant and eye-like windows.