REDUNDANCY, ITS DISCOURSAL FUNCTIONS, AND TEXTUAL REALIZATIONS IN DIFFERENT GENRES

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Abstract

A feature is redundant if its presence is apparently unnecessary. According to Smith (1971) there is redundancy whenever the same alternatives can be eliminated in more than one way. The present paper would attempt to verify the indispensability of a certain degree of redundancy in any communication system in order to safeguard the message against any noise factor. Accordingly, since noise cannot be predicted in many situations in advance, the use of redundancy is inevitable, and what is undesirable is under/over-redundancy. The present study would defend the legitimacy and the discoursally motivated nature of redundancy as a textual strategy and would try to demonstrate its variations in terms of the amount and modes of manifestation in different genres. Five text-types have been randomly selected for this purpose: science, literature (fiction, prose and poetry), advertisement, legal and religious texts. More than fifty texts have been analysed to categorize the overt and covert realizations of redundancy and to investigate the relationship between each of these modes as well as their functions across different genres. The frequency of the redundant elements as well as the physical distance existing between the presupposing and the presupposed items have been the other main concern of the project.

The study of redundancy as one of the important concepts in communication and information theory dates back to Shannon's work, especially in physics, concerning how a message is transmitted from a producer to a receiver through a channel. Mc Garry (1975) points out that redundancy is the complement of entropy (uncertainty), i.e., as entropy rises, redundancy decreases, and vice versa. Accordingly, information is the reduction of uncertainty. Another notion very essential in communication system is 'noise' referring to distraction, fatigue, extraneous sounds, etc. that interfere with the transmission of the message.

Candlin and Lotfipour (1983) define noise as idiosyncratic short-term memory incapacity of a reader plus textual and extra-textual distractions. Textual distractions refer to certain elements in a text which, for some readers, may revive or visualize some emotional feelings and occasions that divert their attentions from what is intended by the addressor. By extra–textual distraction they mean anything occurring outside the text either a change in the reader's physical condition including pain, fatigue and the like, or a change in his environment.

It is obvious that communication transactions do not always happen in ideal conditions; therefore, every channel of communication is subject to a greater or lesser amount of noise. If the systems of communication were free of redundant elements, the information lost would be irrecoverable. By reducing the redundancy in a system we reduce the cost of transmission, but we also lessen its reliability, that is, the most economical communication is not always the most efficient. Therefore, a certain amount of redundancy is not only inevitable but desirable as well. Although in many situations people employ redundancy unconsciously, even its conscious use to a greater extent is defensible. We need not be critizing a message when we say it is redundant because language as it means has redundancy built into it.

Lotfipour (1982) notes that redundancy as a textual strategy functions in two ways: compensating for the attention failure of the reader, and neutralizing the linearity of the text. As the human cognitive capacity to receive information is limited, i.e., he cannot focus upon all concepts which are present in the context, the writer repeats some key concepts in different ways. In this way, the writer arms the text with much more information than is needed so that the reader can recover any missing information in the process of reading. The other discoursal function of redundancy is to make up for the linearity of the text. Discourse is a process and the meaning should be "negotiated by the reader from the overall discourse presented by the text, rather than from the isolated indices linearly perceived" viz the discourse, on the one hand, is a process which should be perceived as a whole by the reader, and on the other hand, the text as the realization of discourse is linear . To solve this problem, the writer uses some textual and discoursal strategies including thematization, redundancy, and the like.

According to this approach, the message is not something ready-made and stored in the text, but rather it should be negotiated by the reader from the text under all the factors interacting in the process of reading. Therefore, the writing process by itself cannot guarantee the achievement of reading comprehension, but it can only facilitate comprehension by providing the reader with clues and indices within the text.

It is interesting to note that the writer cannot always precisely estimate the rate of reader's background knowledge; consequently, his text may be over-redundant for some readers and under-redundant for others. Lotfipour (1982) pionts out that the writer resorts to some textual strategies or what he calls audience unspecificity allowance including redundancy, to decrease such a risk. For instance, some elements that are given less prominence may be realized through lower rank textual items (a clause rather than a sentence or a phrase instead of a clause, etc). As a result, some readers with low background knowledge utilize these strategies while others with high background knowledge are not frustrated and bored. Lotfipour refers to these strategies employed to compensate for the imperfection of writer's awareness of reader's background knowledge as 'take-it or leave-it' strategy, i.e., the readers with low background knowledge stick to all the elaborations made in the text while those with high background knowledge do not have to attend to the known and familiar elaborations; hence, they release their cognitive resources for dealing with unfamiliar materials through the text .

We should bear in mind that redundant elements can have different functions in different texts. Gengshen (1990) points out that in professionally scientific-technical transactions, scientists and specialists tend to use contracted forms of words, expressions, etc., in order to heighten the value of the text and to reduce time consumption. This way of writing may stem from the fact that the writer has written the text only for a special group of people with almost common background knowledge in field. Another version of redundancy is seen in cheques in which some pieces of information are written in both words and figures. Kinneavy (1980) believes that political propaganda, advertisements, and religious texts all underscore the requirement of redundancy. He ascribes a high level of redundancy in these registers to the matter of persuasion.

It is clearly possible to have a higher degree of redundancy in some interactions than others, and this may result from the importance of the message on the part of its producer to be sure that it will be received by his intended addressee(s). For example, the existence of a high degree of redundancy in the language of air traffic controllers and pilots can prevent a plane from crashing due to the communication problems between the interactants. Accepting this conclusion, we are right to stand to reason that an increase in redundancy will yield better communication between interactants in some situations.

2. Methodology

More than fifty pieces of texts belonging to various text-types such as literature (both poetry and fiction prose), advertisement, scientific, religious, and legal texts would comprise the data pool. Despite other definitions of the concept of redundancy reviewed above, a feature or a piece of information is redundant if it is reiterated (in any mode) in relation to features or pieces of information occurring before it in the text. The term 'unnecessary' is not used to avoid any negative implications because we do not consider redundant elements as unnecessary. We start the analysis of each text with its first sentence and carry out the investigation of the modes of realization of the redundant elements across the text in relation to what has preceded. Different modes of realization of redundancy are as follow:

2.1. Exact Repetition
2.2. Functors
2.3. Semantic Redundancy
  2.3.1. Grammatically Undeletable Redundancy
  2.3.2. Grammatically Deletable Redundancy
    2.3.2.1. Reiteration by Paraphrases
      a. Relative clauses
      b. Appositives
    2.3.2.2. Reiteration by Intertextuality
    2.3.2.3. Reiteration by Cross-References
    2.3.2.4. Reiteration by Predictor Signals
    2.3.2.5. Redundancy and Summary
    2.3.2.6. Redundancy and Conjunctions
    2.3.2.7. Redundant Collocations

2.1. Exact Repetition

This type of redundancy is the most common and explicit one having been mostly studied thus far. It is appropriate to note that such sorts of redundancy are not confined to mere words, but they include exact repetition of groups, the same patterns, clauses, clause complexes (sentences) as well. The following examples clarify this mode of realization of redundancy in real context. The presupposed items have been enclosed in square brackets. And the italic words represent the presupposing items.

Example 1: A muscle [contracts] extremely rapidly when it *contracts* against no load – to a state of full contraction in approximately 0.1 second for the average muscle (Gayton, 1985).

Example 2: [The squatting men] raised their eyes to understand. *The squatting men* looked down again (Steinbeck, 1976).

Example 3: [Now is no time to think of] baseball, he thought. *Now is the time to think of* only one thing (Hemingway, 1952).

While exact repetition as a textual strategy in general and as one manifestation of redundancy in particular may not be tolerated in some texts, it can engrave some vital effects such as expressive and aesthetic aspects of communication, emphasis, rousing the interest of the addressees, and excitement on the receivers in some others .

2.2.Functors

This type of redundancy includes grammatical words without any meaning by themselves, but those which replace the presupposed items in the context. This group of words occur with the highest frequency in all different texts and this can be related to the economy principle in language. Under this class of words, there are pronouns and demonstratives, bound morphemes (e.g., re-), and definite articles. The functors have the potentiality to replace a word, a group, a clause, a sentence, etc. Reiteration of the words without any modification may make a text boring and over-redundant; hence, the use of function words can counteract this effect. It is necessary to add that the references cannot be effective beyond some limited spans in text; otherwise, they result in confusion and ambiguity, i.e., the more the distance between the presupposing and presupposed items, the more restrictions on the use of references.

2.3. Semantic Redundancy

As it was mentioned before, this mode of redundancy is categorized into grammatically undeletable and grammatically deletable redundancy which will be expounded below.

2.3.1. Grammatically Undeletable Redundancy (GUR)

In this part, the exact repetition is not our concern, but reiteration is fulfiled by content words including synonyms, antonyms, general words, different parts of speech, comparisons, and different codes.

One synonymous lexical item can refer back to another, to which it is related by having a common referent. Writers may use synonyms to make their styles elegant, or in the following example the word 'catalyze' is a technical term and a synonym may have been used in order that different readers can interact with the text. Viewing redundancy from this point of view can have implications for English language teaching as a foreign/second language when the teachers want to be certain that their addressees understand their explanations.

Example: For instance, they contain a large quantity of carbonic anhydrase, which [catalyzes] the reaction between carbonic dioxide and water, *increasing* the rate of this reaction many thousand fold (Gayton, 1985).

It is our conviction that whenever a reader faces an antonym, its opposite lexical item in the text is reactivated in the reader's mind and this interaction contributes to the persistent establishment of both new and old information in long-term memory.

According to Halliday and Hasan (1976), the use of exact repetition of a lexical item, on the one hand, and the use of general words to refer back to the presupposed items, on the other, can be taken as two ends of a continuum. In the following example, we see that the writer introduces something elaborately and then reiterates it with some general words. This process is reductive on the grounds that when something is described in detail, the writer assumes that the reader internalizes it in his mind; therefore, he reiterates it in a reduced form in later stages.

Example: [Soil moisture] as the source of water is of prime importance to the crop. *The supply* may range from 'wilting point', when... (Criffitlis, 1975).

The realization of redundancy through the repetition of specific elements acts just contrary to the above subclassification, that is, a topic is presented in general sense for the first time and then it is narrowed down to make the text more informative. This depends on the writer how to proceed the framework of his text. He can start from one or more general statements and then revolve all his elaborations around it, or vice versa. One of the reasons may lie in that the writer wants to prepare his readers or make them curious to the ensuing information so that they can transact with the text in depth. In the following example the writer uses 'find out' as a general word and then reiterates it with a specific verb which is more appropriate for that register.

Example: Before treating a patient for any disease, the physician must [find out] what the disease is. In other words, he must *diagnose* the disease (Gayton, 1985).

Another property of language is to reiterate one element through different parts of speech which can be a virtue. If it were not so, we would have to use limited structures in order to repeat something already remarked. For instance, we reiterate a singular noun by a plural one, or by a verb, etc. In most cases whenever one part of speech is reiterated through a different one, its rank changes. For example, a verb may occupy the rheme position, but when it is reiterated in noun form, its rank shifts to theme. After the occurrence of an item,

the writer takes it as known; thus, he tries to shift its rank and load some new information on it.

Comparing one thing or person to another can be taken as a redundancy strategy for the purpose of clarifying a particular point. Writers will have recourse to this technique if they want their discussions to be easily digested by readers. While such comparisons are very usual and tangible in scientific texts (such as the following example), they seem queer in literary works (e.g. comparing a man to a monster), and this may derive from the writer's attitude towards the topic under discussion. Studying these comparisons in literary works, the reader may decipher the outlook of the writer on the issue.

Example: Actually, [the red blood cell] is *a big bag* that can be deformed into almost any shape (Gayton, 1985).

The last subcategory of reiteration through the GUR is realized by means of different codes. By the word 'code' we mean any system of signals which can be used for sending the same message efficiently. In written language, these signals can be tables, diagrams, figures, pictures, etc. In the following example, we see that the chemical formula of the material, in addition to its linguistic symbol in ordinary language, has been written. Despite the fact that formulating an object, state, etc., by two codes or channels does not add any new information to the text, it seems that this choice is motivated. Code-switching can be considered another version of this mode of redundancy, especially when an addressor reiterates an idea via codes in order that his addressees can grasp his message smoothly.

Example: The rapidity of this reaction makes it possible for the water in blood to react with large quantity of carbon dioxide and thereby transport it from the tissues to the lungs in the form of [the bicarbonate ion] *(Hco3)* (Guyton, 1985).

2.3.2. Grammatically Deletable Redundancy (GDR)

By this category, we mean the elaboration of a piece of information as distinct from what we have presented so far. It seems to be right in assuming that the elimination of the previous modes of redundancy is not permissible in terms of both grammar and meaning. In contrast, most of the realizations of GDR can be omitted without impairing the text grammatically, but their presence, as will be discussed, is of importance in semantic and cognitive terms. The main classifications of this type of redundancy will be our concern below.

2.3.2.1. Reiteration by Paraphrase

By paraphrase, we mean explaining the meaning of a word, a phrase, etc., by using other words in an attempt to make the meaning easier and more clear to understand. The main difference between this category and other modes of redundancy is that the former is mostly realized in clause or sentence forms, and they appear immediately following the presupposed items whereas this is not the case for the latter. The word 'paraphrase' is so general that can subsume some other semantic reiterations including exemplification, clarification, appositive, and relative clauses. These versions of paraphrase do not have the same value in terms of their overt/covert realizations. Depicting them on a continuum, we can claim that exemplification as the most overt mode is placed on one end and reductive relative clauses as the most covert form on the other.

a) Relative Clause

Relative clauses are considered to be redundant due to their function in reiterating an item preceding them. These redundant elements are so crucial in unfolding the meaning of their presupposed items that their length sometimes trespasses the whole main clause of a sentence. Eliminating all the relative clauses of a text makes it writer-specific or restricts it to a particular group of readers, while the sole purpose of writing is to communicate the message in the best way possible. The relative clauses make sentences self-contained, i.e., the reader does not have to search around the text to recover their meanings. The omission of the relative clauses, on the one hand, may make the text under-redundant for some readers, and presenting them in main clauses, on the other, may make the text over-redundant. To arrange them as they are, the writers strike a balance between the two extremes.

b) Appositives

According to Quirk, et al. (1985), appositive refers to words, phrases, or clauses in a sentence having the same reference. As remarked earlier, paraphrases in general and appositions in particular run along a semantic scale. To highlight this, we direct the reader's attention to the following figure as a completely modified form from what Quirk, et al. (1985, p.1308) have presented:

Overt mode of redundancy

Inclusion: especially, particularly, for example, e.g., such as, etc.

Equivalent: i.e., in other words, that is, etc.

Covert mode of redundancy

Attribution: ---, ( ), etc.

Figure1. The degree of overt/covert-redundancy in appositives

As the Figure shows, we believe that inclusion (exemplification and particularization) is the most overt form of redundancy in terms of both the specificity of information it presents and the respective cues (e.g., that

is. etc.) being available for the reader. Here. the elaborated element is made more precise and clear. Equivalence or clarification is on half way due to its level in giving more general information than inclusion. And attribution is covert on the grounds that it comes into play indirectly. i.e.. without the intervention of any cues such as the foregoing ones. It should be noted that this scale has been arranged according to our analysis from the writers' attitudes to their texts; therefore. it is not fully true on the basis of the readers' reasoning because an exemplification that may be over-redundant for a reader with high level of background knowledge may be under-redundant for another reader with low background knowledge . The following examples represent each of these triple classifications.

Example 1: [Infectious diseases] which spread by contact or touch are called contagious disease. *Malaria, smallpox, diphteria, and colds are examples of infectious diseases* (Guyton. 1985).

Example 2: Thus far. all the acquired immunity that we have discussed has been [active immunity]. *That is, the person's body develops either antibodies or sensitized lymphocytes in response to invasion of the body by a foreign antigen* (Guyton. 1985).

Example 3: It was pointed out in chapter 30 that such needle pressures do not measure the interstitial fluid pressure but instead measure [the total tissue pressure] (*the pressure that tends to collapse blood vessels and tubules*) (Guyton).

Studying the examples. we realize that example 1 is explicit and clear in terms of providing additional information. but the extra information in the last examples have come into play without the involvement of any explicit cues. This may derive from the fact that the writer has employed this strategy regarding his presupposition about the readers' background knowledge.

2.3.2.2. Reiteration by Intertextuality

While Lemke (1985) identifies two kinds of intertextual relationships. i.e.. relationships existing between elements of a given text (passive intertextuality). and relationships existing between distinct texts (active intertextuality). we shall concentrate on the latter. Intertextuality is taken as redundant due to the fact that it duplicates the preceding or following information; hence. its presence is apparently unnecessary despite the fact that the use of intertextuality is discoursally motivated. In the following example. Widdowson (1984) intermixes his discussion about language teaching and learning with words from Shakespeare.

Example: Propero: I pitied thee.
Took pains to make thee speak, taught thee each hour.
One thing or other: When though didst not, savage.
Know thine own meaning, but wouldst gabble, like.
A thing most brutish, I endow'd thy purpose
With words that make them known.
Caliban: You taught me language, and my profits on't
Is. I know how to curse. The red plague rid you
For learning me your language (The Tempest, Act 1 Scene 1. line 353).

The writer by exerting such a strategy bestows authority and justifiability to his text.

Quotation may be a weak form of redundancy because writers repeat their arguments through restating others' words so that their text may seem more authoritative and reliable for different readers.

2.3.2.3. Reiteration by Cross-References

By cross-references we mean the devices by which we can keep track of references retrospectively or prospectively in the unfolding discourse. We use phrases such as 'in the following chapter', 'as mentioned above', 'it will be discussed elsewhere', etc. to refer to larger chunks of discourse that are located within a text. These redundant elements provide links between the discoursal themes and reiterate them in various ways so that they make the process of reading more possible. Lotfipour (1982) calls this strategy 'take-it or leave-it' strategy and argues that by including such a strategy writers avoid running the risk of over-redundancy for readers with high background knowledge and under-redundancy for those with low background knowledge. Van Dijk (1979) also points out that by employing such a technique we do not violate the completeness technique.

2.3.2.4. Redundancy and Predictor Signals

Predictor signals are enumerations and words that inform readers retrospectively and prospectively in a text. They serve as warnings of what the writer is about to produce, or what he has already produced.

Example: There are a few stages: (1).....(2).....(3).....;first,.....second,.....third.....

It is evident that a text without utilizing the above signals can be more or less comprehended; nevertheless, they have some crucial roles in lubricating the process of interaction. Some of the above elements (such as 'first' and '1') are merely prospective because they are always followed by consequent signals. while some others may act bilaterally. For example, signals including 'secondly', etc., both pave the ground for introducing new information and remind us some

complementary information having already been introduced. Despite the redundant nature of these signals, they are significant in that they prepare readers to be attentive to both new and old information, and this can be accounted for as one of the strategies to neutralize any noise in its general sense.

2.3.2.5. Redundancy and Summary

In scientific texts, the more we come to the end of the text, the more redundant elements are crystalized. It seems that the density of redundancy reaches its climax in the summary of a text because the writer without anything new only reviews the main points of the text. This part can be presented either covertly (without any marker signifying the summary) or overtly. The overt signals include patterns such as: 'I should now conclude by summarizing my arguments', 'in sum', 'to close up the text', etc.

The writer's awareness of readers' memory limitations helps him keep step with the readers, i.e., he does not hasten to overload readers with a lot of information in a short span. These condensed parts of texts have important cognitive effects on the reader's comprehension and recall, and thay can act as feedback whether the reader has extracted the intended message or not.

2.3.2.6. Redundancy and Conjunctions

By conjunctions Halliday and Hasan (1976) mean conjunctives (so that, as long as, etc.), conjunctive adverbs (however, therefore, etc.), correlatives (either.....or, both.....and, etc.), coordinators (but, and,.....), and subordinators (because, when, etc.). It is worthy of note that the lack of these tools does not seriously damage comprehension because readers are usually able to make bridging inferences. Despite these, we believe that they reiterate the previously mentioned information in a very covert manner while preparing the ground for some other elements to occur next. For example, Blackemore (1988) points out that the conjunction 'however' while paving the way for introducing some likely new information, is also relevant as a denial of a proposition. 'First', or 'moreover' or any other equivalent conjunction informs additional evidence for whatever conclusion is expected to be drawn from the first clause(s). We also consider the correlative conjunctions redundant in the case that the appearance of one member of the pair signals the presence of the other.

Lotfipour (1982) argues that these elements act to ensure that the reader is following the inferential operations involved in the intended direction. He interprets this statement with caution in that the function of the above devices is not to predict what exactly will follow. Were it so, it would have negative effect on remembering and recalling the processed information.

2.3.2.7. Redundant Collocations

Halliday and Hasan (1976) define collocation as the association of lexical items that regulary co-occur. It includes any pair of lexical items that stand to each other in some recognizable lexico-semantic (word meaning) relation. Accordingly, such pairs of words can be synonyms (climb and ascent), antonyms (like and hate), series (north and east), hyponyms (chair and table), and paranomy (car and brakes) occuring freely both within a sentence or across sentence boundaries. We do not intend to depict them in our analysis, but it is our purpose to show only those pairs of words the presence of one of which alone exempts the intervention of the other. In the following example, the word 'droplet' contains all the semantic components of its previous collocated word 'water'; therefore, the deletion of water may hamper the effectiveness of the message grammatically and semantically. Although we do not see any exigency for the attendance of one of the above collocated pair, this may stem from their overuse in English and changing them into cliches.

Example: The water gain occurs only through the application of [water] *droplets* to the soil surrounds or directly to the plant; this may be through rainfall or other forms of participation, irrigation or flooding or dew formation (Criffitlis, 1975).

3. Data Analysis

Categorizing the different manifestations of redundancy (see Table 1), we calculate the rate of each mode in different text-types. The comparison is made by dividing the number of reiterations in a genre (each kind of reiteration is separately dealt with) by its total number of words. In order to aviod obtaining any decimal number, the fraction is multiplied by 1000. That is, we reckon the occurrence number of redundant words in one thousand.

$$\text{rate} = \frac{\text{number of reiterating words in text-type}}{\text{total number of words of that text-type}} \times 1000$$

A few words of caution. Since comparing the rate of the redundant elements of two texts in different genres might sometimes result in wide discrepancies, and this can lead to unreasonable conclusions, we take the whole number of words in a genre and estimate the mean of each mode of redundancy residing in it. Meanwhile, the genres in our project do not match in terms of the number of their comprised words; to counteract any bias, we estimate the number of redundant elements in percentile rank (in one thousand words). For instance, although we have chosen twelve scientific texts made of

Table1. The rate of every mode of redundancy in different text-types

Modes of Realization of Redundancy	Scientific Texts (1780 w)	Religious Texts (950 w)	Poems (730 w)	Novels (980 w)	Advertising Texts (970 w)	Legal Texts (413 w)
Exact repetitions	21	320	116	53	55	112
Pronouns	12	66	15	115	25	5
Appositives	10	5		4	13	5
Summary	3		25		26	
Conjunctions	16	70		40	5	
Definite articles	5	36				
Synonyms	9			14	3	
Different codes	2				4	
General words	20			13		10
Specific words	10			6		
Relative clauses	13	13	20	12	2	2
Cross-references	5					
Predictors	6				5	
Total rate of different modes of redundancy in each genre	132	510	176	257	138	134

Note: w = word

1780 words, seven advertisements made of 970 words, etc., the rate of exact repetition is 21 in the former and 55 in the latter. The rate of every mode of redundancy in different genres has been compressed in Table 1, but now we turn our attention to the rate of each of the realizations of redundancy in different text types.

a) Exact Repetition

As it was remarked, one mode of reiteration is mere repetition of words, and it seems that many authors have only regarded it as redundancy at the cost of the other covert realizations. The following Figure of exact repetition in different genres can be extracted.

As Figure 2 illustrates, the number of this mode of

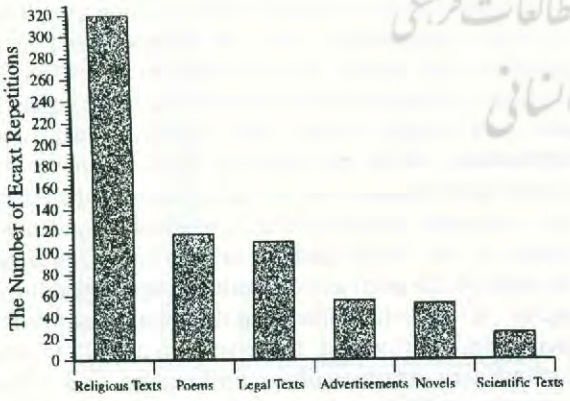

Figure 2. Percentage of exact repetition in different genres of English

redundancy in religious texts (the Koran and Bible) comprises about one third of the whole texts, and this is discoursally motivated on the grouds that this text-type has always been threatened with distortion. The density of redundancy guards the text against any fragility, ambiguity, and misunderstanding. Furthermore, these indicate the emphatic nature of the respective messages.

The number of exact repeated words is almost equal in poems and legal texts (about one-ninth of the whole texts). A great deal of lexical recurrence is tolerated in the legal texts (some parts of the U.S.A. constitution and a mortgage) when misinterpretation is of more serious concern than adverse stylistic criticism. Candlin and Lotfipour (1983) also point out that since in legal documents the occurrence of unwanted implications would be extremely undesirable, certain extra elaborations are added to forestall any such would-be implications.

A question that may arise from our analysis is the incongruity between the amount of redundancy in poetry and its readability, i.e., despite the fact that there are a lot of exact reiterations in poetry, why does its informational density reach the highest point compared with other genres in our study? It can be asserted that the occurrence of exact words in any text does not determine the degree of its readability because mere repetitions cannot be taken as elaboration to decipher the meaning. If a word is not decoded for the first time, its sole repetition may not contribute to its comprehension. It is worth noting that most repetitions occur in the last quatrains due to the exigencies of the convention, metre, and emphasis. Moreover, as it was

mentioned earlier, redundancy is not something inherent in texts but it depends on many factors including the reader, his background knowledge, etc.; therefore, the value of mere repetition may vary for different readers.

The number of exact repetitions in advertisements and novels is about one twentieth of the whole text. The advertisers reiterate the key elements in different parts of the text, e.g. in headlines, subheadings, captions, etc. Their choice is to arouse the reader's attention and to persuade him that quality of the article advertised is high. The emergence of this mode of redundancy in novels can be attributed to the subject matter of the text; the novelists reiterate the main characters, key elements, etc. in order to convery their messages.

In scientific texts, the number of repetitions reaches the minimum (one-fiftieth of the whole text), and this may be one of the characteristics of unmarked written texts. There may not be the possibility of reducing redundancy to a lower degree than that of this genre due to redundant nature of language. In other words, to make a text cohesive, the use of repetition in variant degrees is inevitable.

b) Pronouns

The highest rate of pronouns lies in the novels that can be related to the text-type characteristics including: the interaction between a few characters in the story, the novelists' attention on specific points in order to develop their texts and to utilize the spoken mode of language. While comparing the frequency of references in literature (fiction-prose) and scientific texts in English, Nasrollahy (1995) also reaches a similar conclusion in that the literary and scientific texts differ in the degree of the utilization of references (the number of references, especially, pronouns and demonstratives in the literary texts, is about two and a half times more than those in the scientific texts).

The religious texts also contain a remarkable degree of pronouns; however, these pronouns rarely refer to 'God' or anything else that results in any equivocation. Moreover, these pronouns either co-occur with their antecedents in the same sentence or immediately in the following sentence so that this counteracts any misinterpretation.

The ratio of about one-fortieth of words in the form of pronouns in advertisements illuminates the fact that the presence of these elements does not hamper the comprehension of the text because all such a text revolves around is describing one particular item; hence, the relationship between pronouns and their references can be easily discerned. The rich context pertained to the genre is also a crucial factor contributing to the relationship between pronouns and their presupposing items.

The least amount of pronouns in legal texts indicates the fragility of this genre to miscomprehension, fraud, and other unwanted implications. As the whole mortgage text (Halliday, 1989) deals with the interaction of a few people over some property, any ambiguity can cause notorious damages. Halliday defends the odd structure of legal texts in a sense that they are not written to be read for people but they are kept for rainy days. He delineates this in a text without employing any punctuation and capitalization. Figure 3 is the outcome of the study in this regard.

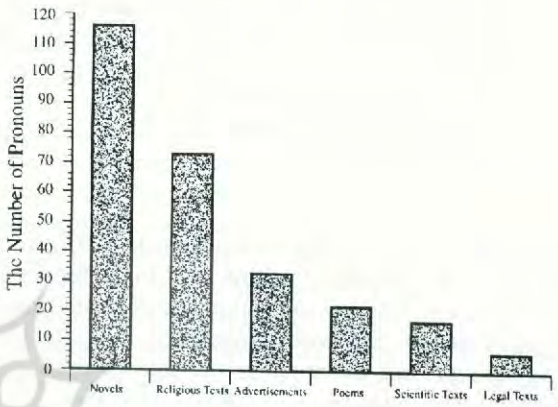

Figure 3. Percentage of pronouns in different genres of English

c) Appositives

The highest degree of this mode of redundancy lies in advertisements and clarifies the preceding statements and restates them to increase the transaction. Employing different descriptions, the advertisers intend to put forward every detail of their entries to all readers. The scientific texts occupy the second rank in the hierarchy, and they mostly come after technical words and expressions. While the religious, legal, and novel texts almost have the same amount of appositives, there is not any noticeable degree of such a mode of redundancy in poems of our sample and this may be one of the factors involved in the degree of difficulty/comprehensibility in poetry. If poets had elaborated the ambiguous words in their texts, they would not have been open to so many contradictory interpretations; furthermore, had it been so, poetry might have lost its dynamic and living nature. The use of appositives to a reasonable degree may be one of the ways to counteract over/under-redundancy. Figure 4 depicts the hierarchy in a more tangible way.

Figure 4. Percentage of appositives in different genres of English

d) Summary

This version of semantic redundancy is seen abundantly in advertisement and poetry. In advertisement, the summary of the text is presented through selecting key elements within a cadre. This part is more spectacular than other parts of the text by means of a different typography (e.g. italic words, different colours, etc.). In poetry some key elements of the text are compressed in a line in order to counteract the linearity or sequential nature of the text and the reader's memory limitations. Some scientific texts also include summary parts at the end of the texts or paragraphs that remind the readers of the general ideas of the texts and fulfil the function of feedback. As Figure 5 demonstrates, there is no frequency of this mode of redundancy for religious, novel, and legal texts.

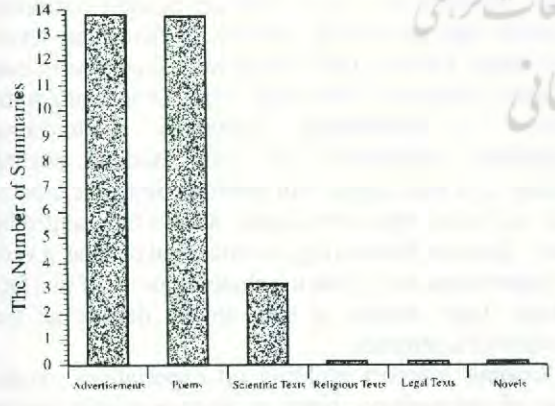

Figure 5. Percentage of summaries in different genres of English

e) Conjunctions

In our analysis, about seven percent of the religious text words are conjunctions. From this about 1.5 percent of the words are transitional adverbs and the remainder includes coordinators such as 'but' and 'and'. It is interesting to note that all the conjunctions concerned in the novels (about 4% of the whole texts) are coordinators including 'but', and 'or'. This similarity in terms of the amount and kind of coordinators in novels and religious texts may result from the similar macro-structures of these two text-types, that is, the selected religious texts discuss narrative tales as the novels.

Scientific texts also consist of about 1.5 percent conjunctions that play crucial roles in developing the texts. As it was remarked, these discoursal devices assist readers to visualize larger stretches of discourse and to go beyond the limits of the linearity of the text to anticipate the directions in which the texts unfold. Now we magnify the frequency of this mode of redundancy through Figure 6.

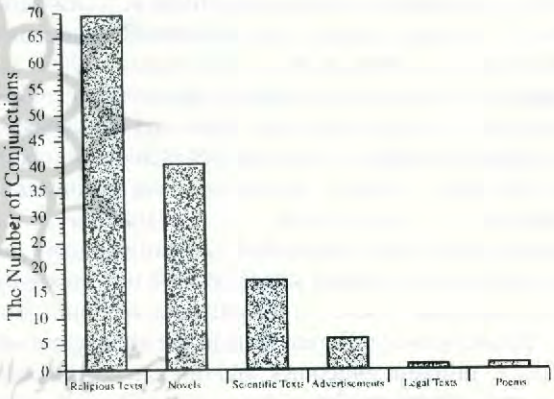

Figure 6. Percentage of conjunctions in different genres of English

It seems that cross-reference words and expressions are genre-specific. For instance, a few of these signals have come only in scientific texts, and this may be due to the wide range of the topics under discussion. This is in line with Hatch's statement (1992) that as the frequency of deictic terms varies across types of text, i.e., the more formal a text, the more markers may be needed to keep the text coherent. Accordingly, science reports are a rich source of guiding clauses like: 'X is

given in appendix A' which direct the reader to another part of the text.

Synonymy as another mode of redundancy appears only in novels (about 1.5 per cent), scientific texts (about one per cent), and advertisements (about half per cent). The absence of synonymy in religious texts is motivated because of the fact that their presence makes the text hazardous to many abuses and misunderstanding. The absence of such devices in poetry may be one of the reasons for the degree of readability of this genre.

The use of different codes (stating an item, fact, etc., in two or more codes) also seems to be genre-specific. Their presence in scientific texts and advertisements may stem from the fact that these texts are written for a wide range of readers with different background knowledge.

It should be added in passing that we overlook the comparison and contrast of other realizations of redundancy because no noticeable discrepancies are seen in our data pool.

4. Summary and Conclusion

Studies on the significance of redundancy have been mainly concerned with exact repetition of words across genres without entering into its intricate and covert realizations in running ways. All discussions in this conjunction have concentrated on claims that the rate of redundancy in advertisements, legal, and religious texts is higher than that of other genres including literature and the like without giving a clear definition of redundancy beforehand. Considering our characterization of redundancy as a unified theory may be somehow an extreme stance because it is impossible to counteract any bias even in systematic randomization, i.e., the analysis of different texts in the same genre may result in different outcomes, and this can be associated with the rich potentiality of language in general and the uniqueness of every text in particular.

It is concluded that there is none of the text-types in our analysis that overrides the others in terms of the frequency of redundancy in all of its manifestations. For instance, the religious texts contain the highest frequency of exact repetition as one of the paramount versions of redundancy while advertisements occupy the first rank in appositives, one of the semantic categories of redundancy. Or whereas novels include the largest amount of pronouns, the scientific texts hold the first position in cross-reference words. All of these support the idea that we cannot arrange different text-types in a continuum and attribute to each of them some degree of redundancy, that is, to assert that advertisement and poetry, for example, are the two opposite extremes of this continuum on the basis of the amount of redundancy they carry. On the contrary, to reach any reliable conclusion, we should distinguish different types of redundancy based upon our definition of the notion and then compute them in different genres.

Another point is that one mode of redundancy may not have the same value across different texts. For example, the repetition of a word in a poem with a host of open responses may not assist a lay reader how to interact with the text while the inclusion of the same mode of redundancy in scientific texts can lubricate the negotiation of meaning between the reader and the text to a high extent. Another reservation that should be made is that the contribution of every mode of redundancy is relative to different readers, e.g., some repetitions that are unhelpful for a lay reader may be quite effective and luminous for a literary one.

5. Implications of the Study

Reading is discoursally viewed as a dialogic and interactive process of communication between the text and the reader. While reading, the reader is actively involved in communication with the writer through the meeting ground which is the text. Accepting the text as the writer's final product and its dissection by the reader in order to explore the writer's process and interaction, we suggest the following implications.

The usefulness of redundancy becomes apparent when we consider the matter of ambiguity, miscomprehension and mistakes. Since all channels of communication are subject to noise in its full sense, there seems to be no way of avoiding this problem but through designing our tests in such a way that they contain a certain amount of redundancy they will serve as a valid means of communication. Teachers can guide language learners to find both linguistic and nonlinguistic redundancies when they counteract some knotty problem in a text. Infusion of some redundant elements into an overall syllabus at elementary levels may make learners more sensitive and curious to look for more channels when they read. Or teaching some forms of redundancy including conjunctions, appositives, summaries, etc., can facilitate reading process to a high degree. For example, semantic aspects such as future time are almost always represented by more than one feature (e.g., an adverbial of time, a verb in future tense, etc.). Making students aware of this fact reduces their dismay if they do not decode all the elements of a sentence.

Reading involves building up expectations on the basis of redundancy; hence, a sentence must be harder to read than a paragraph, a paragraph harder than a page, and so on. Practising and teaching reading comprehension through long texts can meet such a

necessity, and this is in line with new approaches to teaching reading comprehension.

While a few clues may refer to the same event in a text, they may not have the same values. For example, in the group, 'five forks' despite the fact that both 'five' and the suffix "-s" show the plurality, the former carries more information (both plurality and the exact number) than the latter (that shows only plurality.) Making students aware of this fact can heighten their attention to some informative features more than others.

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