LOCAL –GLOBAL COHERENCE
AND
TEXT PROCESSING

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Preliminaries

This paper is an attempt to concentrate on two strategies which constitute text coherence, viz , local and global .These two strategies enable the reader to reach at good understanding for the text .By following the strategies suggested in this paper, the reader is supposed to easily point out the hidden relations in any text.

Coherence can be viewed as a covert potential meaning relationship among parts of a text, made overt by the reader or listener through processes of interpretation (Blum-Kulka,1986:17) .The meaning of the word "coherence" is holding together .It is an attribute of texts that are closely constructed so that readers may not be confused about the relationship of its parts .This property of texts is considered by careful writers who transfer the ideas from their minds to those of their readers to give clear and orderly progress from beginning to end .
 Coherence is a quality assigned to texts by readers .It is a text –user-centered since it is brought to the text by language users .It resides in the minds of users who assume that as a text is part of a language , it should communicate something .It depends on our ability to detect and interpret meanings not necessarily present in the text .

Correspondingly ,Van Dijk (1977:93) states that these processes are based on the interpretation of each individual sentence relative to the interpretation of the other sentence .
The relatedness of sentence leads to continuity of sense , which is , as Beaugrande and Dressler (1981:84) suggest , the foundation of coherence .They claim that a text makes senses because there is a continuity of senses among the knowledge activated by the expressions of the text .A non-sensical text is one in which text receivers can discover no such continuity usually because there is a serious mismatch between the configuration of concepts and relations expressed and the receivers' prior knowledge of the world.

Beaugrande (1991:276) states that coherence can be syntactic ,stylistic and pragmatic .He adds that van Dijk and Kintsch focus on semantic coherence .They see two fundamental types : "conditional" , which dominates in typical expository texts , and "functional", in narrative ones .A distinction is made between three levels of coherence gauged by depth of interpretation : "superficial" , if two propositions are in the same frame or script ; "normal" if the two instantiate a direct conditional or functional connection , and "full" if further information is inferred from semantic or episodic memory.

The realization of the text, according to Blum-Kulka (1986: 23) can be approached either theoretically by postulating an "ideal reader" or empirically by investigating the ways a given text has been interpreted by various readers.

So far , the major concern of this paper is the most crucial distinction , suggested by van Dijk and Kintsch , between " local" and " global " coherence . The aim is to find out whether the criteria suggested cover all the possible relations among sequences of sentences and contribute to complete and effective comprehension of text.

The paper is based on the assumption that coherence can be theoretically represented via local and global semantic properties of a discourse . This leads us to hypothesize the following:" strategies can elicit all the possible relations among the sentences of a text ".

1-1 LOCAL COHERENCE

Beaugrande (1991:276) states that local coherence strategies establish meaning connections between successive sentences in a text or between constituents of sentence .
These strategies need guidance and constraints from the global to relate to the discourse as a whole to surmount discontinuities. Moreover , they operate both "bottom-up" with words and phrases and "top-down" with schema ,frame ,script or macroproposition. Local strategies provide constraints for specific meaning by looking "forward" for meanings to come or "backward" for meanings only partially interpreted . Likewise , Brown and Yule (1983:235) show that the reader operates a top-down interpretive strategy which creates expectations about what is likely to come in the text . It is the predicative power of top-down processing that enables the human reader encounters ,via , his bottom –up processing , ungrammatical or mis-spelt elements in the text and to determine what was the most likely intended message .

1.1.2 Processing Strategies

Coherence relations are the possible connections between utterances in a text . The specification process of these relations requires certain adequate guide lines. Beaugrande (1991:276) displays van Dijk and Kintsch's criteria for text processing as that conditional semantic coherence is based on " cause" "consequence" and "temporality" relations , whereas functional one is based on " example" ,"specification" and " conclusion"   relations.

Jurfasky and Martin (2000,695) mention another set of coherence relations .The terms S1 and S2 represent the meaning of the two sentences being related .Each one of the following relations is associated with one or more constraints that must be met for it to hold .To do this , deduction is the most familiar method for performing inferences . The strategies are:

a. **Result**: infer that the state or event asserted by S_1 cause or could cause the state or the event asserted by S_2.

1. John bought an Acura .His father went ballistic.

b. **Explanation**: infer that the state or event asserted by S_2 causes or could cause the state or event asserted by S_1.

 2. John hid Bill's car keys. He was drunk.

c-**Parallel**: infer that (P) from the assertion of S1and (P) from the assertion of S2 are similar.
3. John bought an Acura. Bill leased a BMW.

d. **Elaboration**: infer the same proposition (P) from the
assertion of S_1 and S_2.
4. John bought an Acura this weekend .He purchased a beautiful   new Integra for 20 thousand dollars at Bill's dealership on Saturday afternoon.

e. **Ocassion**: A change of state can inferred from the assertion of S_1, whose final state can be inferred from S_2 or a change of state can be inferred from the assertion of S_2 whose initial state can be inferred from S_1.

5- John bought an Acura. He drove to the ballgame.

Another set of relations, emphasized by van Dijk (1977:106) , reveals that the orderings of descriptions depend on the   relations

between individuals or properties denoted by subsequent sentences .

a. general – particular .
6. Peter always comes late .He won't be in time tonight either.

b. Whole –part / component
7. She could see Harry Duke .She could see his powerful shoulders.

c. Set-subset-elements.
8. Many girls had applied for the job .Some of them were invited to a meeting with the staff.

d. including-included.
9. There was a large glass on the table .In it was a pinkish juice.
e. Large – small.
10- Peter climbed upon the hill, which was covered with pine trees .Under the trees were thick bushes.

f. Outside-inside.
11. We came to an isolated inn .The lights were already on.

g. Possessor-possessed.
12. Peter was shabbily dressed .His jeans had large holes in them.

1.2 GLOBAL COHERENCE

Beaugrande (1991:272) notes that global coherence strategies determine the meaning of fragments of a text or of the whole . Global coherence organizes and order predicates, referents, properties, and so on, around the central ones and imposes unity and sequence .It is imposed by a theme, topic, gist, upshot, or point, all theoretically reconstructed as macrostructures.

Beaugrande and Dressler (1981:90) add that these global patterns would be stored as a complete chunks because of usefulness in many tasks.

Knowledge structures are represented in terms of schemas , frames and scripts as information in a memory , having a label or slots (variables) within a prearranged relation and accepting information of a given type through instantiation .Such schemas are descriptions not

definitions and vary from concrete to abstract and their information is normally valid (Beaugrande, 1991:273). Besides , he adds that schematic structures often determine the current function from the global content , therefore the instantiated schemas or frames or scripts are not equated with textual representation .A schema provides readers with a basis for interpreting the text and a conceptual skeleton to which they can bind the semantic units derived from the textual input.

A frame is a set of propositions characterizing our situations (activity, course of events, states) (Van Dijk, 1977:99). In the same tone, Brown and Yule (1983:238) envisage Minsky's frame theory as when one encounters a new situation , one select from a memory a structure called "frame" .This is a remembered framework to be adapted to fit reality by changing details as necessary .

Emphatically , Beaugrande and Dressler (1981:91) claim that using global patterns greatly reduces complexity over using local ones , and allows retaining much more material in active storage at one given time .

1.2.1 Processing Strategies

As strategies for text processing, Beaugrande (1991: 295) proposes Van Dijk and Kinstch's model of macrostrategies:

A. Specification.
B. Addition.
C. Particularization

The resulting distribution depends on "complexity" "importance" and "Relevance", high degrees of which call for independent units" Clauses" or "sentences" rather than dependant ones like "modifiers" Relative clauses".

A common strategy is to start from given information (e.g.in the first noun phrase functioning as a subject and topic of sentence) and go on to the new (e.g. in a predicate phrase functioning as the comment) .

Beaugrande and Dressler (1981:90) add the following patterns :
Frames: Global patterns that contain commonsense knowledge about some central concept, e.g. " polling station ", " birthday parties".
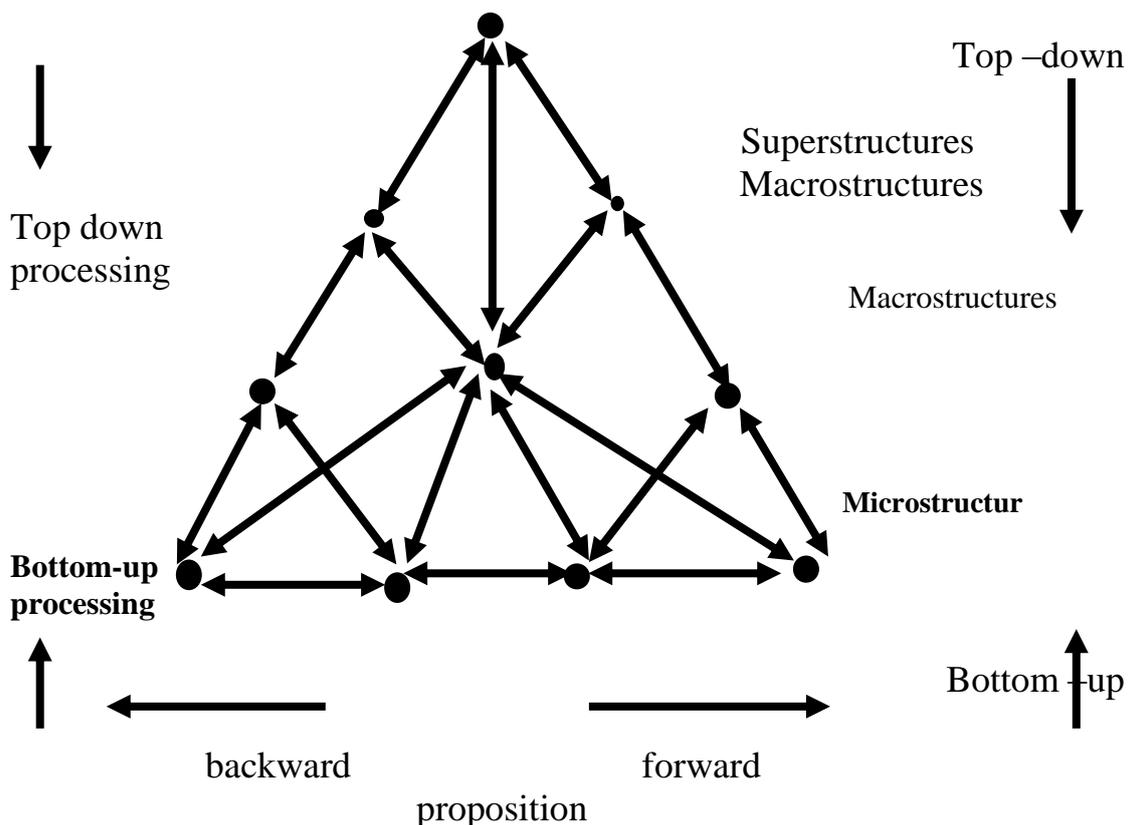
Frames states what things belong together in principle , but not in what order things will be done or mentioned.

Schemas: Global patterns of events and states in ordered sequence linked by time proximity and causality. Schemas are always arrayed in a progression , so that hypotheses can be set up about what will be done or mentioned next in a textual world.

Plans: Global patterns of events and state leading up to an intended goal .Plans from schemas in that a planner (text producer) evaluates all elements in terms of how they advance toward the planner's goal.

Scripts: They are established plans called up very frequently to specify the roles of participants and their expected actions. Scripts , thus , differ from plans by having a pre-established routine.

The model can be diagrammed as follows:

Top –down

Superstructures
Macrostructures

Top down
processing

Macrostructures

Microstructur

Bottom-up
processing

Bottom –up

backward   forward

proposition

The bi-directionality of arrows signifies the coherence of a text at all levels. The tree shows also how strategies segment the text coherently into layers that form an organic whole.

1.3 Operational Strategies

After reviewing three sets of criteria used for eliciting local relations , the operational criterion adopted in this paper is that proposed by Van Dijk and Kintsch . This model is more comprehensive and applicable than other models reviewed.

CHAPTER TWO

2.1 APPLICATION

It was on a hill It was a graveyard of the old –fashioned western kind. It was on a hill, about a mile and a half from the village .It had a crazy board- fence around it , which leaned inward in places , and outward the rest of the time , but stood upright nowhere .Grass and weeds grew rank over the whole cemetery .All the old graves were sunken in . There was not a tombstone on a place ; round-topped , worm-eaten board staggered over the graves , learning for support and finding none .'Sacred to the memory of ' So –and-so had been painted on them once , but it could no longer have been read , on the most of them , now , even if there had been a light (Twain , ch-9:68).

2.1.1 Text Processing

This practice is achieved purposively for showing how a text can be processed. The processing of the text can be done in terms of processing sentences locally and globally following the strategies suggested in the theoretical side of this paper.

Henceforth, the units (sentences) of the text are being analyzed and the relations are ascribed:
1- " It was a graveyard of the old fashioned western kind"
The noun phrase (graveyard) presents an example of a graveyard-frame viz a set of slots or typical graveyard individuals (board-fence, grass, weed, graves, tombstone, hill, etc.)

This sentence instantiates the graveyard-frame by the use of text –fillers.

The first sentence is coherent because (old-fashioned western kind) is a normal whole for the individual (graveyard).
Specification is shown through dealing with the (graveyard) as subclass and (western kind) as its superclass.Moreover, cataphoric reference is represented by (it-graveyard).

2.   "It was on hill, about a mile and a half from the village "
Locally, the relation between this sentence and the previous one is explication. Globally, the relation among the part of this sentence is addition .It is coherent in virtue of elaboration of the meaning.

(About a mile and a half from the village) is a normal location the (it – graveyard) and (hill).

3.   "It had crazy board –fence around it, which leaned inward in places, and outward the rest of the time, but stood upright nowhere".
 The local relation between sentence (2) and (3) is specification. This sentence represents the subclass of the previous sentence, i ,e., superclass. This kind of relation, i.e., specification, is globally shown through dealing with the parts of the graveyard. Moreover, the predicate (leaned inward) determines a possible consequence for the (fence) .All the predicates come in accordance with the argument (fence).

4.   "Grass and weeds grew rank over the whole cemetery ".
The relation between this sentence and the previous one is explication.
Globally, the predicate (grew rank) denotes a possible relation between the argument (grass and weeds) and (cemetery) or it is a normal consequence.

5.   " All the old graves were sunken in"

For the relation between this and the previous sentence is generalization. This sentence is coherent because the predicate (were sunken in) reveals a possible consequence. Particularization is introduced, via, (old graves) part from the graveyard. This can be interpreted as:

   1. There are old and new graves.
   2. New graves were not sunken in.

6. " There was not a tombstone on the place; round-topped, worm –eaten board staggered over the graves, leading for support and finding none".

The relation between (5) and (6) is identified as specification. Globally , lets start with predicate (staggered over the graves) which shows two things : on the one hand , it is a possible consequence for the argument (tombstone) , and on the other hand , it denotes an acceptable relation between (tombstone) and (grave) ,i.e., whole-part.

   7. " Sacred to the memory of' So –an-so had been painted on them once but it could no longer have been read , on the most of them , now, even if there had been light ".

Locally, this sentence is a relation of example, and globally, elaboration or addition can be easily noticed in this sentence.

The argument (scared to the memory) can be correctly denoted by the predicate, it can be (painted) (read). Both are typical activities or consequences for the argument. The argument (scared to the memory) is anaphorically referred to as (it). (them) refers to (graves) as well .

CONCLUDING REMARKS

On the basis of what has been mentioned, it can be concluded that :
1-Text processing can be easily tackled if strategies are followed adequately.
2- The criteria suggested showed high degree of applicability and comprehensiveness, and this agrees with the hypothesis of the paper.
3- Frame can be directly instantiated through text representation.

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