

## Paragraph Inner Structure: The Step Model

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### Abstract

*All incorporated in what we prefer to call the STEP MODEL, this paper aims at reporting the main correlations between several factors affecting the inner structure of a paragraph. This model, the argument goes, reveals the underlying linguistic bonds between the topic sentence, explaining sentences, discourse makers, etc. and what they result in, for example, length of paragraph and harmony of the idea involved. In addition, it provides the newborn main mechanisms adopted in processing the paragraph. It pretends that heaviness of topic sentence, astray hood of explaining sentences, and the critical point all work in tandem to control paragraph structuring and lengthening. This study comes out of certain tangible findings including that the process of building a paragraph is not governed by stylistic components or cohesive or coherent factors. Rather, they are fully related to the idea involved, taking its maturity into account.*

**Key Words:** Paragraph, Discourse, Step Model, Idea Maturity, Critical Point

### Introduction

A written text is traditionally presented in (a certain set) of internally-related paragraphs. According to Bond and Hayes (1984) and Stark (1988), the subjects tend to make paragraph divisions where there are thematic discontinuities in the texts. As these discontinuities form pivotal points in the thematic development of a text, the use of paragraph divisions to mark them obviously plays a significant role in exposing the underlying structure of the text. Such a revelation, as suggested by many researchers (e.g., Britton, 1994; and Hinds, 1980), facilitates, as a result, the reader's text processing. In relevance-theoretic terms, what this basically means is that communication can then be "relevance-oriented", i.e. processing assumptions productively (Sperber and Wilson 1986a, 1986b, 2002; Wilson and Wharton 2006). It is then claimed that the differences between paragraph divisions as reflected in varying agreement rates have to be specified (Cf. Shaojun Ji, 2007). The thrust of argument in a number of recently published studies ( ) is like this: Why are paragraph divisions are not entirely shared?

According to Gernsbacher's *et al* (1990) structure-building framework of language comprehension, the reader maps incoming information onto a developing mental structure as long as that information coheres with the previously represented information. When the incoming information is incoherent with the evolving structure, the reader stops building the present structure and starts developing a new one. Accordingly, the first clause of a discourse should enjoy first mention advantage and be more accessible than subsequent clauses, so that incoming information might be mapped onto it. In the meantime, any clause currently being processed (in its own substructure) should be foremost on the comprehender's mind.

Other scholars ( ) claim that the division of new paragraphs is due to a digression process, on which research hinges on two poles:

- 1- That which deals with digression only.
- 2- That which deals with digression markers only.

A major goal of our current research is to bridge the two to show how discourse markers can serve a digressive function in paragraphs division.<sup>1</sup>

It is possibly an axiomatic fact that each paragraph consists mainly of two important parts: A TOPIC SENTENCE which expresses the prime thrust of the paragraph and the accompanying sentence(s) which do(es) explain, account for, signify, etc. this topic sentence. These accompanying sentences are purposefully tagged, in this paper, as EXPLAINING SENTENCE(S). Generally speaking, the number of these explaining sentences is fully ascribed to the complexity of the topic sentence. In the following subsection, we let ourselves into the machinery of the STEP MODEL, so as to show how it can help us see the bonds between the topic sentence, explaining sentences, discourse makers, etc. and what they result in, for example, length of paragraph and harmony of the idea involved.

Besides, Hofmann (1989) tries to integrate paragraphs justified in either way, based on cognitive processing management. He states that paragraph length is tailored in a general way to genre and age considerations. Similarly, the number of paragraphs in the body of a typical essay will not be isomorphic to the number of major conceptual points made in that essay: some points seem to require multiple paragraphs while others do not. For Hofmann, a paragraph is about the need to segment written discourse into manageable chunks, and what counts as manageable will vary according to the expected age and attention span of the reader and the reading context (e.g., home vs. public transport); the fact that the end of a paragraph so often coincides with the end of a structurally integrated conceptual unit of the Christensen or Longacre type makes sense when one considers that such junctures in written discourse are highly convenient points to allow a reader to pause for breath, assess what has been said, and mentally distill the content of the previous paragraph into capsule form.

Coaching the cognitive point of view, Wilson (1998), however, argues that paragraphing cannot be explained in terms of a coherence-based theory. As evidence against a coherence-based theory, she cites Stark (1988), who showed that absence of paragraphing and arbitrary paragraphing did not affect readers' coherence judgments. Unfortunately, however, Stark's findings cannot support a S&W relevance-based theory either. According to Wilson, "the processes that go around paragraph breaks (anaphoric processes, intonation changes, pauses, slowed reading speeds, etc.) save the addressee wasted effort by alerting him to the fact that a switch in contexts is about to take place" (1998: 71).

### ***Step Model***

This model provides us with a rather rational account of the inner structure of a paragraph. More concisely, it links the sentences contained in the paragraph and their order with supra-paragraph elements such as discourse markers. All sentences in a paragraph, except for the topic sentence, have peripheral or even marginal roles in terms of serving the idea involved. Thence, we would pretend that the relationship between the topic sentence and explaining ones is best depicted in the word "government" as in Figure 1 below.

What this basically means is that whereas the topic sentence marks the topic of the paragraph, the other sentences explain this topic sentence *involuntarily*. Any explaining sentence shifting its orientation against that topic processed will end up in one of two fates:

- 1- To be removed from the paragraph involving that topic sentence; hence the coherence and cohesion of the paragraph would break down (for details about cohesion, see Haliday and Hasan, (1976))
- 2- To mark the end of the paragraph and, thus become a topic sentence of another paragraph on its own; hence it disconnects the flow of thoughts and explanation process geared by the previously established topic sentence.

A for the machinery, the topic sentence is the first "step" of building a paragraph, where it becomes quite impossible to access, say, the 1<sup>st</sup> explaining sentence without crossing over the topic sentence.

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<sup>1</sup> Borden'a and Arguedas (2009) claim that digression should be defined as a rhetorical operation which includes some kind of topic difference with the previous and subsequent discourse. They add that recognition of digression is not limited to the role of language; it, rather, involves additional factors such as cultural knowledge, our experience as speakers or readers, or the discourse traditions we are familiar with. The rhetorical nature of digression explains, they add, the large quantity of discrepancies found in the literature, as digression is, to a great extent, a matter of style; hence stylistic matters are somewhat ungraspable.

By the same token, you cannot access the 2<sup>nd</sup> explaining sentence without crossing over the topic sentence and the 1<sup>st</sup> explaining sentence, and so on. This access is best shown in figure 2, where the topic sentence serves the role of the station where you can decide to get the train of thoughts you want:

Here arises the opportunity to ponder on a question like this one: “Are the explaining sentences equally important?” Couched within a framework which puts the flow of the idea at the forefront of communication, we dare to claim that the relevance of any explaining sentence is geared by its ‘closeness’, so to speak, to the topic sentence. To be more specific, the 1<sup>st</sup> explaining sentence is more important than the 2<sup>nd</sup> explaining sentence and so forth. The reason, we reckon, is that the power the topic sentence exercises on the explaining sentences in one paragraph starts to fade out as the explaining sentence falls far from its firm grip. This strength is sketched out in figure 3 below:

In order provide a statistical piece of evidence for our current claim, the researchers analyzed 50 randomly-selected texts containing varying numbers of paragraphs. It turned out that most of the ideas conflicting with the topic sentence are contained in those explaining sentences poisoned far away from the topic sentence. That is probably because the effect of the topic sentence on these explaining sentences has reduced dramatically. Shielded with this understanding, we present the STEP MDEL which where each step represents one level of maturity. As shown in figure 4, the topic sentence is the first step towards the maturity of the idea. It is only across the topic sentence that you can go over to the second step, containing the first explaining sentence and so on.

### ***Topic Sentence Heaviness***

The notion of HEAVINESS relates to the STEP MODEL in that the most important idea is contained in the heaviest step. The scale of heaviness is measured by the number of sentences in one paragraph. For example, the heaviness of the topic sentence in Figure 4 above is “4 degrees”<sup>2</sup> because there are still four steps to go upward. Next comes the 1<sup>st</sup> explaining sentence; its heaviness is “3 degrees”. The lightest step in this model is the 4<sup>th</sup> explaining sentence because there are no more steps to go upward. As a result, topic sentences vary. A topic sentence of a three-sentence paragraph is different from that of a six-sentence paragraph in terms of heaviness. Whereas the former is 2 degrees, the latter is 5 degrees. This could probably account for why we have one-sentence paragraph and, in some cases, 15-sentence paragraph.

Another characteristic feature of the step model is that of SCOPE which roughly be sketched as in the following pyramid:

What is worth mentioning here is that as you move upward the scope of the idea gets narrower to the point it reaches THE CRITICAL POINT, where the heaviness of the topic sentence affects its strength negatively. To illustrate, as the explaining sentences start going astray, the idea being processed in the paragraph gets mature enough. At this point, the correlation between the heaviness of topic sentence and its strength gets negative. This is called “ASTRAYHOOD OF EXPLAINING SENTENCES”. The topic sentence, which has already been sharpening, begins to lose control of the other subsequent explaining sentences, which turn to be rebelling at this stage. This correlation is shown in figure 5:

When reaching the critical point, discontinuity could become the ultimate (and possibly the best) solution for such a mess, with the result that a new more dominant idea is generated, and thus a new paragraph is created.<sup>3</sup>

### ***Producers Adopted to Revive the Topic Sentence***

In this section, we hope to show how to link some discursal phenomena (such as discourse markers) with the inner structure of the paragraph. Upon further analysis of the data, it turned out that discourse markers are more prevalent with the last sentences of a paragraph. In traditional terms, discourse markers are there to serve coherence and/or cohesion purposes (see Fraser 1999; Hansen 1997), or for ‘some’ cognitive purposes (see Wilson and Sperber 2004). However, we dare to claim that discourse markers found towards the end of the paragraph could serve some additional function, namely to prevent astrayhood of the topic sentence.

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<sup>2</sup> Every sentence equals one degree

<sup>3</sup> This finding contradicts that of Swerts (1997) who states that boundary strength was then defined as the proportion of subjects that marked a specific phrase boundary as a breaking point between two consecutive paragraphs

In addition to serving some effort-saving purposes, they help revive the strength of the topic sentence, as the critical point is nearing. For example, the discourse marker “however” which is apparently common much in final explaining sentences makes a link which can serve at least two important functions:

- 1- Reviving the idea of the topic sentence being processed
- 2- Preventing explaining sentences from going astray.

When scattered all over the place, discourse markers fight against the effects of the heaviness scale by preventing the topic sentence from reaching the critical point very soon. It is worth noting that the strength of the discourse marker could also be quantified according the equation which we put forward along the following lines:

***The Strength of Discourse Marker: D + PrS - PoS***

Where:

D = degree of topic sentence

PrS= pre-explaining sentences

PoS= post explaining sentences

Suppose that there is a six-sentence paragraph of which the topic sentence is 5 degrees as shown in Figure 6 below:

According to the equation stated above, the strength of the discourse marker found in the last step can be calculated like this:

$$5+4-1= 8$$

Whereas the strength of the discourse marker found in the penultimate step can be calculated like this:

$$5+3-2= 6$$

What is integral here to focus upon is the idea that the effect of a discourse marker is weakened as long as it approaches the topic sentence. As a result, the discourse markers of initial steps of the model are best labeled as “subordinate discourse markers” since they are heavily affected by the topic sentence, and they only explicate the idea involved in the topic sentence. On the other hand, the discourse markers of last steps of the model are best tagged with “shifting discourse markers” because their role is to rebel the idea of the topic sentence. In addition, as the strength of the discourse marker conflicts with the strength of the heaviness of the topic sentences, it therefore mirrors it as shown in figure 7 below:

At the operational level, what this basically means is that the more the discourse marker is close to the topic sentence, the weaker it gets probably because it gets overpowered by the strength of the topic sentence. Conversely, the further away from the topic sentence the discourse marker falls, the stronger it becomes probably because the grip of the topic sentences starts to fade out. This view may provide deeper appreciation of the role discourse markers play relative to their position in the discourse. At the level of detail we are considering here, this amounts to saying that discourse markers of which fall at higher steps on the STEP MODEL enjoy have discursal functions different from those which come earlier. The former is targeted for paragraph survival; the latter is for building and/or structuring the theme under investigation as enhanced by the topic sentence.

***Conclusion***

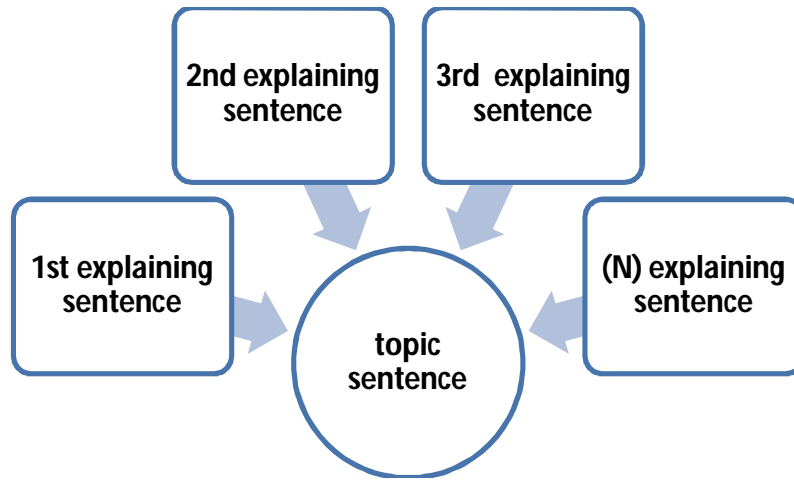
The Step Model is therefore a modest attempt to decipher the main mechanisms of paragraph structuring. It still awaits application on different kinds of paragraphs from different languages. Given the basic tents and the main machinery of the model, it is possible to conclude the following:

- 1- Paragraphs are complicated structures subjected to a certain number of constraints or linguistic operations.
- 2- The topic sentence is the most important sentence in the paragraph because it governs the entire paragraph structure
- 3- The topic sentence has varying weight effects (i.e. control) over the other explaining sentences following it
- 4- The more the explaining sentences are close to the topic sentence, the more they are important and significant for the idea of the processed in the paragraph

- 5- Explaining sentences might go astray when the effect of the topic sentence reduces
- 6- The effect of topic sentence reduces when reaching the critical point
- 7- The critical point is determined by the maturity of the idea processed
- 8- Discourse markers have their actual effect to revive the strength of topic sentence, and thus prevent explaining sentences from going astray
- 9- Discourse marker serve different functions given their location in the paragraph
- 10- A paragraph consists of three ordered working domains shown in figure 7

**Figures:**

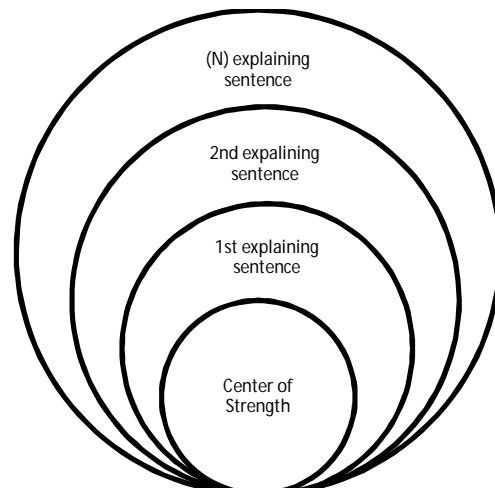
**Figure 1: The Topic Sentence Government**



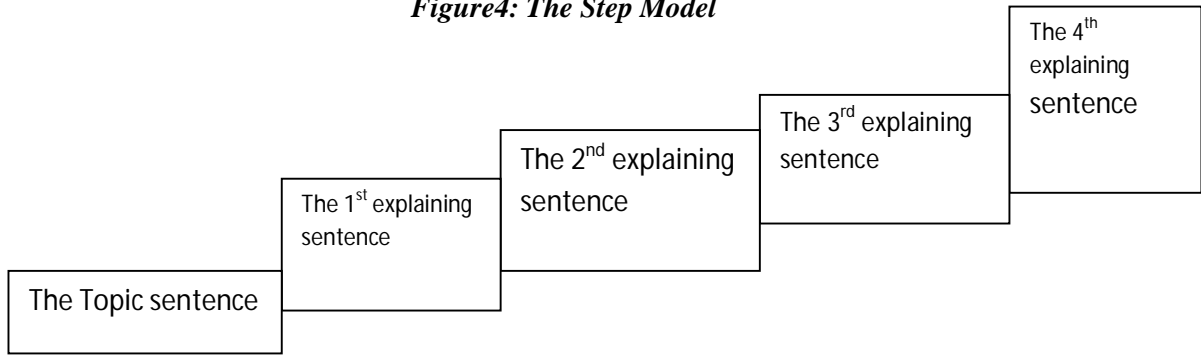
**Figure 2: Sentence access in a paragraph**



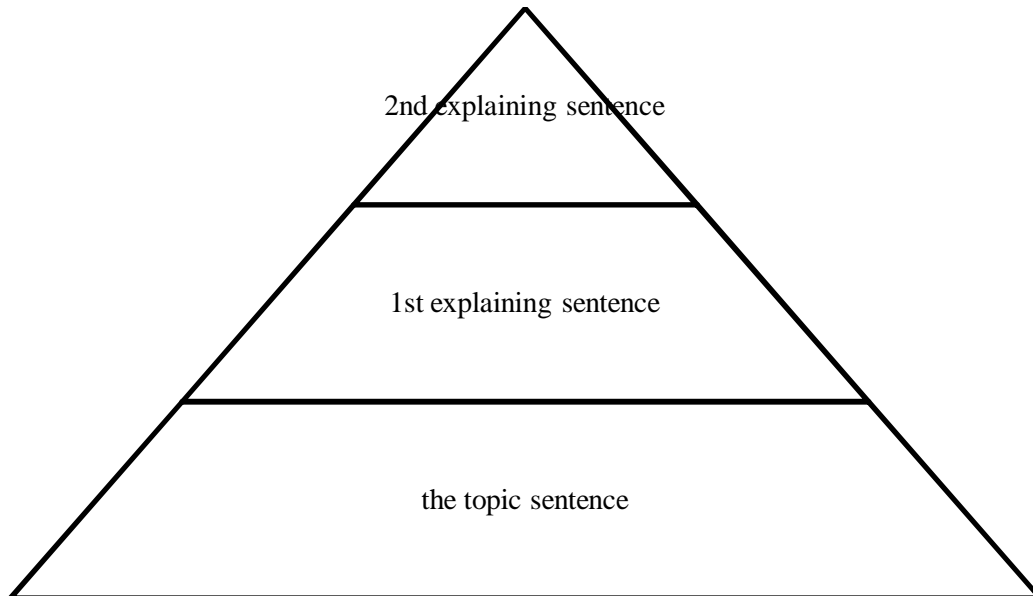
**Figure 3: The Strength of Topic Sentence and its Effect**



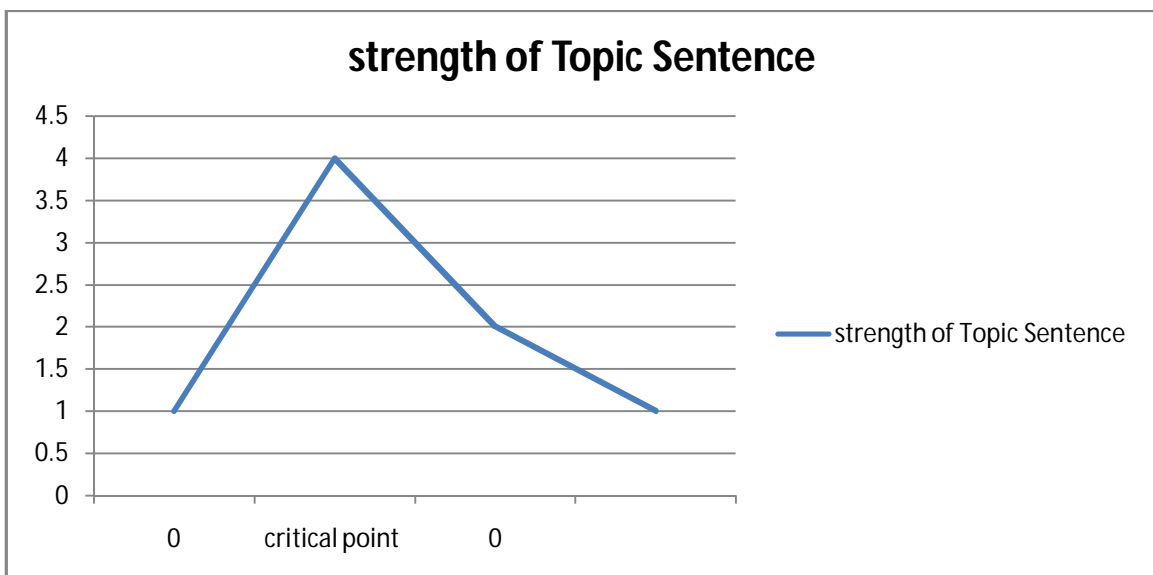
**Figure4: The Step Model**

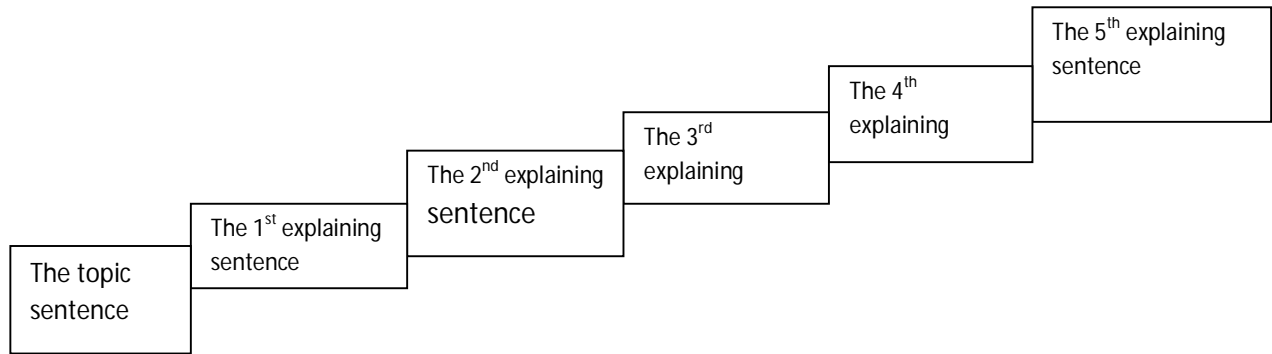


**Figure 4: The notion of Scope**

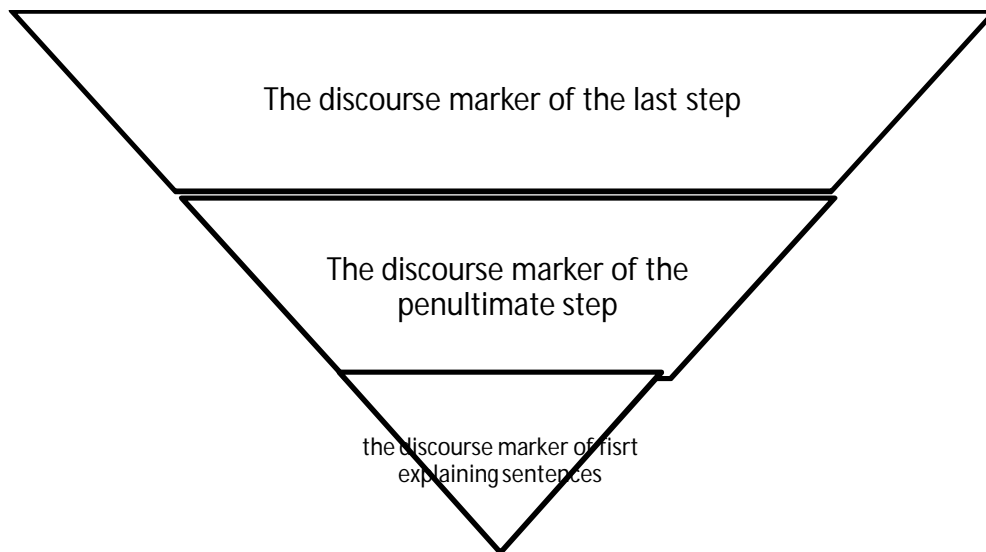


**Figure 5: The Critical Point**

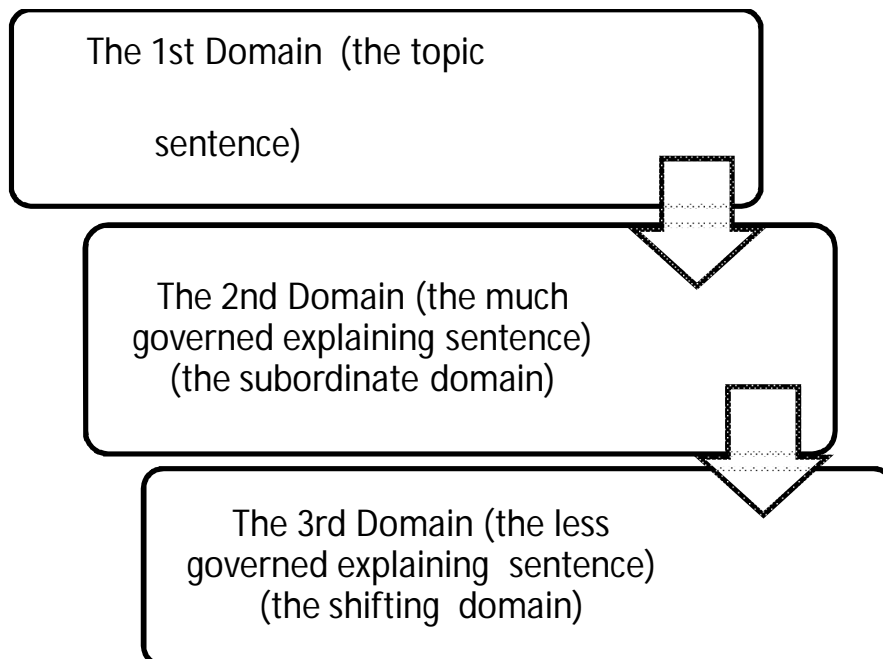




**Figure 7: the strength of Discourse Makers**



**Figure 7: Paragraph Working Domains**



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