Assignment: Scientific Writing

*The Science of Scientific Writing* by Gopen & Swan (1990) discusses some of the important aspects of ‘Scientific Writing’, which included the following:

1) **Reader expectations**
   a) Most important interpretations are based on structure
   b) Interplay between substance & structure
   c) Place information where a reader expects to find it
2) "Shape"
3) Subject / verb separation... interruptive
4) Stress position
5) Ordered for syntactic closure
6) Topic position
7) Logical gaps
8) Locating the action
9) Disclaimer!

Assignment:

As part of the assignment, we were to select a unit of discourse from a scientific journal which (about 500 to 1000 words) and provide a copy of this selected unit by indicating with notation (numbered) each of the "criteria" for meeting the reader's "expectations" discussed in Gopen and Swan' article.

The following paragraph was taken form the results section of a research paper “Genetic diversity and insecticide resistance of *Myzus persicae* (Hemiptera: Aphididae) populations from tobacco in Chile: evidence for the existence of a single predominant clone (2004). Fuentes-Contreras E, Figueroa CC, Reyes M, Briones M and Niemeyer HM. *Bulletin of Entomological Research*, 94: 11-18”.

“Esterase levels found in aphids sampled from all localities are shown in table 3. No significant differences were found between northern (peach), central (few peach) and southern (no peach) areas, evaluated either as total absorbance (Kruskal-Wallis test: H 2,35 = 1.214, P = 0.54) or absorbance per µg fresh weight (Kruskal-Wallis test: H 2,35 = 2.769, P = 0.25). Finally, all localities sequenced (N = 9) presented leucine in position 1014 of the IIS6 fragment of the sodium channel gene; indicating that the *kdr* mutation was absent in the samples analyzed.”

1. **Predominance and most important aspect and what the section deals with:** Even if the reader wants to look at one of the section in the results section, he would be able to interpret the results, by knowing what the author was talking about. Though the author knows that he is talking about the analysis of a completely different aspect of the subject that was discussing in the preceding paragraph, he switches the context that
helps the reader, by giving an idea what the section predominantly deals with, with a hint right in the first sentence.

2. **Place information where a reader expects to find it:** The author follows the results that he cites for the table 3 and elaborates on it, which gives the reader a choice to go through the elaborative results that he/she may want to through.

3. **Subject / verb separation... interruptive:** The author uses the verb as and when needed which conveys the message in a more appropriate fashion that forms the link between the subjects.

4. **Stress position:** The author clearly states in the start of the sentence that they haven’t found any differences in the esterase levels among the aphid colonies that they have tested from different localities. This gives a clear picture to the reader, even if he/she doesn’t know how to interpret the esterase levels and how significant they should in order to say that they are different or similar.

5. **Ordered for syntactic closure:** The author simplifies with the usage of the syntactic closure, here a semi-colon, which combines virtually 2 sentences, which convey the same meaning.

6. **Topic position:** The author makes his position strong by comparing the results that he obtained and makes the topic position very supportive.

7. **Logical gaps:** Throughout the paper the author logically fills the gaps between the two different aspects that they are talking about – Supporting that they have found a single predominant clone in their analysis and survey and which may be the reason that they haven’t found any major differences in the esterase and gene amplification techniques that they have performed to support their stand on their findings.

8. **Locating the action:** The action part is described in the form of the methods that they have used. So, here the author bridges the gap in the form of the action that they have used by bringing up the methods that they have used to interpret / support / quantify the things. Even if the reader missed the method by which they have used, he/she can get that information from the results section, so that he/she can go through the section if he/she is interested in. This helps a lot when the reader is more interested in the results and do not want to spend a lot of time in looking at the methods, elaborative results and the conclusions of the research paper. Simply by looking at a small paragraph, the reader can get a clear picture what the author wants to convey.