**TIPS ON READING AND WRITING ABOUT PRIMARY ARTICLES**

**C.D. Jarvis**

Now that you are reading primary articlesyou'll find that even though the jargon and format may feel intimidating at first, you'll soon get used to both as you learn more about the subject and read more papers on related topics. Also, you'll have more questions--some about content or technique and others about how the work was done.

In the next few weeks, you'll be asked to practice different aspects of writing critiques, and you might find it helpful to refer to this guide and the one about experimental design.

Most primary articles begin with an **abstract** which summarizes the major points of the study (what was asked, what was done, what was learned). If the subject is new to you, the abstract may be hard to understand because it doesn't explain much. It sometimes helps to just scan it to see if it's even close to what you want to know.

The **introduction** is usually helpful because it sets out the rationale for this study by telling you three things:

--the general topic the paper addresses

--previous work that led to the question asked in this study (citations to studies included in the bibliography are given, but few details of that work are mentioned)

--the question(s) the study you are readingis designed to address

The first time you read the paper you might want to skip from the introduction to the **discussion** to get a quick idea about what they concluded.

The **methods** section may look a bit intimidating because it often has lots of technical details, so at first, glaze out the details and focus on two things:

--An overall picture of the experimental design. Sometimes this information is set out more clearly in the introduction or the abstract, but it's important for you to step back from the details and figure out why they designed the study as they did (more about this in the handout on experimental design).

--Details about each step of the experiment (some of these--like how they chose their subjects and how many subjects they studied and over what period of time--will be important to understand right away; others--like what brand of spectrophotometer they used--are more detail than you need to worry about).

The **results** section shows the results of tests described in the methods section. It shouldn't have much in the way of conclusions. What it will have is tables, graphs, or diagrams. The text of the results discusses some of what is in those figures, but you'll need to look closely at the tables and graphs to really understand the results (we'll help with this).

The next section is generally called **discussion or conclusions**. That's where the authors remind you of the original question(s) they were asking and address how well they think their data answered those questions. They may refer to other studies which help explain some of what they found or expected to find and didn't. They may speculate in this section about what their results might mean and what additional kinds of work they believe needs to be done and why.

The final section is the **bibliography.** This is very useful as you're getting into a new topic. It tells you who else is working in the field, what work was done earlier that led to this study, how some of the techniques were developed, etc. Eventually you'll find it hard to read a copy of a paper that leaves off the bibliography, so be sure always to include it when you duplicate a paper to read.