Name:

Date:

RHE309k

**Article Analysis**

[Article citation, in APA format]

**Before you begin: some general advice**

(Jennifer Raff, 2013)

Reading a scientific paper is a completely different process than reading an article about science in a blog or newspaper. Not only do you read the sections in a different order than they’re presented, but you also have to take notes, read it multiple times, and probably go look up other papers for some of the details. Reading a single paper may take you a very long time at first. Be patient with yourself. The process will go much faster as you gain experience.

Most primary research papers will be divided into the following sections: Abstract, Introduction, Methods, Results, and Conclusions/Interpretations/Discussion. The order will depend on which journal it’s published in. Some journals have additional files (called Supplementary Online Information) which contain important details of the research, but are published online instead of in the article itself (make sure you don’t skip these files).

Before you begin reading, take note of the authors and their institutional affiliations. Some institutions (e.g. University of Texas) are well-respected; others (e.g. [the Discovery Institute](http://www.discovery.org/" \t "_blank)) may appear to be legitimate research institutions but are actually agenda-driven. *Tip: google “Discovery Institute” to see why you don’t want to use it as a scientific authority on evolutionary theory.*

Also take note of the journal in which it’s published. Reputable (biomedical) journals will be indexed by [Pubmed](http://www.ncbi.nlm.nih.gov/pubmed" \t "_blank); you can find a more complete index of science journals at **[Web of Science](http://thomsonreuters.com/web-of-science/" \t "_blank)**. Beware of [questionable journals](http://scholarlyoa.com/individual-journals/" \t "_blank).

1. Define these terms (either look them up, or just write what they mean)

* Gastroenterological
* Neurological
* Neurodegenerative disease
* Neuropsychiatric diagnosis
* Autistic-spectrum disorders

2. Skim the paper quickly.

3. Read the summary (British for “abstract”) and introduction. Based on your reading, explain in plain English what you think this article is about. (You may not be able to answer all of these questions.)

*a. Identify the BIG QUESTION: What problem is this entire field trying to solve?*

*b. Summarize the background in five sentences or less. What work has been done before in this field to answer the BIG QUESTION? What are the limitations of that work? What, according to the authors, needs to be done next?*

*c. Identify the SPECIFIC QUESTIONS: what exactly are the authors trying to answer with their research?*

*d. What are the authors going to do to answer the SPECIFIC QUESTIONS?*

*e. What do the authors claim that their results show?*

4. Methods

*a. Who are the test subjects and how were they chosen?*

*b. What aspects of the subjects were examined? You don’t need to know what all these things are, but you should have a sense of what kinds of things they’re looking for. Why are they doing each of the major tests?*

*c. Do you have any concerns about the methods, including the subjects, sample size, and tests?*

5. Results

*a. Which results seem to suggest important correlations? Which results suggest no correlation?*

*b. Look at table 2. Write a short paragraph explaining what you think it means.*

*c. Do you have any questions or concerns about the results?*

5. Discussion

*a. List the major claims that are made in the discussion, in plain English. For each claim, mention any alternate explanations that the authors provide*

*b. List any weaknesses that the authors identify in their own study. Do you see any weaknesses in this study?*

*b. Do you agree with the claims being made? Can you think of any alternate interpretations for the results?*

6. Is this article generally supported in the field? Try googling it.