**Introduction to Critical Thinking Papers**

The process of thinking critically begins with an open mind, then forming conclusive ideas and arguments later. The formally written Critically Thinking Paper should read as an argument paper. It is necessary to be clear and concise to make your argument in 550 words.

**There will be three Critical Thinking Papers, valued at 70 pts, 80 pts, and 100 pts.**

***TO RECEIVE ANY CREDIT FOR YOUR PAPER YOU MUST MEET THESE THREE REQUIREMENTS:***

**1. *Use acceptable sources to avoid a paper score of zero***.

An acceptable source for this assignment must be a peer-reviewed publication or book, published between 2007 and 2017(for more information, look under “Format/Content Guidelines” on second page).

**2. *Properly cite all four of your primary sources in the Analysis section to avoid a paper score of zero***.

All in-text citations must be in the following format *ONLY*: (Author’s last name(s), publication year; page number (or paragraph if no page number).

**3. *Paper must adhere to the Critical Thinking format outlined below*** *(and must include the names of each sub-heading, i.e., Interpretation, Analysis, Evaluation, etc.).*

**In Addition:**

* **You will lose one point for each word over or under the requirements**: *You must have 400-450 words in “Analysis” section and a total for the entire paper of 500 – 550 words (you can count the headings and citations in your final word count or not; this is your choice).*
* **Include Your Name; Student ID #; Recitation Time; TA Name; Word Count; and Question #** **at the top of your paper.**
* **Attach a score sheet and put your initials where required.** You will immediately lose 15 points if score sheet is missing; -5 points for not initialing score sheet; -5 if paper and grade sheet not stapled together.

**Critical Thinking Paper Format**

**To think critically about something is not as intuitive as it might sound, so we will compartmentalize papers into the following format, comprised of the sub-headings explained below:**

# Title:

These Critical Thinking paper will not cover both sides of an issue. Some would call them “Position” papers. Take sides – **always** title your paper with either a declaratory statement, or a question. For example, your broad topic is “Wind Energy.” Your title could be “The Future is Blowin’ in the Wind” or “Wind Generated Energy is too Chancy” or “Why is Wind Generated Electricity the Fastest Growing of all Renewable Sources?”

# Interpretation

## This is, in essence, the introduction to your paper. The goal of this section is to convey to your audience the meaning of your topic, its significance, and how your paper will clarify and elucidate the issue. It might be helpful to attempt to write this section in three sentences: the first clarifying the topic, the second justifying why it is worthy of attention, and the third acting as a thesis statement (a concise explanation of your side of the argument).

###  **Condensed to its bones:** This is essentially a thesis statement [and must be *very* specific].

# Analysis

## The “Analysis” section is the largest at 400-450 words. Under this sub-heading, it is necessary to provide facts with accompanying explanations as to how and why these support your argument. Be sure to provide logical transitions from one idea to the next, elucidating your train of thought, if necessary. It will be assumed by the reader that the arguments presented are judged to be valid.

**Condensed to its bones:** Include only facts that support your specific argument. This is the largest component of your CT paper.

# Evaluation

## The “Evaluation” section provides an opportunity to critically examine the facts and/or arguments used. It is necessary to point out any biases that might exist in the studies, experiments, or statistical analyses and the effects that they have on conclusions, both in your specific essay and for a popular audience consulting their respective works. It is not sufficient to write that the sources were all taken from academic journals and are therefore valid. Stating that Cook is a professor is insufficient. Did he cite supporting material? Where did Allen get the information for his table/map?

**Condensed to its bones:** Identify bias in the arguments of at least two sources that you are using [Once again, be very specific]. If you are citing a piece written by the CEO of Exxon-Mobil concerning petroleum, note his conflict of interest. Go over the source of the bias. If it helps, think of “bias” as the limitations the author might bring to this paper or book.

# Inference

## The intent of this sub-heading is to highlight for the reader how the specific issue has broader consequences. It may be helpful to think in terms of scales; if your issue is on a local scale, what might the effects be on a national, international, or global scale? Essays concerning natural effects might be extrapolated to the human population or vice versa.

**Condensed to its bones:** Expand your topic to include its significance/impact on the broader scale, or if you are speaking of a global issue, how will it affect the local scale? [Be very specific here.]

# Explanation

## The explanation is analogous to a concluding sentence or paragraph. In this section it is necessary to state your argument, briefly summarize the findings that support your point of view, and concisely speculate on the broader effects; in other words, this may be seen as a re-iteration/reinforcement of the interpretation and inference sections.

 **Condensed to its bones:** This is a conclusion statement.

**Other Matters on Format/Content Guidelines**

* ***Word Count***: Once again, you must have 400-450 words under “Analysis” and 100-150 total in other five headings. The total combined number of words for the six subheadings cannot exceed 550 words (this means that you can’t put max words in both “Analysis” and other five headings). Count the headings or not; that is your choice.
* ***Acronyms***: For example, the first time you use the name of something, you can’t just write “ASPCA” – you would have to write it as “American Society for Prevention of Cruelty to Animals (ASPCA).” After that, further references can be written as “ASPCA” only.
* ***Acceptable sources:*** Cite a ***minimum of four peer-reviewed*** sources published in the last ten years.

**\*\*\*If you are not sure what this means, go to the end of this document for “A Guide to find Peer-Reviewed Sources” by Melva Treviño. This is important; failing to use a *minimum of four peer-reviewed* sources will result in a grade of zero.**

* ***Writing style***: Do not use first (or second person). What is the first person? Writing from the “I” point of view (this includes, “we” and “our”, the plural forms of first person).
	+ Do not use contractions. Examples: don’t, isn’t, won’t 🡪 Use: do not, is not, will not.
* ***In-Text Citations --*** *Every quote; fact or idea taken from an outside source needs to be cited, using* ***ONLY the following format:*** (Author(s) *last name* publication year, page number (or paragraph number if no page number) 🡪 Example: (Friedman 2008, page 16)
* Citations must go after the cited information (at the end of the relevant sentence). Another way to cite something could be: “According to Friedman (2008, page 16) ...” For web-based sources without page numbers give the paragraph number. Direct quotes must always be in quote marks.
* ***The Bibliography***: **Use the format for APA *ONLY* and all entries must be alphabetized.**
* Examples of citations for *professional journal articles in APA format*:

Baldi, G., Houspanossian, J., Murray, F., Rosales, A. A., Rueda, C.V., & Jobbágy, E.G. (2014). Cultivating the Dry Forests of South America: Diversity of Land Users and Imprints on Ecosystem Functioning. *Journal of Arid Environments, 123*, 1-13.

Romero-Ruiz, M. H., Flantua, S. G. A., Tansey, K., & Berrio, J.C. (2012). Landscape transformations in savannas of northern South America: Land use/cover changes since 1987 in the Llanos Orientales of Colombia. *Applied Geography, 32* (2),766–776.

**Condensed to its bones**: First author last name, First author first initial., & Second author last name, Second author first initial. (Publication year *only*). Title of publication. *Name of journal italicized*, *journal volume number italicized* (issue number in parentheses), page number range.

* Example for a *book*:

Inkpen, R., & Wilson, G. (2013). *Science, Philosophy and Physical Geography.* New York, NY: Routledge.

**Condensed to its bones**: Author, A. (Year of Publication). Title of work. Publisher City, State: Publisher.

\*\*\*For more information on this (as well as to learn how to list other types of sources, such as a website), please refer to the **APA Citation Guide** of the BibMe™ website: <http://www.bibme.org/citation-guide/apa/>

**Other Considerations**

* **The word limits of 400-450 for the “Analysis” section and 100-125 words total for all other headings, must be strictly adhered to**.
	+ Note that there is some flexibility between Analysis and the other headings, but the paper total MUST not exceed 550 words.
	+ To write concisely, glance at your paper’s title after writing each sentence. Does it fit, is it necessary, can it be written more effectively as a shorter sentence?
* **Make your paper creative and unique.** Each TA reads many, many papers; make yours stand out.
* **Proof-read your paper**, or have a friend with some talent for written English (or the OSU Writing and Learning Center) look it over. "A" papers do not have grammatical and spelling errors.
* TAs will all follow the same guidelines when grading papers, but we all have different personalities and backgrounds. We do work to have our average grades be pretty close at the end of the term.
* **You will receive an extra point if you print your paper on recycled paper or if it is double-sided.**

**A COMPREHENSIVE Guide TO Finding Peer-Reviewed Sources**

**Overview for GEOG 300:**

* In the Analysis section of your CT papers, you must **cite at least 4 relevant sources that are peer-reviewed** *and* **from the last 10 years (2007-2017)**. ***Failing to do this will result in a zero on your CT paper.***
* You may use other sources that do not meet this criterion (non-peer reviewed sources, or sources published before 2007), but *only in addition* to the four required primary sources.
	+ - There is no need to distinguish between peer-reviewed and non-peer-reviewed sources within your Bibliography. If you list your references in a proper format, then we will be able to tell the difference between them.

***What does “peer-reviewed” mean???***

* **Peer-reviewed publications** are written by experts and are reviewed by several other experts in the field before the publication is published; this is done to ensure the article’s quality. For this reason, such publications are more likely to be scientifically valid, reach verifiable conclusions, etc. In most cases the reviewers do not know who the author of the article is, so that the article succeeds or fails on its own merit, not the reputation of the expert” ([ASU Library Services 2017](http://www.angelo.edu/services/library/handouts/peerrev.php)).
	+ *In other words:* using peer-reviewed publications ensures you that the information you cite from that publication is legitimate, accurate, and (as much as possible) unbiased.

***What classifies as a peer-reviewed publication?***

* **Articles from peer-reviewed (or scholarly) journals.** For more information on this, check out this link: [Differences between Scholarly Journals, Popular Magazines & Trade Publications](https://library.sdsu.edu/reference/news/what-does-peer-review-mean)
* **Books (or text-books)** may or may not count as peer-reviewed publications, this depends on the publisher of the book. Some publishers require that the content of the books they publish is reviewed by a board of scholarly reviewers in the subject area of the book, as some don't require this at all. However, *in this class all* books will be considered peer-reviewed sources.

***What does NOT classify as a peer-reviewed source?***

* **"Newspapers and magazines**. Articles are written by reporters who may or may not be experts in the field of the article. Consequently, articles may contain incorrect information" ([ASU Library Services 2017](http://www.angelo.edu/services/library/handouts/peerrev.php)).
* **"Journals containing articles written by academics and/or professionals.** Although the articles are written by “experts,” any particular “expert” may have some ideas that are really “out there!” ([ASU Library Services 2017](http://www.angelo.edu/services/library/handouts/peerrev.php)).
	+ {Examples: National Geographic, New York Times, The Economist, etc.}
* **Websites.** It does not matter if the website ends in .com, .org, .gov, .whatever – information on websites is not peer-reviewed*.* It may be fact-checked and reliable information, but it does not mean it underwent the peer-reviewed process. The information could be coming from a prestigious NGO (ex: WWF, GreenPeace, Survival International, etc), and it may be highly accurate, but it does not mean it is peer-reviewed.
* **Dissertations, theses, industry reports, NGO reports.** These types of sources are often referred to as **"grey literature."** Again, these documents could contain valuable and reliable information, but they do not undergo the peer-reviewed process.
* **Blogs.** Some prestigious scholars might be great bloggers but blogs are not peer-reviewed. You can get ideas and inspirations from these, but *do not cite* them in a scholarly paper.
* **Government reports or publications**. These could be peer-reviewed, but this is not always the case and it varies by country. For this reason, it’s best to not assume that they are not.

***VERY IMPORTANT:* You need to cite a minimum of *four peer-reviewed sources as primary sources with the Analysis section of your CT paper* – from the categories listed in green above – *to avoid receiving a zero.*** *Y*ou can cite sources that fall within the categories listed in red above, but these can only be used as **secondary sources, and *in addition* to the four primary sources.**

***How to Find Peer-Reviewed Journal Articles through the OSU Library Website***

This is how the OSU Library explains how to identify a peer-reviewed journal: *"Peer-reviewed journals can be identified in several different ways: (1) Journals identify themselves as peer-reviewed (in the small print describing who they are in each issue, or on the publisher's website about the journal). (2) You can also do a search in several databases such as Academic Search Premier and limit your results to "Scholarly" or "peer-reviewed."* [If using this search engine, note that we ONLY accept articles that appear in EBSCO supported databases with “peer-reviewed” button checked.]

**🡪 To do this:**

* Go to <http://osulibrary.oregonstate.edu/>
* Type some key words related to the topic you’re researching.
	+ It helps to play around with this, as you will get different results if you change some of these words. For example, you can type “sustainability of electric cars”, then try something like “benefits of electric vehicles”, or “disadvantages of electric cars”, etc.
* **IMPORTANT**: Once you are on the page showing the results of your search, **make sure you click on “Peer-reviewed Journals”**, located to the left, under “Show only” (as shown by the red arrow below)
	+ This will ensure that you only look through sources that classify as ‘peer-reviewed’



***Alternative Search Engines***

You can use other search engines and databases if you wish. Google Scholar is a popularly used tool for finding peer-reviewed journal articles, but you must be careful when using it, as this database is not as clear about the quality of the results from your search (as the OSU Library website can be). If you are not sure you can tell the whether a source you found though Google Scholar is peer-reviewed, then do not use as a primary source or double check that it is before doing so.

🡪**If you’re not certain whether a source you want to use is peer-reviewed or not, please contact your T.A. and have them approve (or disapprove) of the source *before* you submit your CT paper.**