

Department of Anthropology
ANTHROPOLOGY 1026F, Section 001
Introduction to Biological Anthropology and Archaeology
Course Outline -- Fall 2016

Class Time: Mondays 7:00-9:50 PM

Class Room: Social Science Centre (SSC) 2032

Instructor: Dr. Ian Colquhoun

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Office Hours: Mon. 1:00-3:00 pm

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TA: Corbin Berger

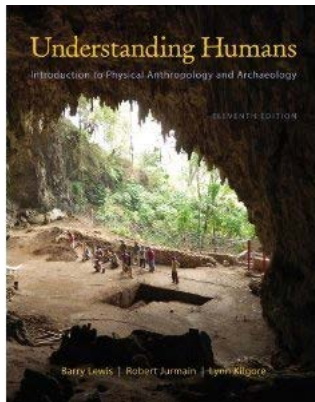
SSC 3301

cberger@uwo.ca

Wednesdays 1:00-3:00 pm

Prerequisite/Anti-requisite: There is no prerequisite for Anthropology 1026F/G; Anthropology 1020E is an anti-requisite to this course.

Required Text: The required text is:



Lewis, B., Jurmain, R., and Kilgore, L.E., 2012. *Understanding Humans: Introduction to Physical Anthropology and Archaeology* (11th edition). McGraw-Hill, Inc., New York.

Course Description:

Anthropology is the study of humankind, in all its facets. This course covers two of the four anthropological sub-fields: biological (or, physical) anthropology, and archaeology. The underlying theme connecting these diverse areas of interest is the study of human evolution, both biological and cultural -- the examination of our biological nature, our biological roots, and our cultural past. Or, if you prefer, “What are we, where did we come from, and how did we get here?”. Thus, we will be considering and discussing theoretical frameworks, biological and behavioural processes, and fossil evidence relevant to the evolution of our species, *Homo sapiens*.

Topics to be covered during the course include: the place of bio-archaeological anthropology within the broader discipline of anthropology; the nature of scientific thinking as it applies to the study of human evolution; a brief history of evolutionary thinking; the genetic basis of evolution; the forces of evolution, and tempo and mode in evolution; human biological variation and the concept of "race"; interpreting the fossil record -- the evolution of the Order Primates; an overview of the taxonomy, ecology and behaviour of the living non-human primates; method and theory in paleoanthropological and archaeological research; evolution of the family Hominidae -- from our extinct ancestors to ourselves; the Neolithic Revolution -- the origins of plant and animal domestication; the rise of complex, stratified societies; and, humans in the Anthropocene Epoch. Students who gain a sense of the biological and historical development of our species as an habitually bipedal, relatively hairless, big-brained, culture-dependent primate will have achieved the single over-riding objective of the course!

Learning Outcomes: Students who successfully complete Anthropology 1026F will:

- have gained a general appreciation of the importance of genetics in human biology;
- understand the impacts that the “Forces of Evolution” have on populations of species (including humans);
- grasp the weaknesses in the “human race” concept and have a contemporary view of human biological variation;
- have developed a broad appreciation of the scope and variability of nonhuman primate behaviour and ecology;
- have been introduced to the current interpretations of hominin, and human, evolution that paleoanthropologists have developed;
- be familiar with the techniques archaeologists employ in researching the history of human cultural behaviour and rise of ancient human societies;
- have insight on the fact that the research of biological anthropologists and archaeologists inherently “biocultural” in nature, which requires a wide range of methodologies and interpretive perspectives to be adequately understood.

Student Evaluation:

It is expected that (short of personal illness or family emergency) **students will attend each lecture** in the course. There is good reason to do so because the mid-term and final exams will be based on the material presented during lectures.

Course requirements will include:

- a mid-term examination -- see class schedule below (**30%** of final grade),
- a research paper **Abstract/draft Introduction** -- this should only be 250-300 words in length (**5%** of final grade); due any time **before Mon. Oct. 3, 2016**; Abstracts/draft Introduction **will not** be accepted after this date (although consultations regarding your paper can certainly continue right up until the due date),
- a research paper* (**30%** of final grade -- **due Mon., Nov. 14, 2016**; **(NO DEADLINE EXTENSIONS WILL BE GRANTED)**),
- a final examination, written in December exam period (**35%** of final grade); the final exam **will not** be cumulative (i.e., it will be based on material presented *after* the mid-term exam).

***NB: Because this is an "essay course", you must submit a research paper to earn academic credit for this course.** The research paper is worth 30% of your final mark in the course and will be graded out of a possible **30** marks; in effect, each mark you receive on your paper goes directly toward your final grade in the course. A paper handed in after the due date is subject to a **late penalty** equal to **5 marks per class** for each class that the paper is late (**to a maximum penalty of -10 marks**). For example, a paper that is submitted 2 classes late, would be penalized 10 marks and receive a mark out of 20.0. Essentially, the student in this case would have **forfeited 10% of their final mark in the course** – that is a drop of a full letter grade. **NO DEADLINE EXTENSIONS WILL BE GRANTED.** So, to avoid a grade penalization on your research paper, avoid submitted it late! However, submitting a late paper is certainly better than not submitting a paper at all!

The **only possible exceptions** to the late penalty and no extension rules are cases in which compelling medical or compassionate grounds can be documented, and where academic accommodation may be allowed. Students should consult the University's "Policy on Accommodation for Medical Illness" (<https://studentservices.uwo.ca/secure/index.cfm>), and the "Academic Rights and Responsibilities" section of the Western Academic Calendar (<http://www3.registrar.uwo.ca/calendars/index.cfm>) for further details.

Or, students should consult the Academic Counselling Office in their “home” Faculty in the event of illness, family emergency, or other personal difficulties that constitute "extenuating circumstances".

Academic Policies

All students should familiarize themselves with Western's current academic policies regarding accessibility, plagiarism and scholastic offences, and medical accommodation. These policies are outlined (with links to the full policies) at:

http://anthropology.uwo.ca/undergraduate/course_information/academic_policies.html

Additional Statements:

Statement on Use of Electronic Devices: Students are requested to switch off cell phones while in lecture. Students are not permitted access to cell phones during the mid-term and final exams. There will be no need for the use of calculators during either the mid-term or final exam. Electronic dictionaries, PDAs, smart phones, etc., are not permitted during the mid-term or final exams. Students may use laptop computers to take notes during lecture, but only if this laptop usage is **not** a distraction to other students in the class -- use of a laptop by a student for purposes other than those directly related to the course (e.g., watching YouTube; exchanging messages over MSN; etc.) would be grounds for disallowing further use of the laptop in class by the student.

Statement on Use of Personal Response Systems ("Clickers"): "Clickers" will not be used in this course.

Course Research Paper:

Be sure to get started on your selection of a paper topic as quickly as possible! Remember, there are a few hundred other students besides yourself taking this course; depending on your choice of topic, demand for research materials could be high. So, to avoid the frustration of being unable to track down references (because someone else got to them first), it is best to begin your research sooner rather than later -- that is, if you intend to avoid late penalties!

Virtually **everything** we cover in this course could be the basis of a research paper -- in fact, leafing through the text book would be one way to select a particular research topic from among the many possibilities. You may choose to seek approval for the topic of your research paper. You can do this by coming to meet with either me or the T.A. **during office hours** to discuss the topic of your research paper. Engaging in this conferral process will provide you direction during your research for, and writing of, the paper. Don't worry if you only a general area of interest as a starting point for a possible paper topic. Through discussion of a general area of interest, we can arrive at a suitable **specific** topic for your paper. Regardless of how you choose the topic for your research paper, you should make sure you approach the topic from a **problem-oriented** perspective. Do not simply provide a descriptive outline of some topic -- you must examine some question or problem that relates to a particular topic. The **"Guidelines for Course Research Papers"** is attached to assist you in preparing and presenting an anthropology research paper that is acceptable. **Be sure to read it thoroughly and refer to it often!**

Your completed research paper should be 12 typed, **double-spaced** pages in length -- the title page is **not** a numbered page; appendices and reference pages (although numbered pages) are not counted as contributing to the 12 page total. Proper reference citation format must be used (see the **"Guidelines"** section below) -- be sure to use **APA** reference citation style. **DO NOT USE THE MLA STYLE OF REFERENCE CITATION. Do not cite references with the use of either footnotes or endnotes.** Failure to use the proper referencing format will **negatively affect** the mark you receive on the research paper assignment. -- **you've been warned!**

Extensions are generally **not** granted. The deadline for submission of the paper **is** the deadline, period. The only possible exceptions would be either in the event of personal illness (a doctor's note is required as verification), or a family emergency (i.e., "compassionate grounds" for academic accommodation) -- see above also. If other extenuating circumstances crop up and prevent you from meeting the paper deadline, consult the Academic Counselling Office in your "home" Faculty, or arrange to speak with me -- preferably **before** the deadline.

Course Outline (tentative):

week 1

M Sept. 12:

"What is Anthropology?"-- Introduction and course overview.

"How did Biological/Physical Anthropology develop as a field of scholarly inquiry?" --

"I am a primate" -- An Introduction to Bio-archaeological Anthropology; L. *et al.*, ch. 1 (pp. 1-18); A Short History of Evolutionary Thinking; L. *et al.*, ch. 2 (pp. 19-36).

week 2

M Sept. 19:

"How did Biological/Physical Anthropology develop as a field of scholarly inquiry?" (cont.) --

video presentation: "Great Books: *On the Origin of Species*".

Genetic Inheritance and the Biological Basis of Life, L. *et al.*, ch. 3 (pp. 37-56).

Population Genetics and the Forces of Evolution;

L. *et al.*, ch. 3 (pp. 56-68), ch. 4 (pp. 79-80) and Appendix C (pp. 428-430).

week 3

M Sept. 26:

“How many ‘races’ of humans are there? The “Race Concept” from the perspective of Biological Anthropology” --

Human Biological Diversity and the Concept of "Race"; L. *et al.*, ch. 4 (pp. 69-79, and 80-94).

Macroevolution: Evolution at the Level of the Species; L. *et al.*, ch. 5 (p. 95 -- top of p. 103).

week 4

M Oct. 3*:

“If Anthropology is the study of humans, why study non-human primates?”

"What is a Primate?" -- An Introduction to the Non-human Primates; L. *et al.*, ch. 6 (pp. 115-144);

video presentation: “Life in the Trees”.

Macroevolution II: A Short History of Life on Earth; L. *et al.*, ch. 5 (top of p. 103 -- p. 114);

***Research paper “Abstract”/draft Introduction due in this class -- no late submissions allowed.**

week 5

M Oct. 10**:

**** Thanksgiving Holiday Monday ** -- No class!**

week 6

M Oct. 17:

“Primates past and present: When and why did primates first evolve and what were extinct primate lineages like? What do we know about extant (living) primate species?”

Evolution of the Order Primates; L. *et al.*, ch. 9 (p. 198 -- middle of p. 202, and “Summary” section to ch. 9, p. 229).

video presentation: The Nature of Things -- “Monkey Business”.

Primate Ecology and Social Behaviour; L. *et al.*, ch. 7 (pp. 145-172).

week 7

M Oct. 24*

***Mid-term exam (30% of grade): to be written during the regularly scheduled class time (SSC 2032).**

week 8

M Oct. 31:

“How did Anthropological Archaeology develop as a field of scholarly inquiry?”

Method and Theory in Interpreting the Fossil and Archaeological Records; L. *et al.*, ch. 8 (pp. 173-196);

“When and where did bipedal apes (“hominins”) first evolve and how did they differ from modern humans (*Homo sapiens*)?”

The Earliest Hominids and Genus *Australopithecus*; L. *et al.*, ch. 10 (bottom of p. 202 -- p. 221, and “Summary” p. 229).

video presentation: “The Search for Early Hominids”.

week 9

M Nov. 7:

“What is the earliest evidence for culture? (Or, what was life like in the Stone Age?)”, and “Which human ancestor first migrated from Africa and what were they like?: ‘Out of Africa’ Part I”.

Questions Concerning “Early *Homo*”; L. *et al.*, ch. 9 (p. 222 and bottom of p. 230);

Homo erectus; L. *et al.*, ch. 10 (pp. 231-250).

week 10

M Nov. 14*:

“Where did modern humans come from, and how are related to Neandertals and other ‘pre-modern’ hominins?: ‘Out of Africa’ Part II”.

Middle Pleistocene “Premodern” *Homo* and the Neandertals; L. *et al.*, ch. 11 (pp. 251-278).

video presentation: “The Search for Neandertal”.

***NOTE: research papers are due by this class; papers handed in after this date are subject to a late penalty (5 marks off the 30 mark value of the paper towards the final grade for each class the paper is late, to a maximum penalty of 10 marks -- see “Student Evaluation”, above).**

week 11

M Nov. 21:

“What is the earliest evidence for modern behavioural capabilities? (or, let’s domesticate the dog, invent art, and explore new places)”.

The Evolution of Anatomically Modern *Homo sapiens*; L. *et al.*, ch. 12 (pp. 279-306)

Homo sapiens at the Pleistocene-Holocene Boundary and the Peopling of the Americas; L. *et al.*, ch. 13 (pp. 307-338);

video presentation: “Ice Age Crossings”.

week 12

M Nov. 28:

“When, and where, did humans invent agriculture, and why go through the trouble?”

The "Neolithic Revolution": The Consequences of Agriculture and Animal Domestication; ; L. *et al*, ch. 14 (pp. 339-372).

video presentation: Out of the Past: “New Worlds”.

week 13

M Dec. 5:

“People invent political societies, marked social inequalities, writing, and cities: why?”

Ancient Civilizations of the Old and New Worlds; L. *et al*, ch. 15 (pp.373-406), and Biocultural Evolution and the Anthropocene, ch. 16 (pp. 407-414);

video presentation: “Indus: The Unvoiced Civilization”.

****Final exam:** The final exam is worth **35%** of the course grade (only material covered since the mid-term will be on the test). The final exam will be written during the mid-year exam period -- **December 10th to December 21st**; the date, time, and place of our final examination will be announced in class when these have been determined by the Office of the Registrar (which should be done by early November). **DO NOT MAKE HOLIDAY TRAVEL PLANS BEFORE YOU KNOW WHAT THE DECEMBER EXAM SCHEDULE IS.**

ANTHROPOLOGY 1026F - Guidelines for Course Research Papers:

General Guidelines:

As noted above in the course description, one of the major requirements for the successful completion of this course is the writing of a research paper. **To be clear, because this is an “essay course” you must submit a research paper in order to successfully complete the requirements of this course.** Certain general guidelines should be followed in order to properly write an anthropological research paper. Taking a little extra time and effort to organize and effectively present the material in your paper will certainly pay off in the mark it eventually receives. In other words, failing to follow the style guide for an anthropological research paper outlined below will result in a loss of marks.

1. The research paper assignment constitutes **30%** of your final grade in the course; the papers will be marked out of 30.
2. A research paper Abstract is expected; **5% of your final grade hinges on whether or not you submit a draft introduction.** This is, essentially, a draft version of the key findings you will present in the “Introduction” section of your paper. The Abstract is quite a short document, just 250-300 words in length. But in order to effectively compose an Abstract of your paper, you need to have done some preliminary research in advance of submitting your Abstract. Your research paper Abstract is due any time **up to and including Monday, October 3rd, 2016**; Abstracts **will not** be accepted after this date, although consultations regarding your paper can certainly continue with either myself or any of the teaching assistants.
3. Research papers are due in class on **Monday, November 14th, 2016**. Of course, papers will also be accepted in **advance** of that date. Papers will be marked out of 30 (30% being the value of the paper towards the final grade); papers that are submitted late will be docked **5.0 marks** for each remaining class in the term (e.g., a paper that is two classes late will be penalized **10.0** marks -- this equates to a forfeiture of **10.0%** from your potential **final grade** in the course). The maximum late penalty is **10 marks** (which equals a full letter grade off your final grade);
4. You should aim for your completed research paper to be **12 double-spaced pages in length** (the title page is **not** a numbered page, and the reference citation page(s) can be in addition to the paper’s 12 pages of text). Papers that are only 8-

9 pages have probably not been sufficiently researched. **Don't expect to receive a strong grade if the page total of your paper amounts to only 6 to 9 pages, with just a few references.**

5. The final submitted version of the paper should include a **title page** -- that is, your paper should have a **cover page** that presents the **title of the paper** in the centre of the upper half of the page, and includes **your name**, your **student number** and the **date of submission** in the lower right portion of the page.

DO NOT SUBMIT YOUR PAPER IN EITHER A DUOTANG OR PLASTIC COVER – these are not necessary to the presentation of the paper and only represent an additional cost for you. Pages should be numbered (either in the upper right corner, or at the bottom of the page in the middle); again, **the title page does not count as a numbered page** and the first page of text (i.e., page 1) is normally not numbered.

Be sure to carefully **proof-read** your paper for spelling and grammatical errors prior to submission; **it is not a ways ideal to simply rely on spelled checking off your paper** -- while spell-checking your paper will catch typographic errors, it will not catch correctly spelled words that are used improperly! Having a friend, classmate or "significant other" also read over your paper is a good way of both catching typographic errors and getting a sense of how well you were able to communicate the topic of your paper.

Be sure you avoid these common compositional errors in your paper:

- **sentence paragraphs** (i.e., a single sentence that is also a paragraph -- considered poor style in academic writing);
- **tense shifts** within sentences or paragraphs (e.g., moving from present to past tense, or singular to plural tense, in a single statement);
- any **internal inconsistencies** within the paper (e.g., stating something at one point in your paper, then stating something contrary without accounting for the earlier statement; citing a source in your paper but failing to include it in your "References" list or, vice-versa, including sources in your "References" list which are not cited in the paper);
- **overuse of direct quotations** -- use quotes sparingly for maximum effect. If you rely too heavily on direct quotes, you risk having a paper that reads as little more than a bunch of quotes that have been strung together;
- **use of contractions** (e.g., instead of "don't", be sure to use "do not"; contractions are **not** used in academic writing).

Criteria for Assessing the Paper -- What is in a Grade?:

In order to do well, or even very well, on this research paper assignment (i.e., receive a mark that amounts to a strong 'B' or an 'A'), **you need to do more than just "work hard" on the paper**. While it is expected that you will "work hard", you actually also need to do several things well to receive a strong grade on the paper. The following briefly describes the sorts of characteristics that would be reflected in papers that fall into the various grade categories.

The 'A' paper (> 80%): The topic has been very thoroughly researched; the material is up-to-date and presented in an organized and coherent manner. A **problem-oriented perspective** has been maintained throughout the paper. The writing style is clear and well-structured. The paper has (virtually) no errors in spelling or grammar. The reference list is extensive (e.g., 15, or more, reference sources), with **all** of the **sources** being from the **peer-reviewed academic journal** literature; **web-sites have not been used as reference sources** (with the possible exception of websites for sources like government agencies (e.g., Statistics

Canada), international organizations (e.g., UNESCO -- the United Nations Educational, Scientific and Cultural Organization), or professional associations (e.g., the International Primatological Society) -- ask me if you need clarification). The "Discussion" section critically examines the implications of what has been presented in the "Body" of the paper, and considers these implications from multiple perspectives. The position reached in the "Summary and Conclusions" section is logically linked to the information and analysis contained in the paper. An 'A' paper could reasonably be considered for publication in *"Totem"*, The UWO Journal of Anthropology (published annually by the UWO Anthropology Society and the Anthropology graduate students).

The 'B' paper (70-79%): The topic has been well-researched, although some key information may be missing; the material presented may not be entirely up-to-date. The reference list is solid (e.g., 10-14 reference sources), with most of the sources being from the peer-reviewed journal literature, but a small number of **secondary sources** (e.g., textbooks) and/or **non-academic sources** (e.g., most .edu web-sites) may have also been used. The material is generally presented in an organized manner, although wording and/or phrasing may occasionally be awkward. In addition, the paper contains spelling errors that should have been caught prior to submission. The "Discussion" section considers most major implications of what has been presented in the "Body" of the paper, but may have not pushed this analysis as far as it could have been (e.g., some issues arising from the material that was presented may have been left unexamined). The position reached in the "Summary and Conclusions" section is broadly linked to the information and analysis contained in the paper, but some relevant finer points may have been over-looked.

The 'C' paper (60-69%): The topic has been nominally researched, but key recent research material is missing; the material that is presented may not be entirely up-to-date. A "problem-oriented" perspective for the paper may not have been clearly articulated in the "Introduction". The reference list achieves, or approaches, the expected minimum number of sources (e.g., 9-12 reference sources). However, many academic sources (e.g., textbooks) are not from the peer-reviewed journal literature, and several non-academic sources (e.g., .edu web-sites, **Wikipedia**, or **popular publications** such as *National Geographic*) have also been used. The material may not have been presented in a coherent manner. Grammatical problems, such as tense shifts, or awkward wording and/or phrasing, are frequent enough that the clarity of presentation begins to suffer in places; there may also be internal inconsistencies in the argument the paper presents. In addition, the paper contains numerous spelling errors. The "Discussion" section is minimal (e.g., only 1-1.5 pages in length) and is relatively superficial; major implications of what has been presented in the "Body" of the paper are either glossed over or not dealt with at all. The "Summary and Conclusions" section may not achieve a clear final position, ending instead with a very general, open-ended statement (such as, "It is up to everyone to reach their own conclusions.").

The 'D' paper (50-59%): The topic has not been adequately researched. The paper itself is relatively short, either barely reaching, or even failing to reach, the minimum expected page count (e.g., ending up in the range of just 7-9.5 pages in length). Material presented in the paper may be seriously out-to-date, inaccurate, or simply incorrect. The paper **fails to present a problem-oriented perspective**. Instead, the paper either tries to present as a problem something that actually isn't a problem (e.g., "Do humans share characteristics with monkeys and apes?"), or simply presents material that is largely descriptive in nature. The reference list is insufficient, with only 5-8 reference sources being used; most, or all, of the reference sources are either secondary academic sources (i.e., textbooks), or non-academic sources (e.g., **Wikipedia**, **.edu web-sites**, or **popular publications**). Presentation of the material may have departed from the prescribed format (e.g., section headings may not have been used); references may have been incorrectly cited (e.g., not providing page numbers for any quotes used), or improperly

cited (i.e., using something other than APA citation style). Grammatical problems, such as tense shifts, incomplete sentences, or awkward wording and/or phrasing, are numerous and render a considerable amount of the material presented either unclear or difficult to understand. Internal inconsistencies in the argument the paper presents (e.g., citing sources but not including them in your list of references), and a high frequency of spelling errors further weaken the presentation of the paper's topic. There may be an over-reliance on the use of direct quotations. A "Discussion" section may be lacking entirely and statements in the "Summary and Conclusions" section may not be adequately supported by material presented in the paper.

The 'F' paper (< 50%): The topic may be entirely inappropriate for the course. Even if the topic is appropriate, the amount of research is entirely insufficient. The page count may be barely half of what is expected (e.g., 4-6 pages). The presentation is entirely descriptive; no effort has been made to critically examine some debate, problem or issue. Material presented in the paper comes entirely from just 3-4 non-academic, and likely web-based, sources (e.g., **Wikipedia**, **.edu** or **.com** web-sites). The paper looks like it was put together at the last minute and does not follow the prescribed format (e.g., no section headings). Grammatical problems, internal inconsistencies and spelling errors litter the few pages that there are to the paper, making much of what is presented almost unintelligible. Overall, such a paper is simply not university-level work.

Content and Format of the Research Paper:

Your aim in this research paper assignment should be to **examine and comment upon some issue or problem** within the fields of biological anthropology or archaeology. Recall from our first class that anthropology basically encompasses anything that relates to human -- or non-human primate -- activity, so you have **a wealth of material** from which to choose the topic for your paper. Once you have selected a topic area that interests you (e.g., human biological variation; primate conservation; neandertals; the "peopling of the Americas", to name just some of the possible choices), the first step in composing an anthropological research paper is to **focus upon a specific issue or problem** that relates to the particular topic you've chosen. Selecting a specific issue or problem on which to focus is absolutely crucial to the successful composition and presentation of your research paper.

Remember, you've only got a maximum of 12 pages in which to do the following:

- i)** introduce the topic and state the purpose of the paper;
- ii)** provide relevant background material that relates to the purpose of the paper;
- iii)** discuss in a critical manner this material in relation to the question/problem you have identified and offer some opinions or interpretations of your own on the matter;
- iv)** summarize the material you have presented, or the position that you have argued and, finally,
- v)** state your conclusions.

In order to adequately cover all the above areas, it is best to begin with **a very focussed, very specific issue or problem** -- one that can be stated in a single sentence (e.g., "While humans are certainly a very variable species, this variation is not sufficient to classify humans into distinct racial groups -- genetic evidence clearly shows that human variation is not typological in nature"; or, "Despite the potential benefits to human health, it is not ethically defensible to use endangered primate species, such as chimpanzees, in biomedical research."; or, "Neandertals were a separate species, not a specialized population of archaic *Homo sapiens* , and therefore could not possibly have contributed to the modern human gene pool."; or, "There are no data

purporting to show the existence of humans in the Americas before about 20,000 years ago that stand up to scientific scrutiny -- such assertions amount to being no more than myth.").

While it is important to have a **clearly stated purpose to the paper**, it is equally important that you organize the presentation of material within the paper in a clear and coherent manner. A good rule of thumb in presenting a research paper is to **not** assume **any** specialized background on the part of the reader. In other words, tell the reader what they are going to read (introduce the topic and state the purpose of the paper); tell the reader what they are reading (present the relevant material and discuss its importance and meaning); and then, tell the reader what they have just read (summarize the material you presented and state your conclusions). The most effective way to achieve this is to use **headings** and organize the paper into **sections**; do not be afraid to even use sub-headings for sub-sections within a particular section. If you flip through the text we are using in this course, you will see that this is precisely the style the authors of the book have used; this is also the standard format for anthropological papers published in academic journals. Using a section heading format for the paper provides a flexible structure around which you can organize your ideas and the material you want to incorporate in the paper, as well as giving the reader some orientation.

The general **section heading** format you are **expected** to employ in your paper includes the following:

- **Introduction** – In this brief opening section to your research paper you **clearly and explicitly** state ***what*** the problem-oriented topic of your paper is, and identify ***what*** you will end up presenting as your conclusion in regards to that problem-oriented topic.
- **"Body"** (you provide a suitable heading title for this main section of the paper). The "Body" of the paper contains the essential descriptive background material to the paper's problem-oriented topic; this section may end up containing several sub-sections.
- **Discussion** – The heading of this section of your paper clearly signals to the reader that you have transitioned from presenting descriptive background material on your topic, to critically assessing ***what*** represents the best explanation/solution to the problem/issue/question on which your paper focusses.
- **Summary and Conclusions** – In this brief final section of your research paper, you re-state the problem-oriented topic you have investigated ***and*** clearly state ***what*** you have concluded from your examination of that problem-oriented topic.
- **References Cited** (or, simply, **References**) – This section is an essential element of all academic writing (and is **not** a bibliography) – you must provide the full citation information for each reference source you have cited in your paper. You can use the reference list in our textbook as an example of how to format your list of **References**.

This format includes the minimum section headings that are expected (that is, you are **expected** to use section headings -- don't just have an introductory section to the paper, have the heading "**Introduction**" in advance of the section). As stated above, you can customize this format, through the use of sub-section headings for instance, to best suit the particular topic you are presenting. Below, the material that should be included in each section is outlined.

Introduction -- This opening section to your paper need be no more than about a half page in length. In it, you want to introduce the general topic of the paper and then go on to clearly state the purpose of the paper; two paragraphs should suffice for this. The last sentence of the introduction should be an **explicit** statement of the aim/purpose of the paper -- don't be afraid to

use the first person (e.g., “This paper will examine the question of the evolutionary fate of the Neandertals from the perspective that Neandertals were a separate species, not a specialized population of *Homo sapiens*, and therefore could not possibly have contributed to the modern human gene pool.”; or, “In this paper, I will consider the future of primatology; I will show that experts in the field predict it is an “endangered science”, and as primate populations disappear so too could this field of study.”).

Body – **Do not** use the heading "**Body**"! You get to be creative here and use a heading that reflects the paper's topic, e.g.: Neandertal: Ancestor or Extinct Relative?, or The Myth of a Middle Pleistocene Presence of Humans in the Americas. The "Body" of the research paper is where you present for the reader all the relevant background information needed for a discussion (to follow) of the issue/problem you are examining. Stick to simply presenting the information at hand and avoid comments on its meaning or importance -- save that for the “Discussion” section. The maximum length for this section should be no more than about 7 pages in length.

Discussion -- This section's heading is self-explanatory. This is the section in which you present any comments or reflections on the meaning or importance of material/data relating to the topic that you were tempted to include in the “Body” of the paper. These can be views that different groups of researchers hold concerning each other's work/views (i.e., short-comings, weaknesses, etc.; e.g.: Neandertals are/are not ancestral to modern humans), but do not be afraid to include **your own** observations, thoughts or comments, especially if you are supporting one side of a debate. You can state **why** you find one particular viewpoint on a research problem in biological anthropology or archaeology more convincing than other, competing viewpoints. You should try to make this section about 2-3 pages in length; a longer “Discussion” section reflects a more in-depth research effort.

Summary and Conclusions - In this section you briefly restate the main points of the previous sections and then state what you can conclude from the material you've examined. Ideally, you are trying to put forward an answer to the issue or problem you posed at the outset of the paper. It may not be possible, however, to suggest a clear answer; perhaps a more interpretive or subjective approach may be better suited to the material. Or, perhaps, we simply need more data before things can be answered one way or another -- if so, what sorts of data are needed to address the issue under consideration? At any rate, **all** such statements are conclusions – do not limit yourself to trying to come up with a "clear cut" answer; where it is not possible to do this you can at least suggest directions for future research. What sorts of future research should be conducted to advance our understanding of the problem? **Regardless of the extent of the conclusionary statements you are able to make, they should clearly relate back to the stated purpose/aim of the paper.** You can usually accomplish this in a concluding section that is about one-half to one page in length.

References Cited - The final section of your paper must be entitled **References Cited** (or simply, **References**), in which you list all the sources you cited in your paper. This section should not be confused with a "reading list" (or bibliography) of all those materials you may have consulted in researching your paper. In fact, **you should not include a bibliography**; the References Cited list should include **only** those works that have actually been cited in your paper. The References Cited section should be organized alphabetically by the last name of the author (by the last name of the first author for publications with two or more authors); if several works by the same author are cited, they should be arranged in chronological order, with the earliest published reference listed first. **A great example of the layout of a References Cited section can be found in the text book**

we are using in the course. Speak with me if you have questions on how to cite such things as government publications, lecture notes, or legitimate Internet sources.

The Importance of Reference Citation:

In composing an academic research paper, an author **must** make use of information or interpretations that are the work of other researchers and are not the author's own. Where this is done, it is expected that credit is given where credit is due -- the source(s) of **any** information or interpretation **must** be cited. Such reference source citation is a basic element of scholarly research; it gives proof to your investigations of the topic on which you are reporting. By failing to cite references, the student risks being open to charges of **plagiarism**.

You should be clear that it is **not** just direct quotes that require citations. **All** ideas and data (including graphs, tables, maps, illustrations, terminology, etc.), that are the work of other authors **must** be cited accordingly. Anthropological research papers tend **not** to put citations in footnotes or endnotes; rather, reference citations are incorporated into the text of the paper at the point particular work of another author is utilized in the presentation -- this "in-text" reference citation is the **APA style** of reference citation (again, examples of this reference citation style can be found in the text book we are using in this course). References can be cited in several ways, depending on how they are being used in your paper; some examples from the well-known physical anthropology text book *Physical Anthropology and Archaeology* by Jolly and White (1987), are given below:

Example 1: "A lava dated at 31 Ma caps the Fayum local sequence, locating it firmly at the junction between the Eocene and the Oligocene (Fleagle et al., 1986; Fleagle and Kay, 1987; Rasmussen and Simons, 1992)."

Example 1 includes a reference with more than two authors (i.e., Fleagle et al., 1986); sources with two authors identify both individuals – e.g., it would be incorrect to cite Rasmussen and Simons, 1992 as Rasmussen, 1992. Note, too, that the three references cited are given in chronological order.

Example 2: "Dean (1988:110) suggests that this may be related to adaptation for, "... finely-tuned hand and finger movements, and opposability of the thumb"."

Example 2 shows a direct quote being used. So, besides the author's name and the date of the publication, the page number where the quote appears is also given.

Example 3: "Mellars (1973, 1989) and White (1982a) have summarized the major developments around 35 Ka as follows: ...".

Example 3 shows two citations of papers by Mellars, again in chronological order. The White (1982a) citation indicates that another publication by the same author also published in 1982 (i.e., 1982b) is cited elsewhere in the paper.

Example 4: "So much of the earth's water was locked up in continental ice that sea levels dropped from 130 to 160 vertical metres (Klein, 1989:34)."

Example 4 shows another citation in which the page number is given, even though no direct quote was being used. This is done to direct the reader to the particular point in Klein's (1989) publication regarding changes in sea levels due to glaciation, rather than simply citing the entire publication on a more general point.

A Note of Caution Concerning Internet Sources:

The Internet can certainly be useful in tracking down information. But, **most** web sites are **not** subject to peer review (e.g., **Wikipedia** is not regarded as an academic source). Therefore, **you are advised to avoid using the Internet as a primary source** -- you could unknowingly be referencing spurious information that is presented as fact (e.g., you visit “Wally’s Wild Australopithecine Page”, but you **do not** know who the heck Wally is nor what he, or she, actually knows, if anything, about the australopithecines!). I have, in previous years, occasionally seen students make statements of supposed fact in their research papers, and cite Internet sources for those statements; unfortunately, those statements end up being totally false. Guess who ends up looking foolish? If you have questions about whether a given website is a suitable source -- ask!!

On the other hand, you **can** use the Internet to track down relevant articles in **peer-reviewed academic journals** (e.g., *Nature*, *Science*, *American Journal of Physical Anthropology*, *Journal of Human Evolution*, *Evolutionary Anthropology*, *Canadian Journal of Archaeology*, *American Antiquity*, *International Journal of Primatology*, *Conservation Biology*, etc.). The way to do this is to access the **UWO Libraries Internet Gateway** (<http://www.lib.uwo.ca>), and then, select “Databases” under the “Research” heading in the banner across the Western Libraries home page -- depending on the topic of your paper, you can access such journal database search-engine resources as: “Anthropological Index Online”, “BIOSIS Previews”, “Science Citation Index” and “Social Science Citation Index”. **All** of these Internet resources allow you to search for paper titles in peer-reviewed academic journals (and, for more recently published material in journals to which Western subscribes electronically, link to articles); searches can be conducted by topic (e.g., “primate conservation”), by key word from the titles and/or abstracts of papers (e.g., *Australopithecus*), or by author (e.g., Goodall, Jane). **This is a much more reliable approach to seeking sources via the Internet than simply “surfing” for sites.** **Do not forget**, the text book includes an extensive References list, and would be a great place to start research on your topic for recent articles in peer-reviewed academic journals! If you find a useful source in the text book’s reference list, you could use **Google Scholar** to find other relevant publications by the same author, or publications on the same topic by other authors.