Geography 111: The Geographic Perspective
Syllabus and Assignments, Spring 2014

Instructor:
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Office hours: All weekdays 10:30-12 (please note that it is best to make appointments in advance, because I often make international Skype calls during this time) or by appointment (TuTh 1:30-3, MW 3-4 are usually good options)

Class Schedule: MWF 9:30-10:20

Purpose:
This course serves as an introduction to the discipline of geography, which studies the earth as the home of humans (physical geography), and humans as they inhabit the earth (human geography). This integrative discipline crosses the borders between the social and natural sciences, and even overlaps with the humanities. It is thus at the heart of the liberal arts, in particular the development of critical and integrative thinking skills. In addition, the course fits into a liberal arts view that we, as citizens of the world, should know something about distant places and peoples in order to develop better mutual understanding.

A single course could never do justice to the entire discipline of geography. Instead, the course is designed to provide insights into selected geographical perspectives while seeking to integrate human and physical geography. Hence, agriculture, industry, and human population growth and settlement are studied as human activities that occur in particular social and ecological contexts, with ramifications ranging from global warming to biological species loss. The perspective of the course is global: some issues are addressed at the global level, while other issues are addressed through case studies, which may be drawn from anywhere in the world. Basic elements of systems analysis are introduced as a method of integrating knowledge from across different areas of inquiry. Class assignments promote skills required for independent intellectual development and critical thinking. Since the focus is on explaining rather than describing geographical patterns, class time will not be devoted to memorizing names and locations of countries or other geographical features; I assume that a well-educated person either knows much of this information, or knows how to acquire it.

This course fulfills the “social sciences mode of inquiry” designation within Truman’s LSP program. It does this by systematic inquiry into how we humans within societies and organizations interact with each other and with the physical environment, affecting the places we inhabit; by critically analyzing such interactions through lecture, discussion, readings, and assignments; by coming to understand some of the important approaches to studying these issues employed by geographers (which often overlap with those of other social science disciplines); by critical use of evidence to support inferences that may often be at variance with popular wisdom; and by applying all the above approaches to studying real-world issues, such as conservation of biodiversity and rural environmental quality, understanding inequity in the world economy, dealing with population growth, and preparing ourselves in the face of natural hazards. As an introductory course in the Department of Society & Environment (which includes the disciplines of anthropology, geography, and sociology), this course is designed to “provide basic subject matter knowledge in a particular discipline, ideas/ big questions discussed within the discipline, initial exposure to data analysis
and arguments in the professional literature.” The last mentioned point regarding data analysis and arguments is addressed in particular through the class assignments, explained in detail below.

Course Objectives
The more specific objectives of this course, based on the above purpose, are that students should:

- Understand basic concepts in physical and human geography
- Understand complex interlinkages among agriculture, industry, population, and the natural environment
- Develop a greater awareness of global environmental and social issues
- Understand basic elements of a systems approach to analyzing complex social and environmental issues
- Successfully find scholarly geographic journal articles relevant to a chosen topic
- Critically read and analyze on scholarly geographic article
- Draw a well-thought out thematic map on a chosen geographic topic
- Draw a chart applying critical thought and systems analysis to a chosen geographic topic.

Grading
Grading will be based on three assignments, a midterm exam, a final exam, and participation in a critical thinking assessment, according to a point scale as follows:

| Assignment 1: | 60 |
| Assignment 2: | 100 |
| Assignment 3: | 100 |
| Midterm Exam: | 60 |
| Final Exam: | 80 |
| Total | 400 |

The assignments will involve exercises to train you in finding, interpreting, and analyzing scholarly geographical literature, in using maps to represent the spatial nature of geographical issues, and in using charts to represent the logical structure of social/geographic issues and arguments. They thus develop a combination of graphic, critical thinking and writing skills. Assignments require library research, and involve all the standards of academic integrity. Points will be deducted from assignments that are turned in late. Written work will be graded based on 1) correct and complete presentation of relevant information, 2) adequate explanations, and 3) good English.

Exams will consist of several sections, designed to test different skills – e.g., familiarity with the definitions of important concepts, understanding of graphs and maps, and understanding of geographic concepts and approaches.

Attendance and class participation are not formally made part of the grade, assuming that you are aware that poor attendance almost certainly will have a negative effect on your performance in assignments and tests. However, in borderline cases, a record of good attendance and class participation may help you get the better grade.

Note on Students with Disabilities
Students with disabilities should contact me early in the semester regarding any special needs.
Readings
For this course, you are expected to buy the following book:

In addition to this text, several additional course readings are either available on the Internet, or on Blackboard. I recommend that you read all readings in advance of the relevant lectures so that you already have some understanding of the topic and can gain more from the lecture. Please let me know if a website listed below is no longer accessible through the URL given here, to help me update the information.

Lecture Outline

I. Introductory Sessions
What is Geography? January 13
On Scholarship January 15
Instructions for the First Assignment January 17

II. Agriculture
Constraints and Opportunities affecting Farmers January 22, 24, 27, 29, and 31
Read
Middleton, Chapter 13: Food Production.
Internet reading: Wolfgang Hoeschele (on Commons Abundance Network): Food.
http://commonsabundance.net/wiki/food/.

Workshop for Assignment 1 February 3
The class will meet in BT 2208 on this day. To make best use of this time, you should have a pretty good idea of what topic you want to focus on, and have made a start of searching for sources. The workshop will be devoted to exchanging ideas about topics and using databases in order to find more sources.

Agriculture and Biodiversity February 5, 7, 10, and 12
Read
Middleton, Chapter 15:Biodiversity Loss; as well as his account of the Aral Sea: pp. 172-6.

Assignment 1 due on February 14
Instructions for Assignment 2 February 14

III. Industry
Factors Necessary for Successful Industrialization February 17, 19, 21, and 24

Midterm exam February 26
Classifying Countries in the World Economy
February 28, March 3, 5, and 7

A fossil-fuel-based economy and global climate
March 17, 19, 21, 24, and 26
Middleton, Chapter 11: Climatic Change
Note: I do not expect you to read this full report, but do have a look at it for an up-to-date scientific assessment of global warming!

Assignment 2 due on March 28

IV. Cartography and Map Interpretation

Topographic maps
March 28
[http://www.colorado.edu/geography/gcraft/notes/cartocom/cartocom_f.html](http://www.colorado.edu/geography/gcraft/notes/cartocom/cartocom_f.html)
Sections 1-4.

Thematic maps
March 31, April 2
[http://www.colorado.edu/geography/gcraft/notes/cartocom/cartocom_f.html](http://www.colorado.edu/geography/gcraft/notes/cartocom/cartocom_f.html)
Section 5.

Map projections
April 4
[http://www.colorado.edu/geography/gcraft/notes/mapproj/mapproj_f.html](http://www.colorado.edu/geography/gcraft/notes/mapproj/mapproj_f.html)

Instrucții for Assignment 3
April 7

V. Population and Settlement

World Demography
April 9, 11, 14, and 16
Use as a reference:

The Debate on Population and the Environment
April 18 and 23
Read
Middleton, sections of Chapter 2, The Human Environment: pages 24-38, see also table 2.5 on page 42; Chapter 3, Sustainable Development, pages 58-64.

Assignment 3 due on April 25
Guidelines for Class Assignments

The assignments for this course are intended to walk you through some of the steps needed in order to conduct independent research on a complex topic — “complex” meaning that it is a topic that involves aspects studied by numerous different disciplines. Most real-world issues that we face are complex in this way — for example, it is not enough to know by what amount temperatures will increase if humans emit more carbon dioxide into the atmosphere (a question to be studied primarily through climatology); it is also important to know what impacts such temperature change may have on animals, plants, ecosystems, oceans, humans, and in order to know this one needs to conduct research in a host of different disciplines. While no single researcher can actually cover the entire range of complexity of such a topic, it is important to understand how one’s own research can make a contribution within that complexity, and for this purpose it is important to have a grasp of the larger picture even while one is oneself only studying some minute aspect of it all.

These guidelines are intended to provide you with basic instructions applicable to all of the assignments (and to much other academic work besides). Specific assignments follow these general guidelines.

Academic Integrity

In class assignments, it is expected that you submit your own work, and that you acknowledge your sources of information. Violating these basic rules constitutes academic dishonesty, specifically plagiarism. For a fuller definition of plagiarism, see Truman’s webpage on academic integrity (at http://conduct.truman.edu/docs/AcademicIntegrity.pdf). If you turn in an assignment in which sources are not cited or cited incompletely for any section of the assignment, I will assign a zero for every section where sources are not cited. In such cases, I will return the assignment to you and grade it only once you have supplied full citations. In that case, I will regard the assignment as having been turned in late and deduct points accordingly. Extended verbatim quotations, even if properly acknowledged, do not count as your own work: I expect you to synthesize information from other sources, and formulate your sentences yourselves. If I discover that you have engaged in unacknowledged verbatim quotations, the most blatant form of plagiarism, my minimum penalty will consist of assigning a zero for the entire assignment. In cases where I feel that a student has knowingly engaged in serious forms of plagiarism, I will assign an F for the course. I reserve the right to inform the department head of any cases of academic dishonesty.
Graphics

Maps and other graphics should be drawn neatly and be clearly legible. Note that cartography is both a science and an art, that is, maps should not only present information effectively, but also in a way that is aesthetically pleasing. Thus, the use of judiciously chosen color or shading schemes is expected, as is a well-balanced placement of the various elements of the map (including the legend and any other supplementary information). Be sure to include legends with the maps, and any necessary explanations with charts or other graphics.

Text

Written portions of the assignments and tables MUST be typed, and provide full references for all your sources (for more on citation methods, see below).

As indicated in the section on academic integrity, I expect you to synthesize information from other sources. This means that you have to understand everything you write before you write it down. If it appears to me that you have written things without understanding what you were writing, I will ask you to see me in my office and explain to me orally any questionable points, or to provide definitions of technical terms that you used in the assignment.

Metric Units of Measurement

In all assignments (in both graphic and textual portions), metric units of measurement are essential, others are optional. As academics, we communicate in an international arena, which uses metric units as its standard. Hence, be absolutely sure to indicate distances in kilometers (km), areas in km$^2$ or hectares (ha), temperatures in degrees Centigrade ($^\circ$C), precipitation in millimeters or centimeters (mm or cm), elevations in meters above sea level (mash), and population densities in persons per km$^2$. If your reference source uses non-metric measurements such as miles or degrees Fahrenheit, provide both those measurements and the metric conversions. Thus, if you make a mistake in the conversion, I can figure out where you went wrong; otherwise I only know that you went wrong. If you do not know how to do the relevant conversions, feel free to ask me.

Finding Print Sources

I encourage you to use all sections of the library while working on these assignments. The map and atlas section is of special importance to the third assignment. The reference section includes various specialized sources of reference, as well as additional atlases. For the first assignment in particular, you will need to find geographical and other journals, while for the last assignment, books may be relevant as well. With the resources of the Truman library in conjunction with the MOBIUS network and interlibrary loan (ILL), you have a wealth of printed sources available (essentially, anything found in the holdings of any academic library in the entire United States). Make use of this great resource!

To search for books and articles, use the computer search mechanisms provided for you in the library. For books, start with the Truman WebCat, and if that fails, use MOBIUS (providing ILL from other libraries in Missouri, usually delivered within a few days). If you can’t find the book you need by either of these means, use “Worldcat” (accessible from the Pickler Memorial Library web site), which allows you to search books in libraries across the United States. You can then request these books by ILL, which may take around a week to deliver.

For journal articles, the most comprehensive search mechanism is “ArticleFirst,” which allows you to search for a very wide range of journal articles in all disciplines, including many geographical journals. However, some important geography journals are not included in this database; these can usually be found using GEBASE, a more specialized search engine focusing on the geosciences. Once you have found an item, you are told whether that journal is available at our library, or you can access the full text online. If not, you can get it through ILL (journal articles are often delivered electronically now, which sometimes
happen within 24 hours). Another useful database is EBSCOHost, specifically the “Academic Search Elite” option.

The use of the library’s online search engines will be explained in class. Computerized databases like these are essential in order to efficiently access the literature on any existing topic, and being able to use them well is important across all academic majors.

Please note that you can always talk to me if you have trouble finding good sources – in many cases I can help you in your search, or even give you specific references of books or articles relevant to the assignment. You can also talk to reference librarians.

Finding Internet Sources

Internet sources can be highly informative, but they can also be horrible, unmitigated junk. You have to learn to tell the difference. Here are some guidelines.

For the first assignment, you need to find scholarly geographic articles. Some such articles are published online, but you need to distinguish them from non-scholarly articles. The questions to ask are: 1) is there some method of peer-review used for this website, 2) are the author’s work affiliations listed (e.g., a department of geography where they work), 3) do the articles take care to explain the theoretical underpinnings of the research, the research methods, the sources of data and information collected by the authors, and how the above are logically related to the conclusions, and 4) do the articles provide comprehensive citations of references used? If ALL of the above apply, then it is a scholarly article.

You may also use non-scholarly sources for some of the information you use for your assignments. For example, in assignment 1, you may use various types of websites in order to find out about the qualifications of the authors of the scholarly articles you have found (most commonly, the websites of the universities or other institutions where they work). In assignment 2, you may find that there are useful online sources that help provide you useful information when discussing a scholarly article. In assignment 3, you may use various online sources for information you need to construct the maps and charts. You can easily find various types of websites by using search engines such as Google. Next, however, you have to assess whether the website you found is a reliable source of information.

First, find out who is the author of the website, and what are the author’s qualifications. This must be some person or institution with specialized or privileged knowledge about the topic. Remember that literally anybody can create a website, including all sorts of wonderful graphics, and there is no generalized peer review on the web. If we wanted to, you or I could create a website on nuclear physics tomorrow, and nobody would prevent us! Thus, it is the reader who has to decide whether this is a authoritative source of information. For example, if you find a website on the tropical rainforest generated by the Organization of Tropical Studies, an organization generally recognized as a leader in the field, you can rest assured that they are providing you with well-researched and up to date information. However, if you find a site created by students or teachers at a high school on the same topic, do NOT use it. These people have never seen the tropical rainforest, and they rely on what others have written. You should not use them as a source but rather go to the actual original references.

If out of some reason you can not figure out who is the author of a website, do NOT use it under any circumstances whatsoever. If I decide that you have used an inappropriate internet source, I may deduct some or even all points for the relevant portion of your assignment. Do remember that an author can be an institution, such as a university, a government agency, an international organization, a non-profit organization, or a business, and these can be cited as authors too.

Second, find out whether the website provides you with information about its own sources. This is not so important if you are trying to find information about the website’s author (for example, if you find a scholar’s statement about his/her own research, you don’t need to worry about that person’s sources of information), but it is important if you are using the website for some other topic (e.g., climate change).

Third, read the information presented in the website critically. Authors have their own points of
view, whether they present them on the web or in print. Just because somebody has written something, it is not necessarily true. Check in particular for internal consistency, and whether something makes sense or not. If you have doubts about the truth of some statement, simply use a phrase such as the following: “X claims that . . .” This lets you off the hook if I find that this claim is outrageous. This caution, by the way, applies to absolutely anything that you read or hear, from any sources including print sources, the electronic media, your friends, and your professors.

Note that there are links to geographical websites from the links page of the Department of Society & Environment (to which geography belongs): http://societyandenvironment.truman.edu/AGS_links/links_index.asp. Those listed under the Virtual Libraries of different regions of the world have generally been reviewed by academics before they were included, helping you to eliminate unreliable sites from consideration. Many geographical resources are available from:


Citation of Sources

All your sources, whether they are printed or in the internet, must be fully referenced (see section on academic integrity above). This applies even if I, the professor, have directed you to that source. Refer to citations in this syllabus for examples to follow. Use the following format:

Books:
Author(s). Date. Title. Place: Publisher. Page numbers.

Book Chapters (edited books with chapters by several different authors):
Author. Date. Title of Chapter. In: Book Editor(s), Title of Book. Place: Publisher. Page numbers.

Journal Articles:

Encyclopedias:
If encyclopedia entries indicate individual authors,
Author. Date. Title of Entry. Title of Encyclopedia. Place: Publisher. Volume Number: page number.
If the encyclopedia has a named editor, although there are no names for individual entries:
Author or Editor of the Encyclopedia. Date. Title of Entry. Title of Encyclopedia. Publisher, Place. Volume Number: page number.
If no name of an author is given:
“Title of Entry.” Date. Title of Encyclopedia. Publisher, Place. Volume Number: page number.
Atlases:
If the atlas has a named author or editor, follow the format for an ordinary book. Otherwise:
*Title of Atlas*.  Date.  Publisher, Place.  Page or Plate number.

Websites:
Author.  Date Last Updated.  Date Accessed.  *Title of Website*.  URL.
The author may be a person or an institution.  Many websites have fine print somewhere indicating when they last updated their data; web journals have dated issues – indicate such dates under Date Last Updated. Date Viewed is the date when you looked at the site – sites change, so this is important! Title of Website is either a title at the top of the page, or failing that, your description of the contents. Finally, write the URL – which should be something that you can type into the computer and get into the site. If you can only get to that web page through links from other pages, then provide the URL for the nearest web page that you can access directly, and then list the links you need to follow to get to the place where you found the information. Note that proper citation of websites is as essential as proper citation of print sources.

Your professor:
If you use information from lecture, write my name and “personal communication,” with the date (if you don’t remember the exact day, then indicate the month). If I have passed out a document authored by myself, you can cite it as an “unpublished document.” Do likewise if you obtained information from other persons.

**Getting Help from your Professor**
If you are having any kind of trouble completing your assignments, feel free to ask me for help. However, please note that it is best to ask for assistance well before the due date of the assignment. For example, the day before the assignment is due is NOT the time to ask me where you can go to find relevant journal articles – you should have found those at least a week in advance so that you can read them carefully and come up with a well thought out paper. Thus, talk to me early rather than late if you have any questions, and I will be glad to help you in any way I can.
Assignment 1: Choosing a Topic and Finding Sources  
Due February 14; 60 points (15% of course grade)

For the project that you will work on through the semester, you will have to find a topic. This will be a case study of an issue involving aspects to be studied both through the social and natural sciences. “Case study” means that you study this issue in a particular locality or region, which may be a city or town, a county, province, state, or a small country (e.g., a country the size of Hungary, but not of Brazil). It may also be a nature reserve, a particular forested area, a river delta, or some other ecologically or socially defined region. Furthermore, select some place outside of the United States for this study (if you are from a country other than the US, select a place both outside the US and outside of your own country) – I want you to learn about a place that is culturally different from what you are familiar with. The textbook should help you identify interesting examples of a wide range of environmental issues. Its bibliography may provide you with one or two sources to use for your assignment. You can use the textbook as a source for the “explanation of the topic” portion of this assignment, but it should not be listed as one of your sources in the annotated list, because it discusses each case study only briefly.

Examples of the kinds of topics you might study in a place:
How can forestry/ranching/fruit growing/annual crop cultivation/shrimp harvesting/fishing/hunting be made more ecologically sustainable while also supporting rural livelihoods in locality x?
How can air pollution/water pollution/disposal of hazardous wastes/disposal of nuclear wastes/greenhouse gas emissions be controlled so as to improve human health and environmental sustainability in locality y?
How can people best address the hazards of earthquakes/fires/floods/permafrost/landslides/mudslides/tornadoes/ice storms/hurricanes in locality z?
How can areas of wilderness or natural beauty and biodiversity be best protected from urban sprawl/expansion of agricultural land/hunting/logging in locality xy?
Feel free to consult with me as you think about topics.

1. Topic statement (10 points)

For this part of the assignment, write a topic statement or question along the lines suggested above.

2. Explanation of the topic (10 points)

To explain the topic, indicate a) why you consider the topic important, b) why it is of special relevance in the place you selected, c) one social scientific aspect of the problem (i.e., a question that can be addressed through social scientific research), and d) one natural scientific aspect of the problem (i.e., a question that can be addressed through natural scientific research). Make sure to clearly mark sections a through d.

3. Annotated list of relevant scholarly sources (10 points per source, 40 points total)

Provide a list of four scholarly sources published within the last ten years which focus on the selected issue in the locality you selected, with two focusing on a social scientific aspect of the problem, and two focusing on a natural scientific aspect of the problem. At least three of your four sources should be geographical articles (i.e., written by geographers or published in geographical journals). For each article, indicate:

a) The expertise of the author, i.e., the academic discipline in which the author is trained, the position he/she now holds, and a brief description of the other kinds of research this person has done. If there are two authors, expertise of both authors; if there are three or more, simply the expertise of the lead author. Indicate where you found this information (the citation of the article itself need not be repeated here, if some or all of the information is from there).
b) The most important points made in the article (which can usually be culled from the abstract), summarized in a short paragraph.

Note: keep copies of those four articles, particularly the geographical ones, since you will need to review one of them for your second assignment.

For your orientation as to which kinds of journals are appropriate for this assignment, here is a partial list.

Some scholarly, geographic journals (note that journals with non-English names listed here do contain many or even exclusively articles in English):

- Annals of the Association of American Geographers
- Geographical Review
- Economic Geography
- Political Geography
- Antipode
- Professional Geographer
- Environment and Planning
- Social & Cultural Geography
- Geografiska Annaler
- Tijdschrift voor Economische en Sociale Geografie
- Erdkunde
- Transactions of the Institute of British Geographers
- Singapore Journal of Tropical Geography
- International Journal of Remote Sensing
- International Journal of Geographic Information Science
- Journal of Climate
- Journal of Biogeography

Some journals which are not purely geographic but in which many geographers publish:

- Mountain Research and Development
- Land Degradation and Development
- Arctic & Alpine Research
- Space and Polity
- Agriculture, Ecosystems, & Environment
- Land Economics
- Environmental Hazards

Some journals in area studies that include articles from many different academic disciplines, including geography:

- African Studies Review
- Journal of Modern African Studies
- African Development Review
- Journal of Southeast Asian Studies
- Modern China
- Journal of Japanese Studies
- Journal of Asian Studies
- Modern Asian Studies
- Asia-Pacific Review
- Mediterranean Quarterly
- Journal of Latin American Studies
- Europe-Asia Studies

There are far more scholarly journals (including journals in geography) than I can list here. If you use a journal not listed here, please make sure that it is scholarly, i.e., featuring the reports of scholars to other scholars in the same or related disciplines about their own original research. You can notice that an article is not scholarly if it does not include references to other scholarly literature, and if it does not clearly explain the theoretical framework for the analysis and/or the methods used to collect data. Also, if an article vaguely reports that “scientists” (rather than named individuals) have discovered something, and shows no evidence that the author him/herself did any data collection or analysis, it is journalistic rather than scholarly. Journalism is of great importance to our society, but for this assignment I want you to read original scholarly literature. Therefore, do NOT refer to newspapers or popular magazines.
*Geographic* in particular is a popular magazine, not a scholarly source. Although some of its articles are written by scholars, they are directed to a popular audience.

A source that may include useful contributions on the physical aspects you will be studying is a series coming out from Oxford University Press on the physical geography of various world regions. The books that are at present available in the library are on Southeast Asia, Western Europe, and “Northern Eurasia” (the former Soviet Union), all in the reference collection; one on Africa is in the general collection (each book is titled “The Physical Geography of…”). If the place you are studying is in one of these regions, check the appropriate book to see whether there is a relevant chapter.

Before you complete this assignment, be sure to read through the Guidelines for Class Assignments (p. 5-9), with special focus on the sections “Finding Print Sources” and “Citation of Sources.”

**Criteria of evaluation:**
The chosen issue clearly includes social as well as natural scientific aspects. Questions in section 2 are succinctly answered.
Sources are properly cited.
Articles chosen correspond to the listed criteria (all scholarly and recent, 2 social and 2 natural scientific, 3 geographic).
Author information is reasonably complete.
The article summaries clearly identify and summarize the issues addressed.
Assignment 2: Critical Review of a Geographical Article
Due March 28; 100 points (25% of course grade)

For this assignment, you will read one of the geographical articles that you selected for assignment 1, with close attention to issues that are important in reading any scholarly article. No matter what your major may be, if you do any academic work you should be able to read scholarly articles critically; thus the skills you gain through this process should be helpful for classes that you will take in your major (especially writing intensive classes). For the article you choose to focus on, answer the questions below. Note the number of points devoted to each section: the attention you devote to each section should be roughly proportional to that number of points. Also pay attention to the criteria indicated, according to which you will be graded. Be sure to provide section headings as indicated. The entire paper should be about 5 double-spaced pages long. All literature you refer to should be fully cited on a citation page (a sixth page).

1. Purpose (10 points)
What is the author's purpose for writing this article? What is the main point (or the two or three main points) that the author is making in this article, and what does the author say is new about this point or these points? Note that a journal article is supposed to say something that is new or different from previous work in the field, and that this novelty should be identified in the article.

Criterion of evaluation:
Clearly identifies and summarizes the issue.

2. Structure of the Argument (60 points)
What evidence does the author use to back up the main point or points?
Work out the logical structure of the article, that is, which statements need to be true in order to support the main point. If the author is trying to disprove some claims made by others, explain which evidence is used to disprove those claims. If the article considers two or more conflicting hypotheses, explain which evidence is used in order to determine which hypothesis appears to be closer to the truth.

How did the author collect the evidence?
For each major piece of evidence mentioned above, explain how it was collected. Some evidence may be based on common knowledge; other evidence may be based on previous research and theories (by the same or other authors), and yet further evidence may have been obtained by the author through some form of data collection. For evidence based on previous research and theories, provide a brief summary of what they are about. For evidence based on data collection by the author, explain how that data was collected in some detail (such as through open-ended interviews of a random sample of the users of a resource, through a questionnaire of key respondents, through satellite imagery showing land cover of an area).

Criteria of evaluation:
Sequence or presentation reflects clear organization of ideas, recognizing their relative importance. Demonstrates understanding of complex relationships between facts, opinions and values in light of available evidence.

3. Discussion (15 points)
Critically discuss the article's findings. Is the logical structure of the article, which you described above, sound? Assuming that the evidence is correct, is it sufficient to back up the author's claims? Are there any alternative explanations consistent with the presented evidence? Is the evidence itself sufficient, that is, can you be confident that it is correct? If the author is generalizing beyond the place and context in which the
research was done, is that generalization adequately supported? One way of going about this is to ask yourself how scholars opposing the author’s claims might try to pick holes in the argument. In order to obtain relevant background information, it may be useful for you to consult the course text; if you do so, please cite it as a source!

On the basis of this discussion, suggest what further work could be done in order to obtain greater certainty about the knowledge claims of the article. This might involve looking for new kinds of evidence, or doing a more thorough job about the kinds of evidence already obtained, or using different methods to obtain relevant evidence, or doing similar research in other places in order to see whether similar patterns prevail there.

Criteria of evaluation:
Approaches issue with clear sense of scope and context.
Offers own perspectives in a complex process of judgment, respecting other views.
Causal relationships are clearly distinguished from correlations or coincidental relationships.
Grounds own conclusions with strong support, qualifies own conclusions with balance and acknowledgement of scope, limitations, or ambiguities.

4. Further Research (15 points)
An author may have done very strong research to answer the questions posed, but no piece of research can answer all questions. Raise relevant questions that were left unanswered in this piece of research, and discuss what kind of research study might answer those questions.

Criteria of evaluation:
Approaches issue with clear sense of scope and context.
Insightfully integrates treatment of other’s perspectives into own reasoning to deepen own perspective.

General criteria of evaluation (for the entire assignment):
Language clearly and effectively communicates ideas.
Organization is clear and cogent.
Sources are cited and used correctly. Be sure to provide the full citation of the article you review, as well as full citations of any other publications that you may refer to in the course of your review.

Assignment 3: Mapping the Problem
Due April 25; 100 points (25% of course grade)
In this assignment, create a thematic map, a systems chart, and a supporting written explanation regarding the problem you are studying.

1. Map (40 points)
   This map should show geographical patterns pertaining to the issues you are studying – for example, if you were to study the impacts of the 2004 tsunami on Sri Lanka, you could prepare a map of some of the coastal areas affected by the tsunami, showing which areas suffered different kinds of damage, as well as areas where reconstruction has occurred since the tsunami, or the locations where people displaced by the tsunami now live. You could also look at the issue at a different scale and prepare a map of the entire Indian Ocean basin, showing the location of the earthquake that set off the tsunami (near the Indonesian island of Sumatra), some of the other coastal areas affected by the tsunami, and perhaps arrows coming from outside
the map to indicate the sources of aid by governments and international agencies to help with relief and recovery. Such a small-scale map could also show the tectonic plate boundary at which the earthquake occurred.

Your map should be complete with bar and ratio scales, and with citations of all sources that you used. If your map is at a scale of 1:1,000,000 or less (e.g., 1:10,000,000), it should also indicate which map projection was used. A legend should explain any symbols or color codes that you used in the map. The map should be designed in such a way as to effectively convey information, be neat, and not be excessively cluttered. You will be using existing maps as your base maps, but add more information either by combining information from more than one map, or by adding information from non-map sources to a map. If you have difficulties including all the information you want on the map, then either make some choices of which information to leave out, or devise some other way of showing the same information that works better within the space provided, or create an additional map. Note that oftentimes, the creative use of color can make it easier to show complex information on a map.

In addition to the atlas and maps section of the library, you can also look for maps in many books and articles on relevant topics. Some of the maps in the text may be useful. Online, the National Geographic website has a substantial number of maps that you may find useful in constructing your own. Google maps can be helpful as a source as well. Another online reference that may be useful is the Perry Castañeda Library Map Collection at the University of Texas at Austin: http://www.lib.utexas.edu/maps/. Note that the original printed maps reproduced here have been produced by a variety of different agencies, which you should duly cite. Also, if you use these, you should be aware that any ratio scales are those of the original printed documents, and what you see on the screen or print out is almost certainly of a different size. Thus, use bar scales in order to calculate the ratio scale of the map you are working with.

Also, the following books may be useful:


While not offering conventional maps, the following source provides geographic information in vivid form: SASI Group (Social and Spatial Inequalities Research Group, University of Sheffield) and Mark Newman (University of Michigan). Worldmapper. Available at: http://www.worldmapper.org/index.html.

2. Systems Chart (30 points)

Draw a systems chart that represents the linkages that must be understood when studying the problem at hand. Examples of some such charts will be shown in class; a Powerpoint file with all these charts will be available via Blackboard for your reference. In the tsunami example mentioned above, the chart might feature physical phenomena such as the tension between two tectonic plates leading to an earthquake, the earthquake at the sea-floor leading to a deep wave in the sea above, the rapid propagation of that wave throughout the ocean basin, and its impacts on the shorelines. It would also feature human defenses against ocean waves, and human impacts on coastal vegetation (such as mangroves) that might provide some protection against the tsunami. It would address issues such as greater vulnerability of some people (e.g., poor fishermen and their families living close to the sea) than others (e.g., well-off people with jobs that are relatively independent from local natural resources and who live farther from the coast). It could also feature modes of response, e.g., what did the Sri Lanka government, international aid agencies, and other governments do in order to help which people affected by the tsunami?

The chart should make a clear distinction between stock variables (such as forests, clean air, housing, population) and the interactions among them. Thus, for example, do not create a box of “deforestation” but one of “forests,” and then trace out relationships that either lead to more or less forest cover through the use of arrows. More detailed instructions will be given in class, using examples of systems charts.
Like the map for the first part of this assignment, the chart will present some rather complex information. There should not be merely a simple linear series of relationships (A leads to B leads to C), but some networked relationships as well (for example, A, B, and C all affect D, which in turn affects E, F, and G, and some of those latter variables have their own effects on some or all of A, B, and C, in possibly contradictory ways). Be sure to include feedback loops, either reinforcing/positive or balancing/negative. It is best to include at least ten interacting variables in the representation. Thus, you will have to devote some thought to which information to present in which ways, so that the chart conveys an adequate amount of information while not being excessively cluttered. Use of colors, as well as different types of lines indicating different types of interactions may be helpful. Make sure that the chart looks neat, and maintain margins on the page (if you can’t fit everything on one page, consider making a two-page spread). Do not forget to include a list of sources that you used while creating the chart (this will not be part of the chart itself; use a separate page for this).

3. Written Explanation (20 points)

Provide a written explanation of one to two double-spaced pages to provide a verbal explanation of the decisions you made in drawing the map and chart (for example, regarding use of color and other graphic devices, selection of the map scale, which variables to focus on or leave out on the chart). Also, if there are causal relationships you have portrayed in your chart, or geographical patterns portrayed on your map that you feel require additional written explanation, provide that here. Note that this is not an essay in its own right, but simply a supplement to the map and systems chart.

Be sure to provide a list of citations to the sources you used in constructing the chart and in finding the information for your written explanation.

Neatness (10 points)

Ten percent of the assignment grade will be based on the overall neatness of the project, and the quality of graphic presentation. High marks will be given for papers presented in folders, on paper that is not crumpled (it can be cleanly folded), with lines drawn clearly, with effective use of color, with clear margins, and with information presented where it can be found easily.

Before you complete this assignment, be sure to read through the Guidelines for Class Assignments (p. 5-9), with special focus on the sections “Graphics,” “Metric Units of Measurement,” “Finding Internet Sources,” and “Citation of Sources.”

Criteria of evaluation:
Map neatly drawn, in a way to clearly and accurately convey information.
Legend includes all relevant information, with appropriate units of measurement.
Bar and ratio scales, as well as projections (for small-scale maps) are indicated correctly.
The choice of information to convey is appropriate to the chosen topic of the assignment.

Chart Presentation reflects clear organization of ideas, subordinating for importance and impact.
Causal relationships are clearly distinguished from correlations or coincidental relationships, with arrows pointing from the cause to the effect.
Demonstrates understanding of complex relationships between facts, opinions, and values in light of available evidence. This includes recognition of numerous causes affecting one outcome (sometimes in contradictory ways), one outcome having numerous effects, and the presence of feedback loops.