

NUTRITIONAL ANTHROPOLOGY

ARKY & ANTH 589 (Fall Semester 2009)

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Seminar: Weds. 9:00-11:50 a.m., ES 908

Office hours: Weds. 1:00-3:00 & by appointment



Course Description and Goal



Image from Menzel & deAluisio (1998)
"Man Eating Bugs"

Over 150 years ago, Jean Anthelme Brillat-Savarin wrote, "...tell me what thou eat and I will tell thee what thou art." Cannon (1964) expanded upon this stating that, "...not only biography and genealogy, but the whole field of anthropology could, if one knew the code, be deduced from food."

Is food, in fact, a fundamental part of our identity? Today, in Calgary, who we are may seem somewhat removed from what we eat. The cultural distance that some of us now experience from our favored foods, however, has not always been so great. In fact, human behavior has evolved in great

part as an interplay between the environments our ancestors inhabited, their eating behavior, and cultural institutions. Prior to the industrial revolution and in most societies which continue some sort of pre-industrial subsistence pattern, much of an individual's daily activities were and are devoted to the production of food for their own consumption; a process mediated by both cultural and ecological factors.

The goal of this course is to help you to understand human dietary behaviors as the result of a dynamic web of ecological and cultural factors. To do this, we will cover eight subject areas: (1) the development of nutritional anthropology, (2) basic nutritional principles, (3) basic ecological principles, (4) diet from an evolutionary, comparative, and historic perspective, (5) cultural factors influencing diet, (7) the impact of undernutrition on human physiology and behavior, and (8) methods in nutritional anthropology.

Course Conventions

1. Lecture/Discussion: In order to meet the goals of the course you have to attend class regularly and on time. You must be prepared to discuss the assigned topic. You are responsible for lecture material and any announcements concerning changes in schedule, etc. Because we meet only once a week and this class requires your active input, if you have more than 2 unexcused absences your overall participation grade is automatically a '0' (please see the Individual Participation Self Appraisal at the class blackboard site for details).

2. Reading: The readings for this course are listed on the course bibliography found below. The bulk of the readings for this class will be posted on the class Blackboard website. If you anticipate difficulty in accessing the website, you must plan accordingly to ensure that you obtain all of the readings with sufficient time to read them prior to each class. A careful and critical read of the assigned material is required. Keep in mind that you are not finished with the reading assignment until you thoroughly understand it. This will sometimes require you to read an assignment more than once. The assigned questions are designed to assist you in your critical evaluation of the material you are reading.

Required Text: Dettwyler 1994. *Dancing Skeletons*

3. Evaluation: You will be evaluated in this course on the basis of your in-class participation, two short exams, short-answer questions on the readings, a dietary intake project, a review of a journal article, a term paper, and a presentation of your term paper.

The two exams will be composed of short-answer questions. Material for these exams may be drawn from presentations in class by myself and students, literature covered, and class discussions. Prior to each exam you will be provided with a list of questions from which I will select several for the exam.

You must provide advance notice to me if you are unable to complete an assignment by the due date. All requests for deferral of a due date to health reasons must be accompanied by written documentation as outlined in the University Calendar and should be obtained while the student has the physical or emotional problem rather than after recovery. Travel arrangements and misreading of the syllabus are not valid reasons for requesting a deferred due date. Deferred due dates will not be granted if it is determined that just cause is not shown by the student.

Your final mark will be calculated as follows:

Participation_____	30%
Journal article review_____	8%
Short-Answer Questions_____	10%
Exam 1_____	10%
Exam 2_____	10%
Dietary Intake/Energy Expenditure Study_____	13%
Term Paper and Presentation_____	19%

Letter grade assignment: At the end of the course, the numerical marks will be summed and a final letter grade will be assigned based on the following basis:

<u>Percentage range</u>	<u>Letter grade</u>	<u>Percentage range</u>	<u>Letter grade</u>
95 or higher	A+	68-72	C+
90-94	A	64-67	C
85-89	A-	59-63	C-
81-84	B+	54-58	D+
77-80	B	50-53	D
73-76	B-	49 or lower	F

4. Academic Misconduct: cheating is regarded as a serious academic offense. Students are advised to consult the University Calendar, which presents a Statement of Intellectual Honesty and definitions and penalties associated with cheating, plagiarism, and other academic misconduct.

5. Retrieving Assignments: The Freedom of Information and Protection of Privacy (FOIP) legislation disallows the practice of having students retrieve assignments from a public place, e.g., outside an instructor's office or the Department main office. Term assignments must be returned to students individually, during class, or during my office hours; if a student is unable to pick up her/his assignment s/he may provide me with a stamped, self-addressed envelope to be used for the return of the assignment.

6. Academic Accommodation: Students with a disability, who require academic accommodation, need to register with the Disability Resource Centre (MC 295, telephone 220-8237). Academic accommodation letters need to be provided to me no later than fourteen (14) days after the first day of class. It is a student's responsibility to register with the Disability Resource Centre and to request academic accommodation, if required.

7. Office Hours: I enjoy having visitors during my office hours and am happy to schedule additional times as necessary. These hours are yours and I encourage you to take advantage of them, whether you are having difficulty with some aspect of the course, or if you would like to discuss in greater detail something that was touched on in class.

8. E-mail: Students are encouraged to use the lectures and office hours to ask questions. For after-hours questions, the use of e-mail is acceptable. Please write 'ANTH 589' or 'ARKY 589' in the 'Subject' portion of the email. I receive numerous e-mails every day. By clearly identifying the subject of your email, you will help me reply more efficiently to your e-mails. Note that if I think that your question and related answer is of general interest, I may decide to post them on the course Blackboard space (your name will not appear).

Deadlines to keep in mind

Deadlines are part of the assignments. Late work will not be accepted. Question sets for each week's readings must be complete **and printed** prior to 9:00 am each Wednesday. While you are free to add notes to your completed question set in class, you may not use that time to complete your answers. All other assignments are due no later than 4:00 pm on the due date.

- 1 day before your **journal article review** is presented in class- e-mail me your review
- 12 October (Mon.)- **dietary intake project** due (provide a hard copy- do not e-mail this to me)
- 5 November (Thur.)- deadline to get my **approval on your term paper topic**
- 23 November (Mon.)- e-mail me your **term paper abstract**
- 24 November & 2 December- in class **presentations of term paper**
- 9 December- **term paper** due (provide a hard copy and an electronic copy)

Safewalk

The University of Calgary provides a “safe walk” service to any location on Campus, including the LRT, parking lots, bus zones, and campus housing. For Campus Security/Safewalk call 220-5333. Campus Security can also be contacted from any of the “Help” phones located around Campus.

Tentative Schedule

Date	Topic	Reading Assignment ²
Sept. 9	Introduction, Anthropology, Science, Video: <i>Garlic is as Good as 10 Mothers</i>	
Sept. 16	Critical thinking I, Nutritional anthropology in the field: field work	Ruggiero 2004, Dettwyler 1994 (<i>all chapters</i>)
Sept. 23	Critical thinking II, Nutritional anthropology: history, Kalahari beef, Cali project, different approaches to the study of food.	Sagan 1996, Greenhalgh & Taylor 1997, Pope & Ziebland 2000 ³ , Harris 1978, Allison 1991
Sept. 30	Basic principles of nutrition: physiology of digestion, macro- & micronutrients	Pelto et al. 2000, Whitney and Rolfes 2005: Ch. 1, 3, and one of 4, 5, or 6.
Oct. 7	Organoleptic Properties & Food Choice Basic principles of ecology: energy flow and nutrient cycles	Ackerman 1990, Rozin 1987, Southwick 1996
<i>Note: Your dietary intake project is due no later than 4:00 pm on Friday, October 16. Turn this in at the wooden box outside the Archaeology main office (ES 806)</i>		
Oct. 14	Exam #1 (30 minutes at beginning of class) Evolutionary perspective: what did our ancestors eat?	Cordain et al. 2000, Milton 2000, Stanford 1995, Wrangham et al. 1999, Klein 2000 ³ , Mitani et al. 2002 (optional), Hockett and Haws 2003 (optional)
Oct. 21	Staple crops: strengths & weaknesses Pre-industrial diets: Tropical rainforests, Yapu slides	Diamond 1990, Normille 2000, Katz et al. 1975, Moran 1993, Dufour 1995, Dufour 1990 (optional)
Oct. 28	Pre-industrial diets: East African Pastoralists (Video: <i>Year of the Clouds</i>)	Reader 1988, Moran 1982, Galvin 1994
Nov. 5	Students' choice of topics ⁴	
Nov. 11	<i>Remembrance Day ~ No Class</i>	
Nov. 18	Exam #2 (30 minutes at beginning of class) Students' choice of topics ⁴	
Nov. 25	Student Presentations	Abstracts of papers to be presented
Dec. 2	Student Presentations	Abstracts of papers to be presented

¹ Note, the schedule of topics may change, but the exam dates will not change.

² The reading assignments are subject to change should I find, during the present semester, more recent publications which better cover the topic considered. If this occurs, I will inform you no later than 2 weeks prior to the relevant class.

³ This paper is suggested for undergraduate students and required for graduate students.

⁴ On October 14, Students will be asked to vote for topics to be covered in the classes on Nov. 5 & 18.

Possible topics are listed below. Students are free to suggest others which I may choose to include in the list.

- Cannibalism
- Culture & infant feeding
- Food as Medicine
- Undernutrition: causes & consequences

Course Bibliography¹

Ackerman, Diane. 1990. *A Natural History of the Senses*. Vintage Books, NY, NY. Pp. 127-143 (Although I have provided the entire chapter on taste, you are only required to read the following three sections from this chapter: "The Social Sense", "The Omnivore's Picnic", and "Bloom of a Taste Bud".)

Allison, Anne. 1991. Japanese Mothers and Obentos: The Lunchbox As Ideological State Apparatus. *Anthropological Quarterly*. 64:195-208.

Bearak, B. 2003 Why people still starve. *The New York Times*. July 13. Sunday Times Magazine.

Bergner. 2003. The Most Unconventional Weapon. *The New York Times*. Oct. 25. Sunday Times Magazine

Chavez, Adolfo, Cecilia Martinez, and Beatriz Soberanes. 1995. The Effect of Malnutrition on Human Development: A 24 Year Study of Well-Nourished and Malnourished Children Living in a Poor Mexican Village. In: N. S. Scrimshaw, ed. *Community-Based Longitudinal Nutrition and Health Studies: Classic Examples from Guatemala, Haiti, and Mexico*. Boston: International Nutrition Foundation for Developing Countries, pp. 79-124.

Cordain, L, Miller, JB, Eaton, SB, Mann, N; Holt SHA; and Speth, JD (2000) Plant-animal subsistence ratios and macronutrient energy estimations in worldwide hunter-gatherer diets. *American Journal of Clinical Nutrition* 71:682-692.

de Onis, M, C. Monteiro, J. Akre and G. Clugston. 1993. The worldwide magnitude of protein-energy malnutrition: an overview from the WHO Global Database on Child Growth. *Bulletin of the World Health Organization*, 71 (6):703-712.

Dettwyler, Katherine A. 1994. *Dancing Skeletons: Life and Death in West Africa*. Waveland Press, Long Grove, IL.

Diamond, Jared 1997. The worst mistake in the history of the human race. *Discover*, May, Pp. 64-66.

Dirks, Robert 1980. Social Responses during Severe Food Shortages and Famine. *Current Anthropology* 21(1): 21-44.

Dufour, Darna L. 1990. Use of tropical rainforests by Native Amazonians. *Bioscience* 40(9): 652-659.

Dufour, DL. 1995. A closer look at the nutritional implications of bitter cassava use. In: *Indigenous Peoples and the Future of Amazonia: An Ecological Anthropology of an Endangered World*. Edited by Leslie Sponsel. University of Arizona Press, Tucson, AZ. Pp. 149-165.

Food and Agriculture Organization 2000. *The State of Food Insecurity in the World*. (available on line at <http://www.fao.org/DOCREP/X8200E/x8200e00.htm#TopOfPage>)

Frisancho, A. Roberto. 1993. *Human Adaptation and Accommodation*, Chapter 16: Accommodation to Experimental Starvation and Chronic Undernutrition. University of Michigan Press, Ann Arbor, MI. Pp. 381-397.

Galvin, Kathleen A., D. Layne Coppock, and Paul W. Leslie. 1994. Diet, Nutrition, and Pastoral Strategy. In: *African Pastoralist Systems: An Integrated Approach*, edited by Elliot Fratkin, Kathleen A. Galvin, and Eric Abella Roth. Lynee Rienner Publishers, Inc. Pp. 113-131.

- Goodman, Dufour, and Pelto. 2000. Undernutrition: counting, classification, and consequences. In *Nutritional Anthropology: Biological Perspectives on Food and Nutrition*. Edited by Goodman, Dufour, and Pelto. Mountain View Press, Mayfield CA. Pp. 221-226.
- Gray, S. J. 1996. Ecology of weaning among nomadic Turkana pastoralists of Kenya: maternal thinking, maternal behavior, and human adaptive strategies. *Human Biology* 68(3):437-465.
- Greenhalgh, Trisha and Rod Taylor. 1997. How to read a paper: Papers that go beyond numbers (qualitative research). *British Medical Journal* 315:740-743.
- Harner, Michael, 1977. The Enigma of Aztec Sacrifice. *Natural History* (April) 86(4):46-51.
- Harris, Marvin. 1978. India's Sacred Cow. *Human Nature* (February) Pp. 28-36.
- Hockett, Bryan and Jonathan Haws 2003. Nutritional ecology and diachronic trends in Paleolithic diet and health. *Evolutionary Anthropology* 12:211-216.
- Katz, Solomon H., M. L. Hediger, and L. A. Valleroy, (1975) Traditional Maize Processing Techniques in the New World. *Science* 184: 765-773.
- Klein, RG (2000) Archaeology and the evolution of human behavior. *Evolutionary Anthropology* 9(1):17-36.
- Lee, Richard B. 1969. Eating Christmas in the Kalahari. *Natural History* Vol. 78, No. 10.
- Lee, Richard B. 2000. Postscript to a Christmas Story: The People of /Xai/xai Thirty Years On. *Natural History* archives,
http://www.naturalhistorymag.com/master.html?http://www.naturalhistorymag.com/editors_pick/1969_12_pick.html, Accessed 17 August 2005.
- Levine, Nancy E. 1988. Women's work and infant feeding: a case from rural Nepal. *Ethnology* 27(3):231-251.
- Martorell, Reynoldo 1989. Body size, adaptation, and function. *Human Organization*. 49(1):15-20.
- Martorell, Reynaldo; Juan Rivera, Haley Kaplowitz and Ernesto Pollitt. 1992. Long-term consequences of growth retardation during early childhood. IN *Human Growth: Basic and clinical aspects*. M. Hernandez and J. Argente, editors. Elsevier Science Publishers. Pp. 143-149.
- Milton, K (2000) Hunter-gather diets—a different perspective. *American Journal of Clinical Nutrition* 71(3):665-667.
- Mitani, JC, Watts, DP, and Muller, MN (2002) Recent developments in the study of wild chimpanzee behavior. *Evolutionary Anthropology* 11(1)9-25.
- Moran, Emilio 1982. Human Adaptability: *An Introduction to Ecological Anthropology*. Chapter 8- Human Adaptability to Grasslands (pp. 212-234). Westview Press, Boulder, CO.
- Moran, E.M. 1993. *Through Amazonian eyes: The human ecology of Amazonian populations*. University of Indiana Press. Chapter 1: Amazonia people and environment (Pp. 2—33).
- Nietschmann, Bernard. 1974. "When the turtle collapses, the world ends. *Natural History*. June/July. 83:34-42.

- Normile, Dennis 2000. Agriculture: Variety spices up Chinese Rice Yields. *Science* 289(5482): 1122-1123.
- Pelletier, David L. 1994. The potentiating effects of malnutrition on child mortality: epidemiologic evidence and policy implications. *Nutrition Reviews*. 52(12):409-415.
- Pelto, Gretel H. 1981. Perspectives on Infant Feeding, decision making, and ecology. *Food and Nutrition Bulletin*. 3(3):16.
- Pelto, Gretel H., Alan Goodman, Darna Dufour 2000. *The biocultural perspective in Nutritional Anthropology in Nutritional Anthropology: Biological Perspectives on Food and Nutrition*. Edited by Goodman, Dufour, and Pelto. Mountain View Press, Mayfield CA. pp. 1-15.
- Pelto, Gretel H., Pertti J. Pelto. 1983. Diet and delocalization: dietary changes since 1750. *Journal of Interdisciplinary History*, XIX, Pp. 507-528.
- Pope, Catherine & Sue Ziebland. 2000. Qualitative research in health care: Analysing qualitative data. *British Medical Journal* 320:114-116. (optional for undergraduates, required for graduate students).
- Preston, Douglas. 1998. Cannibals of the canyon: has a controversial anthropologist uncovered the truth about a great Southwestern civilization? *New Yorker* 74(37): 76. Nov 30.
- Reader, John 1988. *Man on Earth*. University of Texas Press. Austin, Texas. Pp. 89-108.
- Rozin, P. 1987. Psychobiological perspectives on food preferences and avoidances. IN *Food and Evolution*, edited by M. Harris and E. B. Ross. Temple University Press, Philadelphia, PA. Pp. 181-205.
- Ruggiero 2004. *Beyond feelings: a guide to critical thinking*. McGraw Hill. Chapters 2, 6, 13, 19.
- Sagan, Carl 1996. *The Demon-Haunted World: Science as a Candle in the Dark*, Balantine Books, New York, pp. 203-218.
- Southwick, Charles. 1996. *Global Ecology in Human Perspective*. Oxford University Press, NY, NY. Pp. 33-67.
- Stanford, Craig B. 1995. Chimpanzee hunting behavior and human evolution. *American Scientist*, May-June issue.
- Whitney, Ellie, Sharon R. Rolfes. 2005. *Understanding Nutrition*. Tenth Edition. Thomson Wadsworth, Belmont, CA.
- Wrangham, Richard W., James Holland Jones, Greg Laden, David Pilbeam, Nancy Lou Conklin-Brittain 1999. The raw and the stolen. *Current Anthropology*. 40(5): 567-594.

¹ The course bibliography is subject to change should I find, during the present semester, more recent publications which better cover the topic considered.

DEPARTMENT OF ARCHAEOLOGY STATEMENT OF INTELLECTUAL HONESTY

(With thanks to the Department of Anthropology for use of their
Statement of Intellectual Honesty as our guide.)

Intellectual honesty is the cornerstone of the development and acquisition of knowledge. Knowledge is cumulative and further advances are predicated on the contributions of others. In the normal course of scholarship, these contributions are apprehended, critically evaluated and utilized as a foundation for further inquiry. Intellectual honesty demands that the contribution of others be acknowledged.

Essentially, plagiarism is a form of cheating that involves submitting or presenting work in a course as if it were the student's own done expressly for that particular course when, in fact, it is not. Most commonly plagiarism exists when:

- a) the work submitted or presented was done, in whole or in part, by an individual other than the one submitting or presenting the work (this includes having another person impersonate the student or otherwise substituting the work of another for one's own in an examination or test).
- b) parts of the work are taken from another source without references to the original author.
- c) the whole work is copied from another source and/or
- d) a student submits or presents work in one course which has also been submitted in another course (even though it may be entirely the work of that student) without the express consent of the instructors of the courses concerned.

While it is recognized that scholarly work often involves reference to the ideas, data and conclusions of other scholars, intellectual honesty requires that such references be explicitly and clearly noted. Plagiarism is an extremely serious academic offense.

The elementary rules of quotation and paraphrase are given below. There are further details and conventions of punctuation that you will need to look up in a manual of style, but observance of these rules should assure compliance with contemporary standards of intellectual honesty.

1. If you use more than four words from any source, put them in quotation marks and identify the source with a reference.

EXAMPLE:

It has been observed that "many tribes are, in a sense, ethnographic fictions"
(Leach 1954: 291).

2. If your direct quotation is more than three lines long, put it in block form, that is, left and right indented and single-spaced, without quotation marks and with a reference.

EXAMPLE:

Malinowski thought of tribes as social systems with well defined boundaries. This conception of tribe was later to be challenged by one of his students, who observed that:

The ethnographer has often only managed to discern that existence of ‘a tribe’ because he took it as axiomatic that this kind of cultural entity must exist (Leach 1954: 291).

3. To paraphrase the work of another means to present the same train of thought and evidence, but rephrased into your own words. Whenever you do this, you must include a note or reference to the source. A common mistake is to break up an author’s words, and rearrange them slightly, passing them off as your own. This is wrong, even if you include a note or reference to the source. To do this for more than a few words is to commit plagiarism.

Below are three passages. The first is an excerpt from E.A. Leach, *Political Systems of Highland Burma*. The second is an improper paraphrase of the passage that would be considered plagiarism. The third is a proper paraphrase.

1. It is largely an academic fiction to suppose that in a ‘normal’ ethnographic situation one ordinarily finds distinct ‘tribes’ distributed on the map in orderly fashion with clear-cut boundaries between them. I agree of course that ethnographic monographs frequently suggest that this is the case, but are the facts proved? My own view is that the ethnographer has often only managed to discern the existence of ‘a tribe’ because he took it as axiomatic that this kind of cultural entity must exist. Many such tribes are, in a sense, ethnographic fictions (Leach 1954: 290-1). **(source)**
2. It is an academic misconception to think that in a typical ethnographic situation tribes with clear-cut boundaries can be found distributed in an orderly fashion on the map. Ethnographic monographs often imply that this is so, but what are the facts? The ethnographer is often able to find a ‘tribe’ only because she takes it for granted that this kind of group must exist. Many tribes are figments of the anthropologist’s imagination. **(plagiarism)**
3. Ethnographic monographs often suggest that it is normally the case that there exist in the real world contiguous tribes with clearly discernible boundaries: however, it is Leach’s view that such units are found only because the ethnographer has taken their existence for granted (Leach 1954: 290-1). **(proper paraphrase)**

STUDENT ACCOMMODATIONS

"It is the student's responsibility to request academic accommodations. If you are a student with a documented disability who may require academic accommodation and have not registered with the Disability Resource Centre, please contact their office at 220-8237. Students who have not registered with the Disability Resource Centre are not eligible for formal academic accommodation. You are also required to discuss your needs with your instructor no later than fourteen (14) days after the start of this course."