Medical Anthropology and Global Health

Jul. 5–6th 2012
Lecturer

- Ryoko Michinobu, Ph.D., MPH
- Sapporo Medical University, Center for Medical Education, Department of Liberal Arts and Sciences
  - Email: michinor@sapmed.ac.jp
- Cultural anthropology, Medical anthropology, Global health
Lecture objectives

- Provide a basic understanding of anthropology.
- Explain approaches and methods relevant to the study of medicine, health, and illness.
Anthropology and biomedicine are based on different assumptions about social reality.

Medical research and public health are dominated by biomedical assumptions.

Anthropologists fail to communicate with medical professionals and make a convincing case for what anthropology has to offer.

(Pool and Geissler, 2005)
Need for interdisciplinary cooperation

- Mutual understanding of the assumptions and approaches of the other discipline.
- Share the languages used in the other discipline.
  > The languages: key concepts, explanation, reasoning.

(Pool and Geissler, 2005)
Structure of the course

- Part I: Introduction to medical anthropology (Jul. 5, 9:30–11:00)
- Part II: Anthropology and medical systems (Jul. 5, 11:10–12:40)
- Part III: Community organization and health (Jul. 5, 14:00–15:30)
- Part IV: Cultural analysis of human practice in public health programs (Jul. 6, 10:00–11:30)
Introduction to medical anthropology

- Introduce anthropology
- Discuss the concept of culture as well as the basic assumptions, perspectives and approaches to medicine, health, and illnesses.
Part II: Anthropology and medical systems

- Medical system is a subdiscipline of medical anthropology.
- Often, this is traditionally considered to be the main objective of medical anthropology.
- Discuss medical systems and medical bricolage.
Examine participatory approaches to community health.

Discuss anthropological contributions.

- Understanding of the complexity of people's experiences of health and illness.
- Useful concepts: illness/disease, illness narratives, explanatory models.
- Detailed exploration of the wider context of community health (regional, national, and global).
Part IV: Cultural analysis of human practice in public health programs

- Present a case study: HIV risk and educational intervention in multinational corporations in Thailand.
- Situate health risk/risky behavior in the social and cultural context, as well as the globalizing world.
  - Complexity of human practices.
  - Perceived risk/situated risk.
  - Implications for public health interventions.
Part I: Introduction to medical anthropology

Jul. 5, 9:30–11:00
Anthropology

- The comparative study of human beings, their societies, and cultures.
Specialization in anthropology

- Physical or biological anthropology
- Ecological anthropology
- Cultural anthropology
- Applied anthropology
- Other sub-disciplines

✓ Medical anthropology encompasses all of the sub-disciplines
Physical or biological anthropology

- The study of human evolution, biological adaptation to the natural environment.
- The study of physiological differences among modern humans.
- The study of nonhuman primates.

(The Jane Goodall Institute)
Case Study (Biological medical anthropology)

- Article: “Stone Agers in the Fast Lane: Chronic Degenerative Diseases in Evolutionary Perspective”
- Authors: Boyd Eaton, Marjorie Shostak, Melvin Konner (1988)

The primary argument

- There is a “discordance,” or biological estrangement, between our genes and contemporary patterns of diet and activity.
- As a result of this discordance, there has been a marked increase in a variety of chronic diseases.
Implications of the study

- The chronic diseases are *preventable*.
  - The prescription includes a low-fat, high-fiber diet and an increase in exercise.
  - The reasoning behind this is *evolutionary*.

- Modern people can learn a lot from Paleolithic humans.
  - *Historical and comparative perspectives.*
Data

- Literature on fitness, diet, and disease prevalence in nonindustrial societies.
- Anthropological fieldwork among the hunter-gatherers in Africa, most analogous to Paleolithic humans.
The impact of cultural changes

- From a genetic standpoint, modern humans are still late Paleolithic pre-agricultural hunter-gatherers.
- The rapid cultural changes over the past 10,000 years have far outpaced any possible genetic adaptation.
**Impact of industrialization**

- Improved housing, sanitation, and medical care
  - Infection and trauma ↓
    - Average life expectancy ↑ (Beyond age 60)
  - Obesity, diabetes, hypertension, and certain cancers ↑ (Rare among traditional humans)
Analysis

- Diet/Nutrition
- Physical exercise
- Obesity
- Diabetes prevalence
### TABLE I  Late Paleolithic, Contemporary American, and Currently Recommended Dietary Composition

<table>
<thead>
<tr>
<th></th>
<th>Late Paleolithic Diet</th>
<th>Contemporary American Diet</th>
<th>Current Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total dietary energy (percent)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Protein</td>
<td>33</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>Carbohydrate</td>
<td>46</td>
<td>46</td>
<td>58</td>
</tr>
<tr>
<td>Fat</td>
<td>21</td>
<td>42</td>
<td>30</td>
</tr>
<tr>
<td>Alcohol</td>
<td>~0</td>
<td>7–10'</td>
<td>–</td>
</tr>
<tr>
<td>P:S ratio</td>
<td>1.41</td>
<td>0.44</td>
<td>1.00</td>
</tr>
<tr>
<td>Cholesterol (mg)</td>
<td>520</td>
<td>300–500</td>
<td>300</td>
</tr>
<tr>
<td>Fiber (g)</td>
<td>100–150</td>
<td>19.7</td>
<td>30–60</td>
</tr>
<tr>
<td>Sodium (mg)</td>
<td>690</td>
<td>2,300–6,900</td>
<td>1,100–3,300</td>
</tr>
<tr>
<td>Calcium (mg)</td>
<td>1,500–2,000</td>
<td>740</td>
<td>800–1,600</td>
</tr>
<tr>
<td>Ascorbic acid (mg)</td>
<td>440</td>
<td>87.7</td>
<td>60</td>
</tr>
</tbody>
</table>

Updated from Eaton and Konner, note 4. Data base now includes 43 species of wild game and 153 types of wild plant food.

*Inclusion of calories from alcohol would require concomitant reduction in calories from other nutrients—mainly carbohydrate and fat.

P.S.—polyunsaturated to-saturated fat.
# Physical exercise

## TABLE II  Aerobic Fitness

<table>
<thead>
<tr>
<th>Subsistence Pattern</th>
<th>Population</th>
<th>Average Age</th>
<th>Maximal Oxygen Uptake (ml/kg/minute)</th>
<th>Fitness Category*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hunter-gatherers</td>
<td>Canadian Igloolik Eskimos</td>
<td>29.3</td>
<td>56.4</td>
<td>Superior</td>
</tr>
<tr>
<td></td>
<td>Kalahari San (Bushmen)</td>
<td>Young men</td>
<td>47.1</td>
<td>Excellent</td>
</tr>
<tr>
<td>Rudimentary horticulturists</td>
<td>Venezuelan Warao Indians</td>
<td>Young men</td>
<td>51.2</td>
<td>Excellent</td>
</tr>
<tr>
<td></td>
<td>New Guinea highland Lufas</td>
<td>25</td>
<td>67.0</td>
<td>Superior</td>
</tr>
<tr>
<td>Simple agriculturists</td>
<td>Mexican Tarahumara Indians</td>
<td>29.8</td>
<td>63.0</td>
<td>Superior</td>
</tr>
<tr>
<td>Pastoralists</td>
<td>Finnish Kautokeino Lapps</td>
<td>25–35</td>
<td>53.0</td>
<td>Superior</td>
</tr>
<tr>
<td></td>
<td>Tanzanian Masai</td>
<td>32–43</td>
<td>59.1</td>
<td>Superior</td>
</tr>
<tr>
<td>Industrialized Westerners</td>
<td>Canadian Caucasians</td>
<td>20–29</td>
<td>40.8</td>
<td>Fair</td>
</tr>
<tr>
<td></td>
<td>Canadian Caucasians</td>
<td>30–39</td>
<td>38.1</td>
<td>Fair</td>
</tr>
<tr>
<td></td>
<td>Canadian Caucasians</td>
<td>40–49</td>
<td>34.9</td>
<td>Fair</td>
</tr>
</tbody>
</table>

*From note 14.
<table>
<thead>
<tr>
<th>Subsistence Pattern</th>
<th>Population</th>
<th>Age</th>
<th>Thickness (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hunter-gatherers</td>
<td>Australian Aborigines</td>
<td>25–29</td>
<td>4.7</td>
</tr>
<tr>
<td></td>
<td>Kalahari San (Bushmen)</td>
<td>Young men</td>
<td>4.6</td>
</tr>
<tr>
<td></td>
<td>Canadian Igloolik Eskimos</td>
<td>20–29</td>
<td>4.4</td>
</tr>
<tr>
<td></td>
<td>Congo Pigmies</td>
<td>20–29</td>
<td>5.5</td>
</tr>
<tr>
<td></td>
<td>Tanzanian Hadza</td>
<td>25–34</td>
<td>4.9</td>
</tr>
<tr>
<td>Rudimentary horticulturists</td>
<td>New Guinea Tukisenta</td>
<td>16–37</td>
<td>5.0</td>
</tr>
<tr>
<td></td>
<td>Venezuelan Warao Indians</td>
<td>Young men</td>
<td>5.9</td>
</tr>
<tr>
<td></td>
<td>New Guinea Biak</td>
<td>25</td>
<td>5.3</td>
</tr>
<tr>
<td></td>
<td>Solomon Islanders</td>
<td>19–70</td>
<td>5.4</td>
</tr>
<tr>
<td></td>
<td>New Guinea Lufa</td>
<td>21–35</td>
<td>5.1</td>
</tr>
<tr>
<td></td>
<td>Surinam Trio Indians</td>
<td>21 and over</td>
<td>6.0</td>
</tr>
<tr>
<td>Simple agriculturists</td>
<td>Peruvian Quechua Indians</td>
<td>35</td>
<td>4.0</td>
</tr>
<tr>
<td></td>
<td>Japanese Ainu</td>
<td>Young men</td>
<td>5.3</td>
</tr>
<tr>
<td></td>
<td>Tarahumara Indians</td>
<td>21 and over</td>
<td>6.3</td>
</tr>
<tr>
<td></td>
<td>Rural Ethiopian peasants</td>
<td>20–30</td>
<td>5.3</td>
</tr>
<tr>
<td>Mean</td>
<td></td>
<td></td>
<td>5.2</td>
</tr>
<tr>
<td>Industrialized Westerners</td>
<td>Canadian Caucasians</td>
<td>20–29</td>
<td>11.2</td>
</tr>
<tr>
<td></td>
<td>American Caucasians</td>
<td>18–24</td>
<td>9.0</td>
</tr>
<tr>
<td>Mean</td>
<td></td>
<td></td>
<td>10.1</td>
</tr>
</tbody>
</table>
### TABLE V  Diabetes Prevalence

<table>
<thead>
<tr>
<th>Subsistence Pattern</th>
<th>Population</th>
<th>Prevalence (percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hunter-gatherers</td>
<td>Alaskan Athabaskan Indians</td>
<td>1.3</td>
</tr>
<tr>
<td></td>
<td>Greenland Eskimos</td>
<td>1.2</td>
</tr>
<tr>
<td></td>
<td>Alaskan Eskimos</td>
<td>1.9</td>
</tr>
<tr>
<td>Rudimentary horticulturists</td>
<td>Papua, New Guinea Melanesians</td>
<td>0.9</td>
</tr>
<tr>
<td></td>
<td>Loyalty Island Melanesians</td>
<td>2.0</td>
</tr>
<tr>
<td></td>
<td>Rural Malaysians</td>
<td>1.8</td>
</tr>
<tr>
<td>Simple agriculturists</td>
<td>Rural villagers, India</td>
<td>1.2</td>
</tr>
<tr>
<td></td>
<td>“New” Yemenite immigrants, Israel</td>
<td>0.1</td>
</tr>
<tr>
<td></td>
<td>Rural Melanesians, New Caledonia</td>
<td>1.5</td>
</tr>
<tr>
<td></td>
<td>Polynesians on Pukapuka</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td>Rural Figians</td>
<td>0.6</td>
</tr>
<tr>
<td>Pastoralists</td>
<td>Nomadic Broayas, North Africa</td>
<td>0.0</td>
</tr>
<tr>
<td>Mean</td>
<td></td>
<td>1.1</td>
</tr>
<tr>
<td>Industrialized Westerners</td>
<td>Australia, Canada, Japan, United States</td>
<td>Range 3.0–10.0&quot;</td>
</tr>
</tbody>
</table>

*See footnote to Table IV.
*Data are from note 41.
Messages from the authors

- In order to regain relative freedom from these chronic diseases, we need to take a step backward in time.
- The best corrective measure is prevention.
- This entails reintroduction of essential elements from the lifestyles of our Paleolithic ancestors.
Questions (Human evolution)

- Some cartoonists poked fun at this study, calling it the “caveman diet.” What do you think about this study?
- This paper was written for physicians who read medical journals. What kind of assumption may be embedded here regarding the nature and causation of health?
Cultural anthropology

- The study of human culture and society.
- Culture: the manner in which human beings adapt to their environments and give meanings to their lives.
- Society: a set of human relationships among surrounding people.
Culture

- Human ideas (learned)
- Human behavior (learned)
- Human relationships
  - Groups: friends, associations.
  - Kinship: families, relatives.
  - Institutions: colleges, companies
  - Community: villages, cities, nations, the global community.
- Material objects (produced by people)
Human ideas  =Ideational system

- Anthropological focus: a shared system.
- Systems of shared ideas (concepts, rules, meanings), which are expressed in the ways human live.
- We see the world through our ideational systems = our cultural glasses.

(Keesing and Strathem, 1998)
Ethnocentrism

- Views other ways of life in terms of our own cultural glasses.
- Dismisses other people's behavior as strange or wrong.
How can we be conscious of our own cultural glasses?

- Do so best by learning about other people’s cultural glasses.
- Then, “comparison” becomes a method of anthropology.
Human behavior

- Cultural codes guide one's behavior (our everyday behavior).
- Codes of physical intimacy, eye contact, orientation in space.
- There are shared understandings we need in order to interact with others in culturally appropriate ways.
Shared or personal?

- Human behavior is a set of cultural and individual matters of shared convention and personal style.
- Traditionally, anthropology focuses more on shared convention than personal style:
  - Even though, anthropologists do not consider idiosyncratic behaviors as deviant/strange.
Culture as public, culture as private

- Public: people share a common code and common meaning.
- Private: cultural codes are enacted in a particular social relationship.
  - Individual differences, based on age, gender/sex, life experiences.
  - Regional/local differences (village vs. city, island vs. mainland, agricultural vs. industrial, etc.).
Human relationships = Sociocultural systems

- The pattern of residence.
- Use of natural resources (food, energy).
- Kinship relations (courting styles, marriage patterns, number of children, elderly care, child care).
Case Study
(Cultural/Ethnomedical anthropology)

- Article: “The Epidemiology of a Folk Illness: Susto in Hispanic America”
- Author: J. Rubel (1964)

Susto

- Soul loss, magical fright
- A folk illness: Does not fit into the categorization system of biomedicine or psychiatry (e.g., The Diagnostic and Statistical Manual of Mental Disorders (DSM) published by the American Psychiatric Association. It provides standard criteria for the classification of mental disorders.)
North and South American countries inhabited by Spanish-speaking people (e.g., Mexico, Argentina, Columbia, Peru).

The population is a mixture of indigenous people (Indian groups) and nonindigenous groups (mestizos: mixed descent).

Rubel’s fieldwork was carried out among indigenous people living in the Spanish-speaking New World (e.g., the Chinantec, the Tzotzil).
This study is an epidemiological study because it describes the distribution of susto in regard to time, place, and person. It also draws hypotheses about the causation of the illness.

This study is an anthropological study, because it presents cultural interpretations of the causes of susto.
Cultural interpretations of the causes of susto

- Beliefs about the etiology of susto
- Curing of susto
- Cultural differences in beliefs and curing
  - Indian etiological theory of susto is different from the mainstream theory (mestizos).
Rubel’s finding

- People who had suffered from susto had a much greater likelihood of dying over the period (ten years of a prospective case-control study).
Descriptive data on susto

- Symptoms
- Etiology
- Regimens of healing
Symptoms

- While asleep, a patient experiences restlessness.
- During waking hours, the patient manifests listlessness, loss of appetite, disinterest in dress or personal hygiene, loss of strength and weight, depression, and introversion.
Etiology

- Indigenous groups:
  - The causal agents are the spirit guardians of a locality (earth, water, animals).
  - The spirits catch the soul of the patient, and the soul separates from the body.
  - The spirits catch the soul when the victim unwittingly offends the spirits.

- Nonindigenous groups:
  - Do not believe in the spirits.
Etiology

- One salient feature among both indigenous and nonindigenous groups:
  - “The helplessness role”: Susto appears when the victim is unable to adequately fulfill the expectations of the society in which he or she has been socialized in and when the victim perceives it as stressful.
Regimens of healing

- **Healing ceremony**: A healing specialist visits the site at which the mishap occurred. He propitiates the spirits and then coaxes the released soul back to the body of the victim.

- **Sweeping**: Sickness that has entered the victim’s body is removed by sweeping it out by means of medicinal branches or by passing hens’ eggs, a fowl, or a guinea pig across the body of the victim.
An epidemiological model of susto (chains of inference)

STATE OF HEALTH
1. Susceptibility to susto and other health conditions.
2. Relative severity and chronicity of illness.
3. Frequency of episodes.

PERSONALITY SYSTEM
1. Self-perception of relative success or failure in fulfillment of social role expectations.
2. Individual’s capacity to adapt to self-perceived inadequate role performances.

SOCIAL SYSTEM
1. Society’s sex-specific and age-specific role expectations.
Rubel presented a model of the individual as a “linked open system” of physical, social, and psychological aspects that are interconnected in the context of stress and social support.
Culture-bound syndromes

- Susto is classified as a culture-bound syndrome: “Specific behavioral disorders that are unique to one or only a few cultures” (D. Pollock, in Encyclopedia of Cultural Anthropology, 1996).
- Mental illnesses: Highly culture-specific but, in fact, fundamentally similar across cultures
- Other CBS: amok (Malaysia), koro (China)
- CBS is an idiom of distress (M. Nicher, 1981).
Questions (Folk illness)

- What are the good and bad features of the sick role?
  - Why might this be good for the person (patient) as well as for the society as a whole?
  - How might the sick role be abused?

- How is the treatment of susto different from the treatment of depression in Japanese society or in your country?
Think of an example of your own illness experience in which assumptions of ways to do things (explanation of illness, treatment behavior, expectation for medical practitioners, etc.) that were thus far unconscious now appear to you to be culturally situated.

(Pool and Geissler, 2005)