Eating Culture
An Anthropological Guide to Food
Gillian Crowther
www.d.umn.edu/cla/faculty/troufs/anthfood/aftexts.html#title
use your up/down arrow keys and/or your space bar to advance the slides

Eating

Biological Makeup

An Anthropological Guide to Food

Gillian Crowther

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Biological Makeup

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the

Biocultural Framework
for the Study of Diet and Nutrition
includes

• Nutritional Status

• **Biological Makeup**

• Human Nutrient Needs

• Diet

• Cuisine

• The Environment
  • Physical Environment
  • Sociocultural Environment
  • Economic and Political Environment
nutrients . . .
nutrients . . .

“essential nutrients” . . .
“Setting the Table for a Cultural Feast”

nutrients . . .

“essential nutrients” . . .

that’s what it’s all about
“Setting the Table for a Cultural Feast”

... and it all starts with the individual ...
Figure 1.1
Biocultural Framework for the Study of Diet and Nutrition

Source: Authors

The Cultural Feast, 2nd Ed., p. 4
essential nutrients

“nutrients that are indispensable for health and cannot be synthesized by the human body, but must be ingested”
essential nutrients

“nutrients that are indispensable for health and cannot be synthesized by the human body, but must be ingested”

*The Cultural Feast, 2nd Ed.*, p. 5
essential nutrients

that’s why you hear the word “nutrition” so often
(to the point where you don’t even pay much attention to it any more)
essential nutrients

“nutrients that are indispensable for health and cannot be synthesized by the human body, but must be ingested”

you MUST get them from the food you eat
(if you want to remain alive / healthy)

_The Cultural Feast, 2nd Ed., p. 5_
in theory

it’s as simple as that . . .

(at least for the bio-physical intake part)

*The Cultural Feast, 2nd Ed.*, p. 5
... but later on you will also see that you need to get all “48 or so” essential nutrients without exceeding about* a 2,000,000-2,300,000 calorie per day limit

*it’s “about a 2,000,000-2,300,000 calorie per day limit” as individual needs and situations vary. This is the number commonly used in discussions for illustration purposes. More on this in the week.

The Cultural Feast, 2nd Ed., p. 5
as the text suggests, for e.g., humans (and a few other primates and other animals) do not have the ability to synthesize vitamin C . . . 

The Cultural Feast, 2nd Ed., p. 5
as the text suggests, for e.g., humans (and a few other primates and other animals) do not have the ability to synthesize vitamin C . . . probably due to a mutation that changed the enzyme which synthesizes ascorbic acid (vitamin C) from blood sugar (glucose) (more on enzymes with “Human Nutrient Needs”)

*The Cultural Feast, 2nd Ed.*, p. 5
The table on p. 7 lists Nutrients That Are Essential for Human Health . . . 48 of them

*The Cultural Feast, 2nd Ed.*, p. 7
Table 1.1 Nutrients That Are Essential for Human Health. These must be ingested as the body does not synthesize them or synthesizes them in small amounts that are not sufficient to maintain health.

<table>
<thead>
<tr>
<th>Macronutrients for Energy</th>
<th>Essential Amino Acids</th>
<th>Vitamins</th>
<th>Minerals</th>
<th>Essential Fatty Acids</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbohydrate</td>
<td>Histidine</td>
<td>Vitamin A</td>
<td>Major minerals (needed in larger amounts)</td>
<td>Linoleic acid</td>
</tr>
<tr>
<td>Fat</td>
<td>Isoleucine</td>
<td>B vitamins:</td>
<td>Sodium</td>
<td>Linolenic acid</td>
</tr>
<tr>
<td>Protein</td>
<td>Leucine</td>
<td>Thiamin (vitamin B-1)</td>
<td>Chloride</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lysine</td>
<td>Riboflavin (vitamin B-2)</td>
<td>Calcium</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Methionine</td>
<td>Niacin (nicotinic acid;</td>
<td>Potassium</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>vitamin B-3)</td>
<td>Phosphorus</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Phenylalanine</td>
<td>Biotin</td>
<td>Magnesium</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Threonine</td>
<td>Pantothenic acid</td>
<td>Sulfur</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tryptophan</td>
<td>Vitamin B-6 (pyridoxine)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Folate (folic acid, folacin)</td>
<td>Trace minerals (needed in very small amounts)</td>
<td>Iron</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Vitamin B-12 (cobalamin)</td>
<td></td>
<td>Zinc</td>
</tr>
<tr>
<td></td>
<td>Vitamin C (ascorbic acid)</td>
<td></td>
<td></td>
<td>Iodine</td>
</tr>
<tr>
<td></td>
<td>Vitamin D (calciferol)</td>
<td></td>
<td></td>
<td>Copper</td>
</tr>
<tr>
<td></td>
<td>Vitamin E (alpha tocopherol, tocopherol)</td>
<td></td>
<td></td>
<td>Manganese</td>
</tr>
<tr>
<td></td>
<td>Vitamin K (menadione)</td>
<td></td>
<td></td>
<td>Fluoride</td>
</tr>
</tbody>
</table>

Other minerals probably essential in VERY small amounts: nickel, silicon, tin, vanadium, cobalt, boron
The table on p. 7 lists Nutrients That Are Essential for Human Health . . . 48 of them.

Wikipedia has 3 “pages” of them . . .
List of essential nutrients

- Essential human requirements usually not considered to be nutrients:
  - Oxygen
  - Water
  - Sunlight (for synthesis of Vitamin D)
- Essential fatty acids:
  - Linolenic acid (the shortest chain omega-3 fatty acid)
  - Linoleic acid (the shortest chain omega-6 fatty acid)
- Essential amino acids necessary for all humans:
  - Histidine
  - Isoleucine
  - Lysine
  - Leucine
  - Methionine
  - Phenylalanine
  - Threonine
  - Tryptophan
  - Valine
- Essential amino acids necessary for human children and not adults:
  - Arginine
  - Vitamins:
- **Valine**
- **Essential amino acids necessary for human children and not adults:**
  - Arginine
- **Vitamins:**
  - Biotin (vitamin B7, vitamin H)
  - Choline (vitamin Bp)
  - Folate (folic acid, vitamin B9, vitamin M)
  - Niacin (vitamin B3, vitamin P, vitamin PP)
  - Pantothenic acid (vitamin B5)
  - Riboflavin (vitamin B2, vitamin G)
  - Thiamine (vitamin B1)
  - Vitamin A (retinol)
  - Vitamin B6 (pyridoxine, pyridoxamine, or pyridoxal)
  - Vitamin B12 (cobalamin)
  - Vitamin C (ascorbic acid)
  - Vitamin D (ergocalciferol, or cholecalciferol)
  - Vitamin E (tocopherol)
  - Vitamin K (naphthoquinoids)
- **Dietary minerals**
  - See also: dietary minerals
    - Calcium (Ca)
    - Chlorine (Cl)
- **Vitamin E** (tocopherol)
- **Vitamin K** (naphthoquinoids)
- **Dietary minerals**[^2]
  
  *See also: dietary minerals*

- **Calcium** (Ca)
- **Chlorine** (Cl)
- **Cobalt** (Co) (as part of **Vitamin B-12**)
- **Copper** (Cu)[^3]
- **Iodine** (I)
- **Iron** (Fe)
- **Magnesium** (Mg)
- **Manganese** (Mn)^[4]
- **Molybdenum** (Mo)
- **Nickel** (Ni)^[5]
- **Phosphorus** (P)^[6]
- **Potassium** (K)
- **Selenium** (Se)^[7]
- **Sodium** (Na)
- **Sulfur** (S) numerous roles[^8]
- **Zinc** (Zn)^[9]

The body's requirements vary widely. At one extreme a 70 kg human contains 1.0 kg of calcium but only 3 mg of cobalt.[^10]
and humans can eat almost anything* to get essential nutrients . . .

*That is almost anything that’s not poison. But even then, humans regularly eat poisonous things, but usually only after processing them—using some culturally invented process. In other words, culture allows humans to even eat poisonous food, and to do that on a regular basis. But, read on, there is . . . a dilemma . . .
that’s why we’re called omni – vores
but

“almost anything”

means we have . . .
but

“almost anything”

means we have . . .
we have a dilemma . . .
but
“almost anything”
means we have . . .
we have a dilemma . . .
the now-well-known . . .

The Cultural Feast, 2nd Ed., p. 5
The Omnivore's Dilemma
A NATURAL HISTORY OF FOUR MEALS

MICHAEL POLLAN
Author of
THE BOTANY OF DESIRE

"Thoughtful, engrossing...you're not likely to get a better explanation of exactly where food comes from." —The New York Times Book Review

PENGUIN BOOKS
Biocultural Framework for the Study of Diet and Nutrition

- Nutritional Status
- Biological Makeup

in the section on “biological makeup” on p. 5 of *The Cultural Feast*
you see the word omnivorous
let’s have a look at that word . . .

(REM: One of the four main areas of anthropology is linguistics)
Diet classifications:

- Herbivorous (plants)
- Insectivorous (insects)
- Frugivorous (fruits)
- Graminivorous (grasses)
- Carnivorous (chiefly meats)
- Omnivorous
Diet classifications:
- herbivorous (plants)
- insectivorous (insects)
- frugivorous (fruits)
- graminivorous (grasses)
- carnivorous (chiefly meats)
- omnivorous

—vorous

SUFFIX: Eating; feeding on: *vermivorous.*

ETYMOLOGY: From Latin *-vorus,* from *vorāre,* to swallow, devour.

-<vorous

**SUFFIX:** Eating; feeding on: *vermivorous.*

**ETYMOLOGY:** From Latin *-vorus,* from *voräre,* to swallow, devour.

-vorous

comes from

SUFFIX: Eating; feeding on: vermivorous.

ETYMOLOGY: From Latin -vor-us, from vorāre, to swallow, devour.
SYLLABICATION: vor-acious

PRONUNCIATION: vo-rə-shəs, vo-

ADJECTIVE: 1. Consuming or eager to consume great amounts of food; ravenous. 2. Having or marked by an insatiable appetite for an activity or pursuit; greedy: a voracious reader.

ETYMOLOGY: From Latin vorāc-, vorā-, from vorāre, to swallow, devour.

OTHER FORMS: voracious-ly — ADVERB
voracious-ty (-rə-shə-tē), voracious-ness (-rə-shə-nəs)— NOUN

SYNONYMS: voracious, glutinous, rapacious, ravenous These adjectives mean having or marked by boundless greed: a voracious reader of history; a glutinous consumer of fine foods; a rapacious acquirer of competing businesses; a politician ravenous for power.
voracious

SYLLABICATION: vo·ra·cious

PRONUNCIATION: vō·rāˈshəs, vō-

ADJECTIVE: 1. Consuming or eager to consume great amounts of food; ravenous. 2. Having or marked by an insatiable appetite for an activity or pursuit; greedy: a voracious reader.

ETYMOLOGY: From Latin vorās, vorā, from vorāre, to swallow, devour.

OTHER FORMS: vo·ra·cious·ly — ADVERB vo·ra·cious·ty (-rāˈshə-tē), vo·ra·cious·ness (-rāˈshəs-nēs) — NOUN

SYNONYMS: voracious, gluttonous, rapacious, ravenous These adjectives mean having or marked by boundless greed: a voracious reader of history; a gluttonous consumer of fine foods; a rapacious acquirer of competing businesses; a politician ravenous for power.

comes from

comes from

**voracious**

**SYLLABICATION:** vor-a-cious

**PRONUNCIATION:** vō-rā'shəs, vō-

**ADJECTIVE:** 1. Consuming or eager to consume great amounts of food; ravenous. 2. Having or marked by an insatiable appetite for an activity or pursuit; greedy: a voracious reader.

**ETYMOLOGY:** From Latin vorā'cius, from vorāre, to swallow, devour.

**OTHER FORMS:** vor-a'c

**SYNONYM:** voracious, glutinous, rapacious, ravenous

These adjectives mean having or marked by boundless greed: a voracious reader of history; a glutinous consumer of fine foods; a rapacious acquirer of competing businesses; a politician ravenous for power.

**meaning**
voracious

SYLLABICATION: vor-ah-choos

PRONUNCIATION: vō-rə-chōs, vor-

ADJECTIVE: 1. Consuming or eager to consume great amounts of food; ravenous. 2. Having or marked by an insatiable appetite for an activity or pursuit; greedy: *a voracious reader.*

ETYMOLOGY: From Latin vorāvō, vorā-, from vorāre, to swallow, devour.

OTHER FORMS: vor-a'ciously — Adverb
vor-a'city (-rəs'-ī-tē), vor-a'cious-ness (-rə'shəs-nəs) — Noun

SYNONYMS: voracious, gluttonous, rapacious, ravenous These adjectives mean having or marked by boundless greed: *a voracious reader of history; a gluttonous consumer of fine foods; a rapacious acquirer of competing businesses; a politician ravenous for power.*

voracious

SYLLABICATION: vo·ra·cious

PRONUNCIATION: vo·rā'shəs, vo-

ADJECTIVE: 1. Consuming or eager to consume great amounts of food; ravenous. 2. Having or marked by an insatiable appetite for an activity or pursuit; greedy: a voracious reader.

ETYMOLOGY: From Latin vorāri, vorā-, from vorāre, to swallow, devour.

OTHER FORMS: vo·ra'cious·ly —adverb
vor·a·cious·ness (vo·rā'shəs-ˈnəs) —noun

SYNONYMS: voracious, gluttonous, rapacious, ravenous These adjectives mean having or marked by boundless greed: a voracious reader of history; a gluttonous consumer of fine foods; a rapacious acquirer of competing businesses; a politician ravenous for power.
omni—

PREFIX: All: omnidirectional.

ETYMOLOGY: Latin, from omnis, all. See op- in Appendix I.
comes from

PREFIX: All: omni-

ETYMOLOGY: Latin, from omnis, all. See op- in Appendix I.
herbivorous (principally plants)
insectivorous (principally insects)
frugivorous (principally fruits)
graminivorous (principally grasses)
folivorous (principally leaf eating)
proteinivorous (principally protein eating)
carnivorous (chiefly meats)

omnivorous ("devours" "all")
• herbivorous (principally plants)
• insectivorous (principally insects)
• frugivorous (principally fruits)
• graminivorous (principally grasses)
• folivorous (principally leaf eating)
• proteinivorous (principally protein eating)
• carnivorous (chiefly meats)
• omnivorous ("devours" "all")

that’s just one diet classification, there are many . . .
diet classifications

- **herbivorous** (principally plants)
- **insectivorous** (principally insects)
- **frugivorous** (principally fruits)
- **graminivorous** (principally grasses)
- **folivorous** (principally leaf eating)
- **proteinivorous** (principally protein eating)
- **carnivorous** (chiefly meats)
- **omnivorous** (“devours” “all”)
- **locavore** (principally locally available foods)
diet classifications

- **herbivorous** (principally plants)
- **insectivorous** (principally insects)
- **frugivorous** (principally fruits)
- **carnivorous** (chiefly meats)
- **omnivorous** ("devours" "all")
- **locavore** (principally locally available foods)

these six are the classifications most often used in the four areas of Anthropology.
diet classifications

- herbivorous (principally plants)
- insectivorous (principally insects)
- frugivorous (principally fruits)

and the two below are the diet classifications seen most often in the Anthropology of Food . . .

- omnivorous (“devours” “all”)
- locavore (principally locally available foods)
diet classifications

• **herbivorous** (principally plants)
• **insectivorous** (principally insects)
• **frugivorous** (principally fruits)
• **graminivorous** (principally grasses)
• **folivorous** (principally leaf eating)
• **proteinivorous** (principally protein eating)
• **carnivorous** (chiefly meats)
• **omnivorous** ("devours" "all")

the newest one is . . .

• **locavore** (principally locally available foods)
locavore

2007 New Oxford American Dictionary
Word of the Year
A Locavore Christmas: Whole Grain Christmas Cookies

Slow Food *Lake Superior*

"Food, Books, Movies"

**Food**: Root Winter Vegetable Themed Potluck

**Books**: Cookbooks to Romances and beyond

**Movies**: Cartoons, Documentaries, Features, you name it

*Bring your favorite root or winter veggie potluck dish and a food-related book or movie (or info about it). Eat great food and find out what others are reading and watching.*

A prize will be awarded for the best root/winter vegetable dessert!

**Sunday, February 7, 2010**

3 pm - 6 pm

Peace Church, 1111 N 11th Ave E

slowfoodlakesuperior@gmail.com for more info

(Slow Food people are generally locavores)

and have a look at the

class Slow Food Page
diet classifications

• herbivorous (principally plants)
• insectivorous (principally insects)
• frugivorous (principally fruits)
• graminivorous (principally grasses)

the other diet classification term you hear most is . . .

• omnivorous (“devours” “all”)
• locavore (principally locally available foods)
diet classifications

- herbivorous (principally plants)
- insectivorous (principally insects)
- frugivorous (principally fruits)
- graminivorous (principally grasses)
- folivorous (principally leaf eating)
- proteinivorous (principally protein eating)
- carnivorous (chiefly meats)
- omnivorous (“devours” “all”)

as in . . .
The Omnivore's Dilemma
A NATURAL HISTORY OF FOUR MEALS

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"Thoughtful, engrossing...you're not likely to get a better explanation of exactly where food comes from." —The New York Times Book Review

Penguin
“omnivores’ paradox”

“. . . humans’ interest in new and varied food sources (neophilia) is balanced by their fear of new food items (neophobic), especially those that taste different from foods already determined to be safe.”

The Cultural Feast, 2nd Ed., p. 6
Biocultural Framework for the Study of Diet and Nutrition

- Nutritional Status
- Biological Makeup
- Human Nutrient Needs
- Diet

we’ll have a closer look at the omnivore’s dilemma in the context of a closer look at “Human Nutrient Needs” . . .