Carol A. Bryant, Kathleen M. DeWalt, Anita Courtney and Jeffrey Schwartz

The Cultural Feast: An Introduction to Food and Society, 2nd Ed.
Belmont, CA: Thompson Wadsworth, 2003
I was a research assistant for Bill Liu for two years at the University of Notre Dame . . . 

and as research advisors do, he had an impact on me way beyond questions related to research . . . but, of course, some of those items also become items of future personal research . . .
One day I made coffee (and coming from Minnesota I made what many others consider *strong* coffee), and Prof. Liu, a kind and gentle man, said,

“Tim, I can not drink your coffee.”
“I’m sorry,” said I, “I’ll remember not to make it so strong next time. . . .”

“No no,” said Prof. Liu, “it’s not how strong that’s a problem . . . it’s the cream.”
“The cream?” said I, product of a small Midwestern German dairy-farming village

“Yes,” said Prof. Liu.
“I can’t drink milk.
I get sick.”

William T. Liu, Ph.D.
Professor Emeritus
1930 - 2008
that was my real-life introduction to lactose intolerance
about lactose intolerance . . .
lactose intolerance
is the inability to metabolize lactose,
the sugar found in milk and other dairy products,
because the required enzyme lactase is absent in the intestinal system
(or its availability is lowered)
population-level difference
in biological terms, these are differences in the frequency of genetic traits
• e.g., the prevalence of lactase deficiency is different across populations
people with lactase deficiency symptoms are known as “lactose intolerant”
The Essence of Chinese Cuisine.
Nashville/London: Aurora.

lactose-intolerant Bill Liu was co-author of a major Chinese cookbook for the English-speaking world . . .
The Essence of Chinese Cuisine

William T. Liu and May L. Liu

Nashville/London: Aurora.
Week 9 we’ll review Sherri Inness’s work and see the impact of Chinese and other minority and class-based cookbooks as a major agents in social change . . .
Chapter 2: “’Unnatural, Unclean, and Filthy’: Chinese-American Cooking Literature Confronting Racism in the 1950s”

Sherrie A. Inness

_Secret Ingredients:_
_Race, Gender, and Class at the Dinner Table._

NY: Palgrave Macmillan 2005
Chapter 2

“Diet and Human Evolution”

Lactose Intolerance
Chapter 2: “Diet and Human Evolution”

“Diet and Human Evolution”

- Exploring the Diets of Extinct Humans Through Paleontology
  - Teeth
  - Skulls and Jaws
  - The Postcranial Skeleton
- What Is Adaptation?
- Using Chemistry to Infer the Diets of Extinct Hominids
- Our Place in Nature
- A Brief Who's Who of the Early Hominids
- What Did Early Hominids Eat?
- What Can We Say About the Diets of Fossil *Homo*?
- Summary

**Highlight: Lactose Intolerance**
“Within a narrow range of variation, humans around the world share similar nutrient requirements and restrictions.”

- no human can digest cellulose
- no human can avoid toxic reactions caused by eating certain poisonous plants
- all humans require the same 50 or so essential nutrients to stay healthy
“Although there have been some specific adaptations of populations in particular environments, on the whole, humans are physiologically the same animals we were 10,000 years ago before the adoption of agriculture, animal husbandry, and food production technology.”
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The Cultural Feast, 2nd Ed., p. 6
ca. 10,000 years ago
(ca. 10,000 ybp)
or
10,000 B.C.
(10,000 B.C.E)
is one of those
“Dates to Remember” . . .
ca. 10,000 B.C. is usually one of the very first dates that you will see on any food timeline . . .

and it virtually always appears on any prehistoric timeline chronicling events of that era . . .
and 10,000 B.C. represents the commonly accepted date for the “beginnings of agriculture”, i.e., the beginnings of “The Agricultural Revolution”
“This [basic ancient physiology] has some interesting implications regarding the impact that diets based on agriculture, animal husbandry, and food technology have on humans’ health and nutritional status.”
Masai's Kinship with Cows

Holy Cow

(50 min., 2004, DVD 1846)

Holy Cow Nature WebSite

This is the story of how we've changed the cow and how the cow has changed us, forever. Human history, biology, agriculture and economics have all been affected by this most influential animal. Societies which learned to domesticate the cow prospered, while those that did not were left behind. The cow is an animal that has evolved to eat pretty much anything and miraculously
and we’ll have a look at cows’ milk and it’s impact on — prehistoric and modern humans . . .

Chapter 2, pp. 40-47
of The Cultural Feast, 2nd ed.,
“Diet and Human Evolution, highlights the importance of lactose intolerance / lactase deficiency in both human evolution and in contemporary populations”
Chapter 2, pp. 40-47 of *The Cultural Feast, 2nd ed.*, “Diet and Human Evolution, highlights the importance of *lactose intolerance / lactase deficiency* in both human evolution and in contemporary populations”
population-level difference

“in biological terms, these are differences in the frequency of genetic traits”

• e.g., the prevalence of lactase deficiency is different across populations
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mammalian milk contains the sugar lactose

- the body breaks this down with the enzyme lactase
  - to the simple sugars glucose and galactase
  - only then can it be absorbed into the bloodstream

_The Cultural Feast, 2nd Ed., p. 40_
mammalian milk contains the sugar *lactose*

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mammalian milk contains the sugar lactose

- the body breaks this down with the enzyme lactase

- to the simple sugars glucose and galactose

- only then can it be absorbed into the bloodstream
mammalian milk contains the sugar lactose. The body breaks this down with the enzyme lactase to the simple sugars glucose and galactose. Only then can it be absorbed into the bloodstream. Glucose is the “blood sugar” that provides energy to the body. About 18% of that is used by the brain. Glucose and galactose are both absorbed.
about 18% of a person’s glucose is used by the brain
mammalian milk contains the sugar lactose

• the body breaks this down with the enzyme lactase

• to the simple sugars glucose and galactase

• only then can it be absorbed into the bloodstream
mammalian milk contains the sugar lactose

- the body breaks this down with the enzyme lactase
  
- to the simple sugars glucose and galactose
  
- only then can it be absorbed into the bloodstream
“sugar”

lactose
(“milk sugar”)

fructose
(“fruit sugar” – but it occurs in many foods and honey)

glucose
(“blood sugar” – major energy source of the body)

sucrose
(“table sugar” – fructose-and-glucose)
one of the classic books in Anthropology of Food is . . .

Sidney W. Mintz

*Sweetness and Power*

back to lactose intolerance
mammalian milk contains the sugar lactose

- the body breaks this down with the enzyme lactase
  - to the simple sugars glucose and galactase
- only then can it be absorbed into the bloodstream
in human populations virtually all infants and young children can digest the lactose in milk

• “an obvious necessity for survival”

• human milk contains 7% lactose

_The Cultural Feast, 2nd Ed., p. 40_
mammalian milk contains the sugar lactose

• the body breaks this down with the enzyme lactase

  • to the simple sugars glucose and galactose

• only then can it be absorbed into the bloodstream
without lactase, or with lower levels of lactase . . .

- lactose is not spliced into its simple, absorbable sugars

- and can stay in the intestine, “wreaking havoc by fermenting and causing an array of uncomfortable symptoms” . . .
this fermentation process produces . . .

- carbon dioxide
- acids
- methane
- hydrogen
the gas production can lead to . . .

- abdominal distension
- flatulence
- diarrhea
- intestinal pain
- and sometimes cramping

*The Cultural Feast, 2nd Ed.*, p. 40
• these symptoms usually occur 30 minutes to 2 hours after milk intake

• but not all people who are lactase deficient have symptoms

• those who do are considered to be lactose intolerant
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• e.g., the prevalence of lactase deficiency is different across populations

REM:

people with lactase deficiency symptoms are known as “lactose intolerant”

The Cultural Feast, 2nd Ed., p. 6
lactose intolerance

is the inability to metabolize lactose, the sugar found in milk and other dairy products, because the required enzyme lactase is absent in the intestinal system (or its availability is lowered)
“When relief agencies in the United States, Canada, and other national donated shipments of powdered milk to developing countries, they were surprised by the response.”

- The people of Columbia and Guatemala used it as whitewash
- the Indonesians took it as a laxative
- the Kanuri of West Africa believed it was a food of evil spirits
- many groups simply threw it away

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• the Kanuri of West Africa believed it was a food of evil spirits
• many groups simply threw it away
Nabhan talks about this, and about how he became interested in lactose deficiency and related research . . .
Gary Paul Nabhan

“Gary Paul Nabhan has been at the forefront of ethnobiology and nutritional ecology for three decades. His books and essays have won numerous awards . . . and have been translated into five languages. His original research that underlies [Why Some Like it Hot] has appeared in Nature, Science News, Slow, Journal of Clinical Nutrition, and Ecology of Food and Nutrition. A leader in the international Slow food Movement, Nabhan grows native crops, Navajo-Churro sheep, and heirloom turkeys at his home in rural Arizona.”
Gary Paul Nabhan

*Why Some Like it Hot* looks at

- Favism / sickle cell anemia (G6PD)
- Sardinia
- Crete
- supertasters
- lactose intolerance
- alcohol tolerance
Gary Paul Nabhan

*Why Some Like it Hot* looks at

- Favism / sickle cell anemia (G6PD)
- Sardinia
- Crete
- Supertasters
- Lactose intolerance
- Alcohol tolerance
Gary Paul Nahban had a good friend in graduate school from the Pima (Akimel O'odham) Reservation in Arizona (who he talks about at the beginning of *Why Some Like it Hot*)
the Pima (Akimel O'odham) people are very well-known in anthropology and in Early American History . . .

Kaviu
a Pima (Akimel O'odham) elder
ca., 1907 Edward S. Curtis
that reservation was also
the home of
Ira Hayes
a hero of WWII
who was part of the
group that raised the flag
Iwo Jima, an event which
became an icon of WWII
“After the war, Hayes accumulated a record of some fifty arrests for drunkenness.”

“The coroner concluded that Hayes's death was due to both exposure and alcohol.”

Gary Paul Nabhan’s friend died.

And Gary Paul Nabhan promised his friend on his deathbed that he would try to research the situation of why so many of his friends’ people died of alcohol-related deaths . . . and alcohol tolerance, lactose intolerance, favism, and topics like that became a major focus of Nabhan’s work . . . eventually resulting in Nabhan’s current role as a major researcher in the area of Anthropology of Food—especially the bio-physical area and in matters pertaining to maintaining genetic diversity of crops, and of locavorism . . .
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Gary Paul Nabhan

*Why Some Like it Hot* also deals with

- Favism / sickle cell anemia (G6PD)

and Nabhan, true to his word, focused his early research on the physical anthropology of food . . .

- lactose intolerance
- alcohol tolerance
and discovered and uncovered some important facts. . .
Report: 12 percent of American Indian deaths are alcohol-related

Chuck Haga Grand Forks Herald
Published Friday, August 29, 2008

In the first-ever national survey of its kind, the Centers for Disease Control and Prevention has found that almost 12 percent of the deaths among American Indians are alcohol-related — more than three times the rate in the general U.S. population.

The CDC report, released Thursday, also found that the greatest number of alcohol-related deaths among Indians occurred in the Indian Health Service’s Northern Plains region, which stretches from Montana to Michigan and includes North Dakota and Minnesota. There was no breakdown by state or tribe.

Reservations in the Northern Plains region tend to be remote and include some of the most economically challenged in the nation, the CDC report said, factors that may contribute to the higher alcohol-related death rate.
Gary Paul Nabhan

*Why Some like it hot*

– Favism / sickle cell anemia

we’ll have a brief look at some of these other issues later in the semester

– lactose intolerance

– alcohol tolerance
for now

back to lactose intolerance
is used to be thought that milk aversion was due to psychosomatic reasons

• relating to things like the idea that “manipulating the udder of an animal was indeed a strange procedure”

• especially when the “white animal secretion” when consumed could make a person ill
is used to be thought that milk aversion was due to psychosomatic reasons

• relating to things like the idea that “manipulating the udder of an animal was indeed a strange procedure”

• especially when the “white animal secretion” when consumed could make a person ill
but that changed in the late 1960s with the work of “pioneers” such as

F. J. Simoons
F. J. Simoons

1970
“Primary adult lactose intolerance and the milking habit: A Problem in biological and cultural interrelations II: A cultural historical hypothesis.” American Journal of Digestive Diseases, 15, 673-695.

1983

The Cultural Feast, 2nd Ed., p. 7
a major work in Anth of Food is . . .

F. J. Simoons
1994

*Eat not this Flesh,*

*Food Avoidances from Pre-history to Present.*

Madison: University of Wisconsin Press.

*The Cultural Feast, 2nd Ed.*, p. 7
“Studies of the distribution of lactose tolerance suggest that the gene’s frequency within a population is related to a reliance on dairying and pastoralism that gives people easy access to milk products. . . .”
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*The Cultural Feast, 2nd Ed.*, p. 7
“Studies of the distribution of lactose tolerance suggest that the gene’s frequency within a population is related to a reliance on dairying and pastoralism that gives people easy access to milk products. . . .”
“Societies that have traditionally practiced dairying and milk consumption, mainly Northern Europeans and some herding groups in Africa and the Middle East, were found to have a low prevalence of lactase deficiency, whereas those whose ancestors did not rely on domestic animals and who avoided milk had high frequencies of deficiency.”

The Cultural Feast, 2nd Ed., p. 41
“Societies that have traditionally practiced dairying and milk consumption, mainly Northern Europeans and some herding groups in Africa and the Middle East, were found to have a low prevalence of lactase deficiency, whereas those whose ancestors did not rely on domestic animals and who avoided milk had high frequencies of deficiency.”
in a few of these latter populations lactase activity is present in adulthood

• these include mainly those of northern European ancestry

• and people descended from people in a few pockets of the Mediterranean

• and parts of central Africa

The Cultural Feast, 2nd Ed., p. 41
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*The Cultural Feast, 2nd Ed.*, p. 40
in human populations virtually all infants and young children can digest the lactose in milk

• “an obvious necessity for survival”

• human milk contains 7% lactose
as most children grow older they produce less and less lactase

• between the ages of 3 and 7 most become lactase deficient
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- between the ages of 3 and 7 most become lactase deficient
research suggests a person’s ability to digest milk is under genetic control

• “inherited as an autosomal dominant trait”
  • “autosomal” refers to any chromosome other than a sex chromosome

*The Cultural Feast, 2nd Ed.*, p. 42
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_The Cultural Feast, 2nd Ed., p. 42_
Question:
Question:

“Why have some groups inherited a genetic trait that allows them to digest milk as adults, making them different from most of humanity and land animals?”
“One of the best-supported explanations points to the advantages derived from milk consumption.”
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“According to this cultural-historical hypothesis, all early foraging populations were lactase deficient.”
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“About 10,000 years ago, humans began to domesticate animals, raising them for meat and hides.”

*The Cultural Feast, 2nd Ed.*, p. 42
“One of the best-supported explanations points to the advantages derived from milk consumption.”

“According to this cultural-historical hypothesis, all early foraging populations were lactase deficient.”

“About 10,000 years ago, humans began to domesticate animals, raising them for meat and hides.”
“Domesticated animals offered another resource: milk.”
“Domesticated animals offered another resource: **milk.**”

“However, to take advantage of this new food, **people** had to be able to produce lactase throughout adulthood.”
“Domesticated animals offered another resource: milk.”

“However, to take advantage of this new food, people had to be able to produce lactase throughout adulthood.”

“At some unknown point in time, a mutation occurred that enabled humans to produce the enzyme lactase and digest milk as adults.”

*The Cultural Feast, 2nd Ed.*, p. 42
“In societies that made use of domesticated animals, individuals with this trait for tolerating lactose had an advantage in being better nourished than those who could not make use of this new resource.”

The Cultural Feast, 2nd Ed., p. 42
“As dairying practices developed in some societies, lactose-tolerant individuals survived in greater numbers and gave birth to more offspring to also inherited the same advantage.”

_The Cultural Feast, 2nd Ed., p. 42_
“Through natural selection, the frequency of the genetic trait for digesting lactose increased in dairying societies until the majority of people were able to digest milk throughout adulthood.”
“Other explanations for why some people have lactase activity into adulthood have been put forward.”

• G. C. Cook has suggested that the ability to digest lactose originally evolved among desert nomads in the Arabian peninsula and was selected for because the trait would have helped people absorb the water and electrolytes in milk

• an important advantage in a hot, dry climate
“Other explanations for why some people have lactase activity into adulthood have been put forward.”

• G. C. Cook has suggested that the ability to digest lactose originally evolved among desert nomads in the Arabian peninsula and was selected for because the trait would have helped people absorb the water and electrolytes in milk
  • an important advantage in a hot, dry climate
anyway, be that as it may . . .

in societies relying on dairying and pastoralism, individuals with the gene for continuing lactose digestion have had a greater chance of thriving and reproducing, passing on more of their genes to the next generation than those who cannot consume milk products.

*The Cultural Feast, 2nd Ed.*, p. 7
The map on p. 41 of *The Cultural Feast, 2nd ed.* highlights populations in which older children and adults have difficulty digesting lactose.
Figure H2.1
Shaded areas indicate populations in which older children and adults have difficulty digesting lactose.

Source: Authors

The Cultural Feast, 2nd Ed., p. 41
Lactose Intolerance by Region
(African countries are only a rough guess)
The chart on p. 42 of *The Cultural Feast, 2nd ed.* features the estimated incidence of “Lactose Maldigestion” among older children and adults in different population groups.
Table H2.1  Estimated Incidence of Lactose Malabsorption Among Older Children and Adults in Different Population Groups

<table>
<thead>
<tr>
<th>Incidence of Lactose Malabsorption</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asian Americans</td>
</tr>
<tr>
<td>Africans</td>
</tr>
<tr>
<td>African Americans</td>
</tr>
<tr>
<td>Asians</td>
</tr>
<tr>
<td>American Indians</td>
</tr>
<tr>
<td>Mexican Americans</td>
</tr>
<tr>
<td>U.S. adults (overall)</td>
</tr>
<tr>
<td>Northern Europeans</td>
</tr>
<tr>
<td>American Caucasians</td>
</tr>
</tbody>
</table>

see Nabhan’s various works for more information . . .
Table H2.1 Estimated Incidence of Lactose Malabsorption Among Older Children and Adults in Different Population Groups

<table>
<thead>
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<tr>
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</tr>
<tr>
<td>U.S. adults (overall)</td>
</tr>
<tr>
<td>Northern Europeans</td>
</tr>
<tr>
<td>American Caucasians</td>
</tr>
</tbody>
</table>


The Cultural Feast, 2nd Ed., p. 42

this chart on p. 42 is a simplified version of . . .
for e.g., have a look at . . .

<table>
<thead>
<tr>
<th>Human groups</th>
<th>Individuals Examined</th>
<th>Percent Intolerant</th>
<th>Allele frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dutch</td>
<td>N/A</td>
<td>1%(^{[11]})</td>
<td></td>
</tr>
<tr>
<td>Swedes</td>
<td>N/A</td>
<td>2%(^{[12]})</td>
<td>0.14</td>
</tr>
<tr>
<td>Europeans in Australia</td>
<td>160</td>
<td>4%(^{[12]})</td>
<td>0.20</td>
</tr>
<tr>
<td>Northern Europeans and Scandinavians</td>
<td>N/A</td>
<td>5%(^{[3]}_{[13]})</td>
<td>N/A</td>
</tr>
<tr>
<td>Danes</td>
<td>N/A</td>
<td>5%(^{[14]})</td>
<td>N/A</td>
</tr>
<tr>
<td>Basques</td>
<td>85</td>
<td>10%(\leq100%)(^{[15]})</td>
<td>N/A</td>
</tr>
<tr>
<td>British</td>
<td>N/A</td>
<td>5%(^{[16]})</td>
<td>N/A</td>
</tr>
<tr>
<td>Swiss</td>
<td>N/A</td>
<td>10%(^{[12]})</td>
<td>0.316</td>
</tr>
<tr>
<td>European Americans</td>
<td>245</td>
<td>12%(^{[12]})</td>
<td>0.346</td>
</tr>
<tr>
<td>Tuareg</td>
<td>N/A</td>
<td>13%(^{[16]})</td>
<td>N/A</td>
</tr>
<tr>
<td>Germans</td>
<td>N/A</td>
<td>15%(^{[16]})</td>
<td>N/A</td>
</tr>
<tr>
<td>Austrians</td>
<td>N/A</td>
<td>15–02%(^{[16]})</td>
<td>N/A</td>
</tr>
<tr>
<td>Eastern Slavs (Russians, Belarusians, Ukrainians)</td>
<td>N/A</td>
<td>15%(^{[18]})</td>
<td>N/A</td>
</tr>
</tbody>
</table>
for e.g., have a look at...

<table>
<thead>
<tr>
<th></th>
<th>100</th>
<th>74.9%</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>South Americans</strong></td>
<td>N/A</td>
<td>65–75%</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Rural Mexicans</strong></td>
<td>N/A</td>
<td>73.8%</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>African Americans</strong></td>
<td>20</td>
<td>75%</td>
<td></td>
</tr>
<tr>
<td><strong>Kazakhs from northwest Xinjiang</strong></td>
<td>195</td>
<td>76.4%</td>
<td></td>
</tr>
<tr>
<td><strong>Lebanese</strong></td>
<td>75</td>
<td>78%</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Central Asians</strong></td>
<td>N/A</td>
<td>40%</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Alaskan Eskimo</strong></td>
<td>N/A</td>
<td>36%</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Australian Aborigines</strong></td>
<td>44</td>
<td>85%</td>
<td></td>
</tr>
<tr>
<td><strong>Inner Mongolians</strong></td>
<td>198</td>
<td>87.9%</td>
<td></td>
</tr>
<tr>
<td><strong>African Bantu</strong></td>
<td>59</td>
<td>89%</td>
<td>0.943</td>
</tr>
<tr>
<td><strong>Asian Americans</strong></td>
<td>N/A</td>
<td>20%</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Northeastern Han Chinese</strong></td>
<td>248</td>
<td>22.3%</td>
<td></td>
</tr>
<tr>
<td><strong>Chinese</strong></td>
<td>71</td>
<td>25%</td>
<td>0.964</td>
</tr>
<tr>
<td><strong>Southeast Asians</strong></td>
<td>N/A</td>
<td>28%</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Thais</strong></td>
<td>134</td>
<td>28%</td>
<td>0.99</td>
</tr>
<tr>
<td><strong>Native Americans</strong></td>
<td>24</td>
<td>40%</td>
<td></td>
</tr>
</tbody>
</table>
between 30 and 50 million Americans are lactose intolerant

- 15% of European Americans
- 53% of Mexican Americans
- 62% of Native Americans
- 80% of African Americans
- 90% of Asian Americans
Pretty high on the cheese-o-metre.

But it was Minnesota Governor Tim Pawlenty who went for the lactose intolerant vote.

He took a bash at elites who drink chablis and eat brie. Politico - accurately but perhaps in a rather eliteist manner - noted that these are scarcely the choice of today's elites.

He is probably saving his best lines for 2011. Like French cheese, American politicians are at their best when about to run.

But what is it about the American right and cheese?

and lactose intolerance has become part of the world of American politics . . .

http://www.bbc.co.uk/blogs/thereporters/markmardell/2010/02/why_a_republican_big_cheese_ba.html
Should Milk Be Promoted So Widely?

“Given that so many Americans have difficulty digesting milk, it is interesting that milk is seen as a staple food in America and included as a key food in all government dietary recommendations, as well as being served in the School Breakfast and Lunch Programs and distributed in the Special Supplemental Nutrition Program for Women, Infants and Children Program (WIC), both programs of the U.S. Department of Agriculture”

_and lactose intolerance has become part of the world of American politics_. . . } The Cultural Feast, 2nd Ed., p. 42
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*The Cultural Feast, 2nd Ed.*, p. 42
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Figure 12.3
New logo for the Texas WIC program.

Figure 12.4
Texas WIC program posters.
an excellent treatment of this question can be found in . . .

Marion Nestle

Food Politics: How the Food Industry Influences Nutrition and Health

University of California Press
2007
and . . .

Marion Nestle

What to Eat

North Point Press
2007
Should Milk Be Promoted So Widely?
Should Milk Be Promoted So Widely?  YES! NO!
Should Milk Be Promoted So Widely?  YES!  NO!

• “According to Milton Mills of the National Medical Association, an organization of 20,000 African American physicians, the U.S. Dietary Guidelines, although it may be unintentional, are a form of institutionalized racism.”

The Cultural Feast, 2nd Ed., p. 43
Should Milk Be Promoted So Widely?  YES!  NO!

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_The Cultural Feast, 2nd Ed.,_ p. 43
Should Milk Be Promoted So Widely?  YES! NO!

• “The Congressional Black Congress wrote to President Clinton in 1999 stating that the U.S. Dietary Guidelines ‘demonstrated a consistent racial bias’”.

*The Cultural Feast, 2nd Ed., p. 43*
Should Milk Be Promoted So Widely?  YES!  NO!

• “The Physicians Committee for Responsible Medicine, a Washington, D.C.-based group that promotes preventive nutrition, alleges racial bias in the formulation of the Dietary Guidelines and the associated Food Guide Pyramid.“

• “They charge that American minorities are badly served by the Dietary Guidelines that take little notice of their particular needs and hold the position that the Dietary Guidelines should make dairy products optional.”
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*The Cultural Feast, 2nd Ed., p. 43*
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*The Cultural Feast, 2nd Ed., p. 43*
The 1992 USDA food pyramid
This is the old (1992) version

The 1992 USDA food pyramid
Figure H3.1

This is the old (1992) version

A comparison of the USDA Food Guide Pyramid and Vegetarian Food Guide Pyramid

The Cultural Feast, 2nd Ed., p. 82
The current USDA food pyramid

3 cups of dairy products are recommended per day
(for adults)
Mexican Food Pyramid

www.semda.org/info/images/July99_new.gif
Japanese Food Pyramid
www.ethnicfoodsco.com/Japan/JapaneseFoodPyramid.htm
Asian Diet Pyramid

The Cultural Feast, 2nd Ed., p. 251
A vegan version of the food pyramid
food pyramids come in all cuisines and all sizes and shapes . . .
Inflatable USDA Food Pyramid

www.ethnicfoodsco.com/Japan/JapaneseFoodPyramid.htm
Inflatable USDA Food Pyramid

www.ethnicfoodsco.com/Japan/JapaneseFoodPyramid.htm
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www.ethnicfoodsco.com/Japan/JapaneseFoodPyramid.htm
Inflatable USDA Food Pyramid

http://www.ethnicfoodsco.com/Japan/JapaneseFoodPyramid.htm
United States Department of Agriculture

Inflatable USDA Food Pyramid

://www.ethnicfoodsco.com/Japan/JapaneseFoodPyramid.htm
not to be confused with

United States Food and Drug Administration
the United States Food and Drug Administration is responsible for regulating and supervising the safety of foods, dietary supplements, etc.
promotes U.S.A. agriculture

regulates U.S.A. food safety

Inflatable USDA Food Pyramid

[Link to website: www.ethnicfoodsco.com/Japan/JapaneseFoodPyramid.htm]
The USDA promotes U.S.A. agriculture.

The FDA regulates U.S.A. food safety.

The Environmental Protection Agency (EPA) is also involved in environmental protection.
promotes U.S.A. agriculture

regulates U.S.A. food safety

is charged to protect U.S.A. human health and the environment
is charged to protect U.S.A. human health and the environment... but...
How to value life? EPA devalues its estimate

$900,000 taken off in what critics say is way to weaken pollution rules

Each American is now valued at $5.9 million by the EPA in figuring out the costs/benefits of rulemaking — that’s nearly $1 million less than five years ago.

http://www.msnbc.msn.com/id/25626294/
In May, the U.S. Environmental Protection Agency put the value of a U.S. life at $6.9 million, nearly a $1 million drop from 2003.

$900,000
by the G. W. Bush Administration

http://www.msnbc.msn.com/id/25626294/
“The EPA figure is not based on people's earning capacity, or their potential contributions to society, or how much they are loved and needed by their friends and family — some of the factors used in insurance claims and wrongful-death lawsuits. Instead, economists calculate the value based on what people are willing to pay to avoid certain risks, and on how much extra employers pay their workers to take on additional risks.”

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How to value life? EPA devalues its estimate

$900,000 taken off in what critics say is way to weaken pollution rules

“Though it may seem like a harmless bureaucratic recalculation, the devaluation has real consequences.”

Each American is now valued at $6.9 million by the EPA in figuring out the costs/benefits of rulemaking — that’s nearly $1 million less than five years ago.

http://www.msnbc.msn.com/id/25626294/
Dan Esty, a senior EPA policy official in the first Bush administration and now director of the Yale Center for Environmental Law and Policy, said that 'it's hard to imagine that it has other than a political motivation.'
“When drawing up regulations, government agencies put a value on human life and then weigh the costs versus the lifesaving benefits of a proposed rule. The less a life is worth to the government, the less the need for a regulation, such as tighter restrictions on pollution.”

Each American is now valued at $6.9 million by the EPA in figuring out the costs/benefits of rulemaking — that’s nearly $1 million less than five years ago.
e.g., Factory Farming (CAFOs) has environmental impacts and health risks . . .

http://en.wikipedia.org/wiki/CAFO
Consider, for example, a hypothetical regulation that costs $18 billion to enforce but will prevent 2,500 deaths. At $7.8 million per person (the old figure), the lifesaving benefits outweigh the costs. But at $6.9 million per person, the rule costs more than the lives it saves, so it may not be adopted.
e.g., Factory Farming (CAFOs) and decisions affect animal welfare, food ethics . . .

EPA

http://en.wikipedia.org/wiki/CAFO
and to the federal regulators you must also add
promotes U.S.A. agriculture
regulates U.S.A. food safety
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Centers for Disease Control and Prevention
“works to protect public health and safety by providing information to enhance health decisions”
promotes U.S.A. agriculture

Centers for Disease Control and Prevention

USDA

an excellent work that sorts all of this out is Marion Nestle’s...

is charged to protect U.S.A. human health and the environment

Centers for Disease Control and Prevention

Food Politics: How the Food Industry Influences Nutrition and Health

Revise and expanded edition

United States Environmental Protection Agency

Control and Prevention

Health and safety by

keeps health decisions
promotes U.S.A. agriculture and, of course, The United States Supreme Court trumps everybody . . .

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Centers for Disease Control and Prevention "works to protect public health and safety by providing information to enhance health decisions"
Toxic Waters
A series about the worsening pollution in American waters and regulators’ response

Rulings Restrict Clean Water Act, Foiling E.P.A.

Thousands of the nation’s largest water polluters are outside the Clean Water Act’s reach because the Supreme Court has left

The mouth of Amandale Creek in Alabama, into which a pipe maker dumps oil, lead and zinc. A court ruling made the waterway exempt from the Clean Water Act.

By CHARLES DUHigg and JANET ROBERTS
Published: February 20, 2010

Polluters Beyond the Law

Since recent Supreme Court decisions that have limited the reach of the federal Clean Water Act, the Environmental Protection Agency has logged more violations by major permit holders but has taken enforcement action against fewer of these polluters.

CLEAN WATER ACT VIOLATIONS ARE RISING …
30,000 violations

BUT E.P.A. ENFORCEMENT IS DOWN
3,000 facilities

Source: New York Times analysis of Environmental Protection Agency data

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http://www.msnbc.msn.com/id/25626294/
... and when tighter restrictions on pollution are attempted the affected parties [legally] fight the regulations to the US Supreme Court.

Net result: the USDA and the FDA and the EPA and the CDC

[fill in the blank __________________]
back to the question of whether milk should be promoted so widely by the Government . . .
Should Milk Be Promoted So Widely?  YES! NO!
Should Milk Be Promoted So Widely?  YES! NO!

• “Dairy products have much to recommend them.”

  • they are one of the most concentrated food sources of calcium, as well as one of the best absorbed
  • dairy products provide 73% of the calcium in the U.S. food supply
  • when dairy products are eliminated, calcium intake is often compromised

_The Cultural Feast, 2nd Ed., p. 43_
Should Milk Be Promoted So Widely?  YES!  NO!

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*The Cultural Feast, 2nd Ed.*, p. 43
Should Milk Be Promoted So Widely?  YES! NO!

• “Dairy products have much to recommend them. “

• they also provide
  • protein
  • riboflavin (vitamin B₂)
  • phosphorus
  • vitamin A
  • vitamin D

_The Cultural Feast, 2nd Ed., pp. 43-44_
Should Milk Be Promoted So Widely? YES! NO!

• “Dairy products have much to recommend them.“
  • calcium is importance in the prevention of . . .
    • hypertension
    • osteoporosis
    • periodontal (gum) disease
    • possibly some types of cancer
    • and in weight loss programs
Should Milk Be Promoted So Widely?  

YES! NO!

- the recommendations for calcium intake have continued to rise over the years
  - 1000 mg / day for adults 19-50
  - 1200 mg / day for those over age 50
  - 1300 mg / day for pregnant and nursing women

*cf.*, Table, p. 44

*The Cultural Feast, 2nd Ed.*, pp. 43-44
<table>
<thead>
<tr>
<th>Age Group</th>
<th>Daily Recommended Calcium Intake (mg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0–6 months</td>
<td>210</td>
</tr>
<tr>
<td>6–12 months</td>
<td>270</td>
</tr>
<tr>
<td>1–3 years</td>
<td>500</td>
</tr>
<tr>
<td>4– 8 years</td>
<td>800</td>
</tr>
<tr>
<td>9–18 years</td>
<td>1,300</td>
</tr>
<tr>
<td>19–50 years</td>
<td>1,000</td>
</tr>
<tr>
<td>51–70 years</td>
<td>1,200</td>
</tr>
<tr>
<td>Pregnant and nursing women</td>
<td>1,300</td>
</tr>
</tbody>
</table>

Source: Calcium Recommendations from the Institute of Medicine, 1997, from National Digestive Diseases Information Clearinghouse.
lactose tolerance is not always predictable

• “In the Tokelauans of the Pacific, for e.g., there is a wide range in ability to handle lactose”

• Those who have some European ancestors, determined by constructing detailed genealogies, are more likely to be lactose absorbers than those who are not.”

*The Cultural Feast, 2nd Ed.*, p. 40
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lactose digestion is not an all-or-none phenomenon

- “recent evidence shows that people with low levels of lactase may be able to drink their milk and tolerate it too”

- one serving of milk with a meal or two servings of milk divided between meals throughout the day without experiencing lactose intolerant symptoms

The Cultural Feast, 2nd Ed., p. 40
lactose digestion is not an all-or-none phenomenon

• “in fact, only a small fraction of the lactose maldigesters have complete intolerance”

• many still make lactase in reduced amounts, which allows at least some dairy products to be digested

• there are also bacteria in the gut that digest a portion of the lactose, even when no lactase is present

*The Cultural Feast, 2nd Ed., p. 40*
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*The Cultural Feast, 2nd Ed.*, p. 40
is used to be thought that milk aversion was due to *psychosomatic* reasons

(that is, that it was “all in your mind”)
is used to be thought that milk aversion was due to **psychosomatic** reasons

- and still, some individuals *think* they are lactose intolerant because of *a belief* that milk products disagree with them

- for some, the *idea* of milk makes them sick, rather than the actual lactose level

_The Cultural Feast, 2nd Ed., p. 45_
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The Cultural Feast, 2nd Ed., p. 45
although adult lactase persistence is the result of genetics, biology alone does not entirely predict the variation in milk drinking in human populations

- the great deal of variation seen in milk drinking practices reflects a more complex biocultural interaction than would be implied by a single genetic trait
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_The Cultural Feast, 2nd Ed., p. 46_
some definitions
primary lactase deficiency
secondary lactase deficiency
congenital lactase deficiency
milk allergy
primary lactase deficiency

secondary lactase deficiency

congenital lactase deficiency

milk allergy
primary lactase deficiency

• the most common type

• occurs as a normal physiological process in most mammals

• the production of lactase in the small intestine is reduced between the ages of 3 and 7 years

*The Cultural Feast, 2nd Ed.*, p. 43
Secondary lactase deficiency

- Usually temporary

- Low levels of lactase occur as a result of an underlying disease that affects the gastrointestinal tract

- Even having stomach flu can temporarily decrease the amount of lactase made in the intestine

*The Cultural Feast, 2nd Ed., p. 43*
congenital lactase deficiency

• very rare genetic abnormality in which the enzyme lactase is very low or absent at birth
milk allergy

• some individuals have trouble digesting milk because they are allergic to milk protein

• their immune system responds to the proteins in dairy products
  
  • rash, hives, wheezing, redness, stuffy nose, runny eyes
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*The Cultural Feast, 2nd Ed., p. 43*
primary lactase deficiency

secondary lactase deficiency

congenital lactase deficiency

milk allergy

The Cultural Feast, 2nd Ed., p. 43
brief parting notes on other

population-level differences
population-level difference

“in biological terms, these are differences in the frequency of genetic traits”

• another example besides lactose intolerance is energy metabolism
Energy metabolism is often discussed nowadays as “bioenergetics”.
Bioenergetics is the subject of a field of biochemistry that concerns energy flow through living systems. This is an active area of biological research that includes the study of thousands of different cellular processes such as cellular respiration and the many other metabolic processes that can lead to production and utilization of energy in forms such as ATP molecules.

This article is about the biological study of energy transformation. For the Reichian body-oriented psychotherapy sometimes known as bioenergetics, see bioenergetic analysis.
population-level difference

“in biological terms, these are differences in the frequency of genetic traits”

• another example:

  distribution of skin color

The Cultural Feast, 2nd Ed., p. 6
“I hope they paid attention to the lactose intolerance part”