Cultivating Tastes In the Womb

The power of breast milk to influence an infant for good or ill looms large in old wives' tales. Now scientists have shown that it's true when it comes to taste preferences: Women who drank carrot juice while pregnant or lactating cultivated a taste for carrots in their offspring.

Julie Mennella, a researcher at the Monell Chemical Senses Center in Philadelphia, divided 46 women in the last trimester of pregnancy into three groups: One group drank carrot juice during pregnancy and water during lactation; one did the opposite; and one drank only water. Then, when the infants were about 6 months old and eating solid food, they were given cereal prepared either with water or with carrot juice. The babies exposed to carrot flavor either prenatally or in breast milk were much more enthusiastic about the carrot porridge than the plain mix; the other infants didn't show a preference, Mennella's team reported at a symposium of the American Psychological Society in Miami last month.

Getting acculturated.

The researchers claim this is the "first experimental demonstration" that such early exposure affects taste preferences. The work indicates that breast feeding is better than formula, because it makes children more accepting of new foods, Mennella says. Breast feeding may also help all mammals teach infants what foods are safe—highlighting the importance of a healthful diet for pregnant and lactating moms.

The research also casts light on why people are so deeply attached to the foods of their culture, Mennella says. Linda Bartoshuk, a Yale psychophysicist who works on the genetics of taste and calls Mennella's study "wonderful work," agrees. Bartoshuk recalls that years ago some wives of foreign students at Brown University were greatly concerned about getting their usual cooking spices. "They had a strong belief that if they didn't eat the spices while carrying their child, the child wouldn't be properly introduced to the culture," she says. Now, Mennella's research suggests the young wives were right.

Eternal Optimists

Psychologists say that most people in the U.S. rate themselves above average in looks and abilities; the same tendency may apply on a national level. In a Gallup Poll of 1000 U.S. adults released last week, half the respondents thought U.S. 12th graders scored as well as or better in science than students from 20 other countries in TIMSS, the Third International Mathematics and Science Study. In fact, the United States ranked 18th. The poll, "American's Views on Science, Technology, Education, and the Future," was commissioned by the National Science Foundation and the Bayer Corp. (See www.bayerus.com.)

Darwin on Culture

Ever since Stanford University geneticist Luigi Cavalli-Sforza began studying the relation between genes and languages more than 20 years ago, a growing number of researchers have turned their attention to the links between biological and cultural evolution. The often controversial studies, however, have been hampered by a shortage of hard data and a lack of communication between fields. "Workers are scattered across a broad range of disciplines, and many are unaware of one another's existence," says archaeologist Stephen Shennan of University College London (UCL).

The dating game: Cultural evolution of mating strategies will be a topic at center.

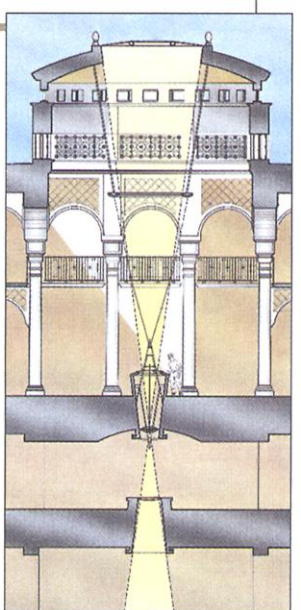
Now a group of archaeologists, anthropologists, and mathematical biologists in the United Kingdom has obtained $1.2 million from the U.K. Arts and Humanities Research Board to bridge the gaps. They're creating a new multidisciplinary Center for the Evolutionary Analysis of Culture, to be led by Shennan and based at UCL and the University of Southampton. Most of the money will support postdocs, who will work with six principal investigators on 23 projects, compiling information on everything from the relation between technological innovation and anatomical change in early hominids to the spread of cultural traits. These "case studies," says UCL paleoanthropologist Mark Collard, will help solve the field's "data problem."

Researchers are greeting the new center enthusiastically. It will add new dimensions to cultural studies, predicts evolutionary biologist Mark Pagel of the University of Reading in the U.K., who believes that "some cultural practices ... may develop for interesting evolutionary reasons."

Center scientists also hope it will lead to some fence-mending between physical anthropologists, who are biology-oriented, and cultural anthropologists, many of whom are highly resistant to evolutionary approaches. "The antagonism of earlier years has been replaced by an agreement of the two sides to largely ignore one another," says Shennan.

Focus on Unity

A four-story-high lobby built to emulate a microscope will be the focal point of a new Science and Technology center at the University of San Diego. In a recreation of T. W. Engelmann's 1883 experiment, in which he discovered that blue and red light were most favorable for photosynthesis, a skylight will admit light that will be refracted by a prism and lenses before illuminating a glass "slide" on the second floor. The $46 million building will be a working symbol of interdisciplinary collaboration, says Rachel Grossman of San Diego design firm Carrier Johnson. The microscope lobby is a "symbol of a moment in scientific history when a single discovery combined biology, chemistry, and physics."



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