

THE WONDER OF US SERIES  
 Making Sense of Our Senses -- #2 Taste  
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 August 1, 2004

Need: Bags of potato chips, Mexican corn god. Bits of Hershey bars broken up on a plate to be passed with the offering. Hymn #313. OFFERTORY AT THE END OF THE SERMON.

OPENING WORDS:

The Wonders of our World. In a time when we understood less, we named a god Ceres and granted her the magic blossoming of Spring. Today, natural wonders still inspire some to see those wonders as God Tracks. We share their awe and cannot prove their celestial connection wrong. And that's OK.

The Wonders of our World – the breadth and depth of them are too much to grasp, to assimilate from all the specialists who devote lifetimes to understanding but small corners of these processes. We can, and some have, built a theology of sorts on this ever evolving, ever changing universe of which our earthly existence is but a small part.

But, possibly, most fun of all is to reduce that universe, universe within universes, until we bring our scope of thoughts down to the universe that is us, you and me. Just look at us, you and me. From finger tip to eyeball, we are indeed a most intriguing piece of work. And we just keep on running for years and years – no winding, no change of batteries, no plugging in to the power grid. Self-contained. Just feed me. Wow!

Whether creationist, process theologian, or what-have-you, “us” can inspire us to new levels of awe. Let's think some more on the Wonders of Us.

MAIN PRESENTATION:

What I'm about to share with you this morning was begun along the shores of the Rio Grande and, I switch to the present tense to take you with me, as the sun begins to set over Falcon Lake, Charlie is beginning a simple dinner of diced potatoes and sliced kielbasa. It's another beautiful sunset. The pyraholxia are chattering away – they are like a gray backed cardinal, and the pauranque will shortly start their night call. Like a whippoorwill, but without the whipper. We've just come back from a hike through a forest of blossoming yucca among the wild Texas thorn scrub country, a great variety of trees and bushes, none of which is more than 16 feet tall. This area is a mix of sunny days with highs in the 70's and 80's while we just hear news of a mammoth snowstorm in New York City. On today's walk, we creep up on two great horned owls. We, like two little kids of the native tribes of 1000-5000-10,000 years ago. It's a fun game. Those long ago kids learned stalking for food. We stalk for a closer look. The owls know we're there, of course, as they sit facing the dropping sun with their eyes squinty closed. At about 50 feet, they decide that's close enough and silently ascend and drift across, what we semi-wild children call “The Great Serengeti, which is really about 2000 acres of grass lands with clusters of smaller trees, a result of the 8-9 years of low water in the 45 mile long reservoir of the Rio Grande. The owls will grab a mouse or two, a ground squirrel, or a rabbit for their dinner. We're looking for the bobcat family we saw

yesterday, two cubs and Mom. A pack of coyotes howl, yip, and laugh for a full 30 seconds – sounds like Mom and Dad teaching a bunch of pups who are falling short of expectations. The arrival of the bobcats might be why the chachalacas, a pheasant sized ground bird, has stopped their morning visits to our feeder. The fact that it is almost 200 miles round trip to the closest Michaels craft store and a movie theater, if that's how we define civilization, is of little consequence as we enjoy what's here because that other stuff and the source of our food is so far away. And our various responsibilities and connections are even further. Our current world is a ¼ acre clearing of privacy with our array of bird feeders and animal watering spots in the thousands of acres of wilderness. There are a few others around. We hear them occasionally. See them when we choose to. But we are all of like mind here in the Texas warmth and wildness, whether we are from Quebec, Idaho, Alberta, Minnesota, Manitoba, or Pennsylvania. We know we'll all gather for dinner on Friday nights and, in the early spring, say goodbye until next winter.

So tonight's dinner is ready now in our RV overloaded with books, modeling clay, gourds, paints, fabrics, tools and projects. Time to eat this tasty dinner.

As we have pondered the Wonders of Life, we've marveled together about the community of cells that is us, our bodies. And how everything interacts -- and works, more or less. We've shared a fascination about how we perceive the world around us. The magic of touch and how our hands tell us much of what's out there. The mysteries of smell. How smell requires no interpretation, is hardwired to the very rudimentary portions of our brain, which is likely why we have no language for smell. We can not share a smell verbally with one another like we can hearing, vision, and touch.

Now let's move on to taste.

The mechanics of taste. It is really the simplest of the sensing mechanisms in its most narrow definition. Seen with an electron microscope, our taste buds look like huge volcanoes on Mars. In reality, of course, taste buds are exceedingly small. Adults have about 10,000, grouped by theme (salt, sour, sweet, bitter). Inside each taste bud, about fifty taste cells busily relay information to a neuron, which will alert the brain. At the tip of the tongue, we taste sweet things; bitter things at the back; sour things at the side; and salty things on the surface but mostly up front. Not much tasting happens in the center of the tongue. There are some incidental tasted buds in the palate, pharynx, and tonsils, sort of like bats clinging to the damp, slimy vertical surfaces of a cave. Got the picture?

Rabbits have about 17,000 taste buds to our 10,000. Parrots only about 400. Cows a whopping 25,000. Maybe a cow needs that many to enjoy its relentless diet of grass.

Our tongue is like a kingdom divided into principalities according to sensory talent. A visitor to any one of these principalities will be reported differently than the same visitor to another principality. A cube of sugar under the tongue doesn't taste as sweet as one on the tip of the tongue. We lick ice cream cones, lollipops, and a cake-frosting covered finger.

Bitter is a danger signal, thus our threshold for bitter is the lowest. Because the taste buds for bitter are at the back of the tongue, as a final defense against danger, they can make us gag to keep a substance from sliding down the throat. We can

detect sweetness in one part in two hundred, saltiness in one part in 400, sourness in one part in 130,000, and that red flag bitter in one part in 2 million. This sweet-bitter distinction is so essential to our lives that it has burst into our language. Children, joy, a trusted friend, a lover all are referred to as “sweet.” Regret, an enemy, pain, disappointment, a nasty argument all are referred to as “bitter.” The “bitter pill” we metaphorically dread is likely to be poison.

Taste buds wear out every week to ten days and we replace them, although not as frequently as we age. Children have the keenest sense of taste. While it takes a more intense taste to produce the same level of sensation in adults.

Just as we can smell something only if and when it begins to evaporate, we can taste something only when it begins to dissolve, and we cannot do that without saliva.

Heredity influences taste – no two of us taste the same plum. Salt cravers, for example, have saltier saliva. Their mouths are accustomed to a higher sodium level and foods must be saltier before they register as salty. Everyone’s saliva is different and distinctive, flavored by diet, their smoking history, and mood, in addition to heredity.

We acquire tastes as we grow. Babies don’t like olives, mustard, hot pepper, beer, fruits that make one pucker, or coffee. After all, coffee is bitter, a flavor from the forbidden and dangerous realm. To eat a pickle, one risks one’s common sense, overrides the body’s warning with sheer reason. Calm down, it’s not dangerous, the brain says, it’s novel and interesting, a change.

But we all know there is more to tasting than taste alone. Smell and taste share a common airshaft, like residents of a high rise who know which is curry, lasagna, or Cajun night for their neighbors. Smell hits us faster. According to Diane Ackerman in “A Natural History of the Senses”, it takes 25,000 times more molecules of cherry pie to taste it than to smell it. Ms. Ackerman, by the way, is a major contributor of information and some words on this subject.

We normally chew about a hundred times per minute. But if we let something linger in our mouth, feel its texture, smell its bouquet, roll it around on the tongue, then chew it slowly so that we can hear its echoes, what we are really doing is savoring it, using several of our senses in what one might call a gustatory free-for-all. All senses become involved from presentation, sound, feel (including minor pain with some pieces), and temperature. Our enjoyment has been enhanced by “food engineers,” wizards of subtleties some of whose products assault as many of our senses as possible.

Potato chips are an example of destruction foods. [Don’t open these bags for the moment.] Destruction foods start with what might be a rather wild attack on the plastic wrap just to get it open. [Open bags] Slashing and tearing may almost be primeval. Destruction-packaging sets the mood. [Now pop one in your mouth and pass the bag down and everybody do the same.] Potato chips are designed almost too large to fit into your mouth because in order to hear the high-frequency cracking you need to keep your mouth open. Chips are 80% air, and each time we bite one we break open the air-packed cells of the chip, making that noise we call “crispy.” David Bodanis in “The Secret House” points out that to get sufficiently rigid cell walls to twang at these squeaking harmonics require starch. And the starch in potatoes fits the bill. The chips are soaked in fat so it’s a shrapnel of flying starch and fat that produces the conical air-pressure wave as we chomp. We’re talking high-tech potato chips here. The original potato chip was an act of spite on behalf of chef George Crum at Moon Lake Lodge in Saratoga Springs,

NY. It seems an 1853 guest thought she had the ultimate of good taste (that other connotation) by demanding her French fries (or should I say, freedom fries) be thinner and thinner. An angry Chef Crum sliced them laughably thin, so he thought, and fried them until they were varnish brown. The guests loved them and Crum went on to start his own restaurant specializing in ...potato chips.

There is a certain awe in how our mouth guards the door, keeps our bodies sealed up tight. Nothing enters for help or harm without passing through the mouth. Even one-celled animals like paramecia have mouths, and the mouth appears immediately in human embryos. Taste encourages the opening of that seal for foods that sustain the body and monitors what goes in to catch mistakes.

Taste is the most social, and maybe the most religious, of our senses. Historic icons like The Last Supper, as well as the more recent UUFRC Potato Chip Communion have all occurred with various degrees of religious overtones. Sharing food seems to tie us together. To the Bantu, exchanging food creates a contract called the "clanship of porridge." We usually eat with our families, thus "braking bread" together symbolically links an outsider to the family group. Weddings end with a feast. Friends unite at celebrating dinners. Children herald birthdays with cake and ice cream. Religious ceremonies offer food in fear, homage, and sacrifice. And various historical theological texts encourage us to welcome a wayfarer with a meal. In every culture, if an event is meant to matter emotionally, symbolically, or mystically, food will be close at hand to sanctify and bind it. Ceremonially, the Catholic and Anglicans take a communion of wine and wafer. The Jews attending a Seder (SAIDER) eat a horseradish dish to symbolize the tears shed by their ancestors when they were slaves in Egypt. Malays use rice as the inspirational center of their life. The Egyptians focused on the onion as they thought it symbolized the many layered universe and swore oaths on an onion as others do on the Bible. Food gods have ruled the hearts and lives of many peoples. Taste is an intimate sense. WE can't taste things at a distance. The Hopi Kachina dolls represent many spiritual essences of their corn-based religious world as does this Mayan Corn god.

We say "food" as if it were a simple thing, but it is a big source of pleasure in most lives, a complex realm of satisfaction both physiological and emotional. Food must taste good, must reward us, or we would not stoke the furnace in each of our cells. We must eat to live as we must breathe. But breathing is involuntary, finding food is not. It takes energy and planning, so it must tantalize us out of our inertia or distractions. If language didn't arise around mealtimes, it certainly evolved and became more fluent there, as it did during group hunts. Beware thinking about our history as looking through a reversed telescope, short time hunter-gatherers and long time "civilized." As recognizable humans, we have been hunter-gatherers for all but the last couple, three thousand years of the last two million. And shoppers at Tri-star for less than 1/1000 of 1 % of that time.

You have been invited to dinner by my Charlie's extraterrestrials of post-it fame. They ask "What do humans eat?" Images may cascade through your mind of a cornucopia of plants, animals, minerals, liquids, and solids in a vast array of cuisines. The Masai enjoy drinking cow's blood. Orientals eat stir-fried puppy. Germans like rancid cabbage – sauerkraut. Americans eat decaying cucumbers – pickles. French eat garlic-soaked snails. Japanese like fungus, as do North Americans – mushrooms.

Chinese of the Chou dynasty like rats, called “household deer.” At time we eat nasturtiums and pea pods and even the effluvia from mammary glands of cows, churned until it curdles, or frozen solid and attached to a piece of wood.

The final awe-inspiring mechanism of taste I would like to share with you today is craving. Frankly, I don’t know how craving works and I have been unable to find out. We do know that we tend to crave what we chemically and biologically need when we need it. Here’s an example from Ackerman’s research: She once worked on a cattle ranch in New Mexico with cowhands with little schooling and no education in nutrition. Their workdays were so arduous that their bodies took over from them, dictating what they needed to survive the physical labor and blinding heat of the day. Each morning was a large breakfast of almost pure protein. Although they drank a lot of water and lemonade through the day, they spurned any drink with caffeine. They ate the hottest of hot peppers, sometimes spread on a slice of bread like peanut butter, but almost no desserts and very little sugar. At night they ate lightly, mostly carbohydrates. If asked, they would simply say they ate what tasted good, what they liked to eat, but their taste in food had clearly evolved to fuel the rigors of their life.

This self-protective yen is also true of larger populations with regional needs as cuisines to help keep one cool as in the Middle East, sedated as in the tropics, or to combat prevalent disease. Farb and Amelagos in “Consuming Passions” cites certain Mexican populations where animal food is scarce. They soak their maize in water in which they have previously dissolved bits of limestone thus increasing the calcium and amino acid content of the tortillas. In parts of Africa with a similar shortcoming, people wrap their fish in a banana leaf whose acidity dissolves the fish bones adding calcium to their diet.

Individually, there is no question that, at least for certain nutrients, if a person is in true need, some gustatory yen or body wisdom takes over. Patients with Addison’s disease, a hormonal deficiency, crave licorice with a vengeance for its glycyrrhonic acid. There are claims of clay being sold in open-air markets in the Southern U.S. where pregnant women buy it to eat as pregnant women munch on termite mounds in certain other tropical areas. It’s thought that the draw is calcium and certain other minerals missing from their diet. In Ghana, villagers sell egg-shaped clay balls rich in potassium, magnesium, zinc, copper, calcium, iron and other minerals. A pregnant women’s craving for dairy products make good nutritional sense because if the fetus does not get enough calcium it will take from the mother’s bones and teeth.

Shirley got into a discussion while teaching GED classes a few years ago. It seems that some pregnant women craved starch and ate it right out of the starch box. They loved the memory of the crunch sound it made. When they tried to rekindle that memory in later years, the stuff tasted awful to them. Apparently the need had passed. Teachers are also trained to watch for young children eating chalk, a likely sign of calcium or other mineral deficiencies.

Neurobiologists suspect certain foods stimulate endorphin – pain killers produced by the brain – that give us a sense of comfort and calm. According to this thinking, when we eat sweets we flood our body with endorphins and feel tranquil. Feeling stressed? Head for the cookies! Experiments have shown that carbohydrate cravers, possibly trying to increase their intake of serotonin, have lost their craving when their serotonin level was increased by drugs. The body’s tendency to crave, to keep us in chemical

balance, is a source of trouble for binge eaters. The first binge gets things out of whack driving subsequent binges of other foods, which then swings the out-of-balance in another direction, which then drives another binge such that the total intake spirals out of control.....

And then there's Chocolate.

You may have been thinking: "When is he going to stop making these sliding references to religion and awe and get to the true theology of Chocolate!"

You may choose to bow your heads. Thank you for the Indians of Central and South America who first discovered chocolate. Thank you for the Aztecs who declared it a gift from their white-bearded god of wisdom and knowledge, Quetzalcoatl. Thank you for the Toltecs who honored this divine drink by sacrificing chocolate-colored dogs. Thank you for Cortez who recognized that Montezuma's court drank two thousand pitchers of chocolate each day and figured there must be something to this stuff to the point that he brought some back to Spain. Thank you for King Charles V who added a little sugar, orange, vanilla, and other spices to enhance it even more. And thank you to the god of chocolate, Mars, and the goddess of chocolate, Hershey, who have put their chocolate in such convenient packages for each one of us. Thanks you for such Wonders of Life. Amen.

And now we will take the morning offering. Please serve your neighbor a bit of chocolate first then pass him the collection plate. Let's make this the longest, slowest offertory ever.

And no, to the best of my knowledge, no one has been able to explain the psychobiochemistry of the theology of chocolate.