

ENVIRONMENTALLY SPEAKING

Peter Schwartzman

What you eat effects everyone and everything

By the time you settle down to read this, you will most likely have already finished your "Thanksgiving" dinner. I sincerely hope you had a fabulous meal and more importantly, I hope you were able to share it with family and friends. And while this holiday is a fine time to socialize and enjoy scrumptious foods, it is also an excellent time to reflect on what we eat. As it turns out, the famous cliché, "we are what we eat," tells only part of the story. It can also be argued that "others are what we eat." How so and to what end? Let's find out.

With all the attention that food gets in our culture, Americans know quite a bit about their diet. Or, at least it would seem that way. Most people realize that proteins can be obtained from meats and important essential vitamins can be drawn from vegetables; although many vegetable-based products have sufficient quantities of protein as well, including, legumes, nuts, tofu, soy milk, milk, yogurt and cheese. And, somewhere deep in their consciousness, most people recognize that they consume more food than they should. This latter realization occupies the minds of many as evidenced by a Food and Drug Administration study that revealed that 62 percent of American men and 71 percent of women were trying to lose weight and spending an incredible amount of money doing so—some \$38 billion on dietary products. According to the Worldwatch Institute, there were also 400,000 liposuction operations performed in the United States in 1998 alone. Yet, this compulsion to overeat and to dedicate abundant financial resources to lose the "excess" poundage highlights only a small range of the variety of impacts that our diets have. In this regard, there is much that we don't appreciate.

There are several ways in which to think about our diet and all of them are instructive. First, we could look at it in terms of the health impacts that it has on us individually. Second, we might consider the effect of our diets on our national economy. Third, going beyond our borders, we could compare our diets to others in the world. And fourth, we might examine what we eat in terms of the impact that it has on our planet. All of these queries are fruitful as each one points to interesting and revealing conclusions, some of which may provoke us to reconsider our eating habits in profound ways.

Everyone knows that what one eats has an influence on one's health. And while the worst thing that one can do is to eat nothing, it doesn't follow that an overabundant diet is the most preferable. In fact, a "proper" diet is a very difficult thing to describe, particularly because it depends greatly on many things including, age, activity level, health condition, etc. Having said this though, food of any kind should be consumed in moderation. Unfortunately, too few of us, myself included, fully appreciate this fact. In fact, new scientific evidence suggests that we could all live longer if we didn't consume so many calories. Apparently, the "burning" of excess calories over a lifetime (which increases the metabolic efforts of bodily organs) can significantly overwork our bodies which ultimately leads to shortened life spans. Given that individual health gets so much attention in our society, and people seem to be fixated on the topic (as any stroll through a grocery store aisle will confirm), I will not dwell further on this aspect of our diets. Rather, I will focus on other ramifications.

On the national front, U.S. agriculture—the industrially-dominated, capital-intensive system that it is—currently requires huge inputs of irrigated water, fertilizer, pesticides, and fossil fuels. Thus, when we buy food grown in this country we indirectly burn gasoline, consume immense amounts of

water, and tubfuls of chemical agents. Several studies have established that each pound of grain-fed cow meat (beef) requires over 2,000 gallons of water (weighing nearly 17,000 pounds) and at least one pound of gasoline (Durning). And while this form of agriculture does wonders for the oil and chemical industry and produces a great amount of grain and meat as well, it does quite a bit of harm to small farmers and to our collective health.

According to U.S. government agencies, from 1930-1997 the average farm size grew 210 percent while the number of farms declined by 70 percent (Doyle). At first glance these statistics indicate the trend has been toward more efficient farming practices driven by improved technologies. And while this is true in terms of yield per acre, it is definitely shortsighted to stop here and think things are going so well with industrial agriculture. Similar to the shift from small businesses to conglomerates like Wal-Mart, small farmers are being squeezed out of the agricultural marketplace. As a result many small farmers are having a particularly difficult time providing locally grown produce at a competitive price.

American health suffers greatly because of poor diets as well. Collectively, the annual health care costs of obesity come to a shocking \$100 billion (Centers for Disease Control). In particular, the consumption of meat is estimated to also cost some \$30-60 billion per year due to the greater incidence of heart disease, cancer, and other health problems associated with diets saturated with this "American" staple (Barnard). (Such an amount is surprisingly similar to the \$50 billion annually required to treat smoking-related health problems.) According to the National Institutes of Health and the U.S. Surgeon General, most of the top ten causes of death due to disease—including heart disease, hypertension, stroke, diabetes, and cancer—are attributable to health risks associated with excess body fat. Obviously the medical profession and the pharmaceutical industry also gain significantly because most of us eat so gluttonously and unwisely. However, we all "pay" for our unnecessary and irresponsible behavior through higher insurance prices, longer stays in waiting rooms, lengthier prescription lists, broken and disheartened families, and shorter lives.

Our diets transcend national borders in many ways as well. Paradoxically, "others are what we eat." How can this be? Agricultural communities throughout the developing world are often more dedicated to feeding "us" (those in the developed world) than their countrymen. The U.S. currently imports ~9 percent of the food that we consume; as a consequence, "the typical mouthful of American food travels 2,000 kilometers from farm field to dinner plate" (Durning). We get a much higher percentage of our coffee, bananas, and grapes from other countries. While these "export" crops can be grown sustainably, they are often grown on plantations where short-term profits dominate business interests. These crops bring landowners in the developed world foreign capital (i.e., money) that they cannot easily obtain from the largely impoverished communities in their homeland. Yet, since most of the land in the developing world is owned by a limited number of men and corporations, little of the money that is spent on these imported foods gets to the local people in these far off places. Hence, our consumption of imported food often doesn't help the people of the nations

from which it comes. In short, our seemingly insatiable appetite for exotic crops provides an incentive for foreign landowners to grow foods that aren't meant to feed local peoples. Additionally, some would argue that certain crops, let's call them "vice" crops, such as tobacco and coffee, are superfluous to our society's needs as well and thus our consumption of them should be reduced radically anyways. These observations might not seem so important unless we consider that despite the fact we currently have more than enough food on the planet to feed all 6 billion humans, some 24,000 people die each day because of hunger or hunger-related causes. Additionally, nearly one out of every seven people in the world is chronically malnourished and ~200 million children under age five lack sufficient nutrition to lead productive lives.

American diets are also quite exorbitant when compared to diets of people from many other countries. The evidence available demonstrates that most of us eat selfishly as well as unhealthily. One's daily intake meal obviously means a lot. A closer look at the contrast between the diets in the "developed" countries, such as the United States, and those of the "developing" countries reveals how consequential one's diet has been and continues to be. Each adult American, on average, consumes ~3,600 kilocalories per day and gets ~600 kilocalories from meat and poultry intake, ~650 from sugars and sweeteners, ~650 kilocalories from vegetable oils and animal fats, and the remainder from cereals, fruits, etc. A typical person in Latin America consumes ~2,800 kilocalories daily and people in Southern Africa consume, on average, only ~2,200 kilocalories (or 39 percent less than each American). In the United States a typical meal consists of high levels of meat, sugar and vegetable oils and fats. Contrastingly, a typical meal of a person living in a developing Latin American or Asian country, such as Costa Rica or Thailand, relies on cereals and starchy foods for their calories and nutrients. While an average adult should eat ~50 grams of protein daily, most Americans consume multiple times this amount (the average intake is above 100 grams); the recommended amount for you can be calculated by multiplying your weight by 0.36g/lb. (High protein diets have also been shown to have detrimental effects on liver and kidney function during excretion and can also increase risks of certain cancers and coronary heart disease; the latter being the greatest cause of death in the United States for both men and women.) People in developing countries often get substantially fewer, and in many cases, insufficient amounts of protein. Clearly there is a great divide among humans in terms of what they get to eat.

Our diets also have a much greater impact on the environment than do diets in most other countries. Cows and pigs that are raised to produce meat require huge amounts of water, grain, and increasing amounts of antibiotics and growth hormones. You may have known this before but have you considered the specific differences and impacts between meat and vegetable consumption? A comprehensive study performed by the Union of Concerned Scientists compares the impacts of producing red meat, poultry and pasta. They found that, per pound of protein produced, red meat results in nearly eighteen times more common water pollution and nearly five times more toxic water pollution than pasta. To produce a protein equivalent of red meat releases three times as many greenhouse gases, uses five times the water, and twenty times the land that pasta does. Perhaps even

more surprising is the difference between red meat and poultry. To produce a protein equivalent amount of red meat releases two-and-a-half times the amount of toxic water pollutants, uses three-and-a-half times the water, and uses more than twelve times the land that poultry does (Brower and Leon). (Thus, a turkey certainly makes more environmental sense than does a pot roast for Thanksgiving; although, by far, a vegetable medley makes the most sense in all environmental categories.) Notably, despite these insights, the U.S. has one of the highest per capita intake of meats, some 23 percent higher than France, over 4 times higher than China and more than 50 times higher than India (Durning). It appears the time has come that we need to more carefully examine our consumption of food. This examination becomes particularly urgent when one also considers that topsoil is being eroded away in large quantities, underground aquifers are being depleted at rates well beyond replenishment, and hundreds of pesticides (most of which have never been tested for toxicity) continue to enter our air, streams, and groundwater at dangerous levels.

It is sad that so many humans don't get the proper nourishment despite its availability. At the same time, most Americans, as well as many other people in the "developed" world, tend to be consuming much more than they need. Is there a relationship between these two seemingly unarguable observations? My investigations suggest there is. This relationship is driven partly by the influence of food coming from overseas which often doesn't appreciably add to the well-being of local people nor the quality of our environment. Additionally, our affection for diets laden with meat products makes our land use practices much less efficient than would vegetable-based diets. Thus, much of our land could better be used for growing nutrient-rich, non-meat products rather than meat (or "vice") ones. If this were done, the "freed up" land could be used to feed others so much less fortunate than us (in terms of caloric and protein intake) or made available for indigenous peoples, plants and amphibians. In the end, if we are going to live in harmony in this world, we need to rethink our current dietary allotments very carefully so that all humans can be properly nourished and our ecological systems won't be continue to be damaged unmercifully either.

Bon Appétit.

Works Cited

Barnard, N. et al. (1995) "The medical costs attributable to meat consumption." *Preventive Medicine*, (November), pp. 646-655.

Brower, M. & W. Leon. (1999) *The Consumer's Guide to Effective Environmental Choices*. The Union of Concerned Scientists. New York: Three Rivers Press.

Doyle, R. (2002) "When the biggest crop is dollars." *Scientific American*, (August), 27.

Durning, A. (1992) *How Much Is Enough?* New York: W.W. Norton & Company.

Peter Schwartzman, a resident of Galesburg since 1998, is chair of the Environmental Studies Program at Knox College. He is a research climatologist with peer-reviewed publications in the area of climate change and human population growth and he is currently writing two environmental books focused on bringing environmental understanding to a wider audience. He encourages responses to his writings.