



Longbranch Research Associates *presents:*

So-Called Experts

a book always in progress & free

by Stephan Michelson

Chapter 3

Food and its Preparation

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There are many cooks on television. One cable channel is devoted entirely to food, and several others have food exploration and preparation shows, from the return of the Galloping (low-fat) Gourmet to various chefs explaining food from ethnic origins we didn't know existed. Alton Brown is an encyclopedic food "expert" who has been used on The Food Network to describe what others are doing more than to cook himself. This (old) photo is from his web site, where he showed off Shun knives. Unfortunately, the lure of television



riches has reduced Alton to a contest show host. Even Alton seems not to take into account how bad most grocery store food— particularly carbohydrates—is for you—and among carbohydrates, those with a high glycemic index.¹ Food experts, we will see, are not all, and not usually, health experts.

The next person to look to for true food expertise is Jacques Pepin, who created (and, in 2012, re-created) the famous Spago restaurant in New York City. As with

¹ Wikipedia tells us: "The number of grams of carbohydrate impacts blood sugar levels more than the glycemic index." That misses the point of the index, which is how fast your blood sugar level rises. Most experts will tell you that it makes sense to limit carbohydrates to those with low glycemic index values.

Rachael Ray's 30-minute meals, where the time it takes to have every ingredient and implement on hand is not counted, Pepin tells us how to handle cooking efficiently. "In a restaurant there is never extra time" he says, and so he instructs us to prepare an artichoke with a knife (don't pick off outer leaves one by one), to peel a cucumber one long stroke at a time, etc. That is, he leaves you with skills that are useful over many menus, whereas Brown leaves you with concepts, and Ray leaves you with meals. Pepin does not appear on the Food network, but is often on PBS stations. They also carry America's Test Kitchen which, despite Christopher Kimball's departure, remains a fine source of advice and recipes.

Many television cooks throw out ideas worth absorbing and running with. Stuff chicken with a goat cheese, for example. I don't need the recipe; I get the idea. If you want recipes, many books will accommodate you. Especially if you want "ethnic" recipes—Thai, Japanese, Indian, Mexican, you name it.

Between Bobby Flay on Food Network and the many barbeque cook-offs and outdoor grilling shows, you can learn about rubs, the difference between barbecue (slow embers cooked) and grilling (fast flame cooked). But for advice on the basics of food and its preparation, go to America's Test Kitchen. For expert advice on managing your kitchen and more efficiently preparing your food, look for Jacques Pepin, and perhaps Rachael Ray.

America's Test Kitchen is trying to select the best products, and generate the best recipes for just about everything.² Their solutions are seriously good. However, if we all follow their instructions, there will be only one way to do anything. You do not want to believe all of what any of these experts says, but you do want to consider what all of them say. Read Melissa Clark at *The New York Times*, both expert and quirky. Once again, we need to be expert in how we use experts. Like military recommendations to civil authority, they are suggestions, not commands.

So what is left for me to say? Why is this chapter here?

Many so-called experts are wrong about a few things or, as Jacques Pepin might tell us, they are unrealistic. I will demonstrate what I mean from your morning cup of coffee. I appreciate the social and time advantages of getting coffee from a vendor. But you might want to read the chapters in this book on money and investing. Substituting home-made coffee in an insulated travel-cup for commercial coffee in a paper cup is one way to save money at no cost to your life style (unless

² I am not sure of the future of this organization. It was sold, and then Christopher Kimball, its founder, left. I think the new owners are more into making money, whereas Kimball was into preparing food.

your life style is defined by the time you spend and the people you meet on that coffee line). On the other hand, there is a cost to making your own coffee—your time and effort. Have you seen this coffee concentrate extractor that you press down on? Not a French press; you really push down on this with all your weight. It ties you up (takes you away from the party) for minutes per cup. Good tasting coffee, but who has that kind of time? Or wants to spend it that way?

One Cup of Coffee

I don't expect to find an exquisite cup of coffee at a reasonable price, in a plastic-lined paper cup, on my way to work. Exquisite, sit and sip, is not the standard here, We're talking about your morning "cuppa." A good, tasty, refreshing cup you will carry with you, not a demitasse you will lift, small finger in the air. Let's think about making such a good-tasting cup quickly and inexpensively.

Among Money Magazine's "7 Secrets of Super Savers," are these two headlines:³

- 3 Skipping a Good Cup of Coffee Won't Make You Rich
- 4 But It's Still Dopey to Blow \$8 on Coffee Every Day

I agree with both sentiments: First, try to find bigger ways to save money. Second, buying coffee every day from a vendor has no place in a frugal, dare I say "expert" budget.

You have been told that the best coffee should be freshly roasted, then stored correctly (air-tight), be just ground, brewed (first by only wetting the grinds, then by soaking them and filtering the brew) with filtered water heated to an optimal temperature (204° F., although Cuisinart says 200°), and reheated to that temperature at every pour. The coffee itself should be drunk within ten, maybe fifteen minutes of brewing, and never be re-heated. I'm not saying that isn't true. I'm saying it isn't practical. Let's aim to grind coffee at most once a week, to take up little or none of your every-day morning time making it, and to carry it with you, saving the time and money you otherwise would spend obtaining it.

It should be needless to say, but if you haven't gotten this far on your own: Avoid "flavored" coffee. If you want something other than coffee flavor, then I have nothing to offer. No hazelnut, no vanilla cream, no anything but roasted coffee

3 59 *Money* 7, August, 2010, at p. 106. By the way,

A large study has found that drinking coffee is associated with a reduced risk of dying from heart disease and certain other causes.

Nicholas Bakalar, "Coffee Tied to Lower Risk of Dying Prematurely," *New York Times* November 18, 2015.

beans. If you like hazelnuts, eat them, but don't confuse their flavor with that of coffee. Please.

You want a pre-ground blend of beans? Sorry. Consumer Reports tells us:

Of the 24 ground caffeinated blends we tested, none was excellent or very good.⁴

There are small coffee roasters that produce excellent blends, such as Vermont Coffee's "Dark" blend. However, I agree with Consumer Report's evaluation of major brands. The best cup of coffee historically may have been real Jamaica Blue Mountain. In the early 21st century, perhaps La Esmeralda, derived from the Ethiopian Geisha bean, by selecting the best to reproduce, might take top honors. At well over \$100 per pound, I am not likely to find out.

Into the second decade of the 21st century, we are told that there is a "third wave" of coffee aficionados:

Coveted "single origin" beans with unique flavors—and high prices—are harvested like wine grapes on a specific farm in specific soil at a specific altitude in a specific climate on a specific lot, in some cases even picked on a specific day.⁵

This coffee will be specially brewed, perhaps using a new \$16,000 machine called the Steampunk, in specialty coffee houses that will compete with Starbucks and Dunkin' Donuts on the basis of their elite, damn the price, cups. Preferably (they advocate) without cream or sugar.

What I will describe here is not likely to appeal to people who want to discuss their coffee, using fruit and berry analogies, like their wine. I am proposing an efficient way to get the third, maybe the second best cup of coffee, you will ever have. And have it every day, serving coffee's place, as background to more important things. You will have this at a far lower price than any you buy already made. Like Rachael Ray's "quick" recipes, mine involves a little preparation. It's not difficult, but there is some work: You will have to make up your own blend.

Why a blend? Think of wine. Is Cabernet Sauvignon the premier red wine grape? Perhaps, but no cab I know of uses only cab grapes. Most have some Merlot, and/or maybe Cabernet Franc. A blend helps enhance the cabernet flavor. Think of whiskey. (I wouldn't know, but that's what whiskey experts say—a blend is best.)

4 *Consumer Reports*, March, 2010, page 38. Notice the correct grammar: "none" is singular.

5 Danielle Saks, "Brewing The Perfect Cup," *Fast Company*, September, 2014 starts at 86.

In coffee, it is as much a blend of roasts as of beans. Like Merlot as a component of any fine red wine, there are some elements you always want in your coffee blend.

Friends from Chicago brought Malabar coffee from Dark Matter Coffee Company. I made a cup by French Press, and then one by drip, which I preferred. A lovely coffee it is. When you make your blend, you might want a Malabar in it, but you will want at least a touch of a dark roast. It is like when judges of cooking call for acid. They aren't saying (I trust—they are experts, after all) that they want all dishes to be like sauerkraut. They just want a tingle to excite the palette (think of vinegar in a potato chip)—as, once you use a blend that includes the right dark roast, you will always want it as part of your coffee.

Preparation

The recipe is below. What about the work? Grinding takes two steps, because we are going to grind three (maybe four) kinds of bean and then mix that melange with coffee from a can. That's right, from a can. Worse (you may think), the can will have a coffee-chicory blend. Whatever proportion chicory was of the mix in the can, it will be diluted in your cup. Believe me, this works. My wife Ani asked for the recipe as part of our divorce. She gets a free copy of this book. (Oh yes—everyone does.) House guests, pointing to cup, remark—always—on its outstanding quality. This is its first presentation to the wider world.

You want to start with three or four kinds of whole beans. The first is a dark roast (“French” or “Italian” or “Espresso”). The best dark roast coffee is Mandheling beans from Sumatra, but you have to be careful, because I am specifying both a bean and how it is roasted. Thus, for example, World Market, tradewindcoffee.com and coffeebeandirect.com all sell a Mandheling, but not dark roasted. The “Dark Sumatra” at coffeebeandirect.com is the same bean roasted as it should be. The Fresh Market sells a dark Sumatra blend, presumably including Mandheling. In Hendersonville, NC, the Sumatra Mandheling is dark roasted at Independent Beans.

You don't have to go to great ends to get a decent dark roast. I have long liked Millstone Columbia Supremo dark roast, even though Millstone, available in ordinary grocery stores, is not respected by most aficionados. I was pleased to find it highly recommended by *Cook's Illustrated* on November 1, 2005, in an article about getting good coffee beans from your local store. Another surprisingly good and easily available dark roast—and also highly recommended by *Cook's*—is Eight O'Clock. Not in the red package. In the dark brown package that says “dark roast.”

The second bean is preferably Brazilian Santos, medium roast. This should be a peaberry, a small bean with an exceptional flavor that you really want in your coffee blend. Some other peaberries (such as Tanzanian) just don't have it. www.Tradewindscoffee.com says of Santos:

It is perfect coffee for blending. If you have become acquainted with the art of blending coffee, this is truly the perfect coffee to use for your blending needs.⁶

Unfortunately, "Santos" now refers to the Brazilian port out of which the coffee is shipped, not the kind of bean. That is, you cannot trust that any coffee called "Santos" will be as I describe it. For example, Santos from Amazon.com is not the peaberry.

Blending coffee is not an art, it is a craft. You can become good at it by following these directions. You can try whatever peaberry you can get, but if that does not blow you away, and you do not want your coffee delivered to you, go for some other top quality bean with character, like Hawaiian Kona. In most cases, you will find Kona, or Jamaica Blue Mountain, as "blends," because real Kona or Blue Mountain would be too expensive to just grind and brew. As this is a small part of our blend, you might try an expensive bean here, but I would not. Find a good peaberry at a reasonable price. Find a real Santos.

The third bean would also be a medium (or "Vienna") roast, and can be one you vary over time, once you have established the first two beans. A good Ethiopia, Columbia or Kenya bean works here. A Malabar—wherever it is roasted, it is grown in Kerala Province, India—would be excellent. The purpose of the third bean is to help balance the dark roast, to add body and its own flavor. It has to be a good coffee bean. Eight O'Clock original serves this purpose well, as do several less expensive beans. Buy whole beans only.

I sometimes add a fourth bean if I run across an interesting one. For example, if I have the Santos and find a regular Brazil roast, I might use them both, rather than have one substitute for the other. My friends Tanya and Peter sometimes show up with a small packet of real Jamaica Blue Mountain beans. I do not use it in a mix. I French Press it for a weekend at-home cup. I do not use a 1990 Chateau

⁶ Tradewinds Coffee no longer exists, at least not as a seller of coffee. www.coffeereview.com rates Brazilian Santos at 89 points, but rates a Kenyan peaberry, roasted by Atomic Café in Massachusetts, at 95 points. www.intelligentsiacoffee.com/ sells a Kenyan peaberry as well as "Tres Santos" from Columbia, which may or may not be related. These experts taste each coffee separately, whereas I am describing each in relation to the blend we are preparing. Atomic tells us that a peaberry is not a distinctive kind of coffee, but describes rogue single beans from normally double-bean plants. I do not know if that is correct information.

Latour to cook onion soup, and I do not bury a connoisseur coffee in my blend. We're talking everyday good here, not celebration excellent.⁷

Finally, although a good dark roast is a must, there are other alternatives to Mandheling from Sumatra. Besides those listed above, The Fresh Market carries a "New Orleans Dark" blend that adds a sweetness to the Sumatra taste, and could be blended with it or any other dark roast. I believe the magic in my blend is in the categories, not the specific beans.

How to store coffee beans? Some "experts" advise keeping coffee beans in the freezer, others say freezing coffee beans is unnecessary, and some say it is bad. I have no idea. They are not refrigerated in the store, so why must they be at home?

On grinding day, put these beans into a burr grinder (not a grinder with a spinning blade) set to medium, in the following proportions:

- 4 measures dark roast
- 2 measures Santos or other peaberry
- 1 or 2 measures Columbia or other
- 1 or 2 measures of the fourth bean, if any

You will vary these proportions to your taste. I have been doing this for over forty years, and find that I lean more toward the dark roast the older I get.

What is a measure? I use $\frac{1}{3}$ cup as my measure. Remember, we are grinding at least one week's worth, maybe two. To get uniform results, I place these beans in a large bowl and mix them by hand, before loading them into the grinder.

You want a burr grinder, not a spinning blade, for two reasons. First, as any expert will tell you, air is the enemy of coffee freshness. That is why they want you to grind every day. They aren't wrong, but they aren't practical. Second, a blade cuts but a burr grinder crushes to some extent, releasing oil and maximizing exposed surface area. Third, a burr grinder leaves you with even sized pieces of coffee beans, whereas, short of making a powder, a blade does not. The brew works better if the particles are evenly sized.

So in Part 1 we are creating a grind to mix with something else, in Part 2, we *will* use a spinning blade. Again, the experts who tell you not to use a spinning blade

⁷ If this discussion of country of origin, type of bean and roast seems too fussy, consider this. Andrew Willett describes the difference between two blends—the Special and the Very Special Mocha Java—at a store in Greenwich Village. "To be very special, in this case, the blend requires beans from Yemen rather than Ethiopia." "The Sweet Smell of Longevity at McNulty's," *New York Times*, January 17, 2014.

aren't wrong, but we do want to mix it up, which the burr grinder will not do. In fact, if you fill up the blade grinder, and don't grind for long, you can achieve a good mix with very little air contamination or cutting. Don't get perfectionist on me.

Especially considering this step. Open a can of Café du Monde. It's a yellow can, 15 ounces masquerading as a pound. Café du Monde also puts dark roast coffee in a blue can, with orange lettering, although few stores carry it. We already have our dark roast, so go with the "Vienna" roast in the yellow can. It contains coffee and chicory in unknown proportions. You cannot substitute any other "New Orleans" blend ("New Orleans" is meant to indicate the presence of chicory). Most "higher end" standard grocery stores stock Café du Monde. I found, however, that Asian stores carry it at lower prices than American grocery stores. When a can cost \$7.99 at Fresh Market and \$8.99 at Harris Teeter, I found it at Pacific Foods in Beaverton, Oregon for \$4.99. On the internet, I often find the best prices at Asian markets. In late 2012, when Café du Monde was selling for \$12 in stores, I purchased twelve of them from VeryAsia.com for a single can price of \$7.25, after a very high shipping charge. Now I have to store a dozen cans of coffee, but at a 40 percent saving, I'll find the space. More recently (as of December, 2015), Amazon.com has become competitive, if you buy six cans or more at a time.

Yes, you get it: You need two tools. The burr grinder got your mixed beans into a grind similar to that of Café du Monde. Now into the working area of a blade grinder (don't use this one for herbs or nuts—reserve it for coffee) place your blend and Café du Monde in the following proportions:

2 or 3 measures blend

1 measure Café du Monde (to your taste)

Fill the grinder container almost to the top. Grind for no more than four seconds and pour into your storage cannister. I use a plastic container with a vacuum seal cap from Food Saver for "long term" storage, and a small porcelain container with a metal clasp during the week. I keep the large container in the refrigerator. You can see quality slipping slowly through my hands. That is what happens with everything. Let's have good coffee, but not be fanatics.

Equipment: The Coffee Maker

Intelligentsia.com says to get simple equipment, like a Melita or Chemex filter; but when they throw a party, they make coffee in a Clover. Starbucks purchased the company that makes the Clover machine, and apparently will not let us purchase them. That's OK. I think automatic coffee-makers can be quite good.

Although in cooking a “cup” is eight fluid ounces, in coffee it is something less, usually four or five. I make a “mug” of coffee every day, maybe 12 ounces, and then I add cream. For some years I made coffee in a Capresso that has the following features:

- I can program it to run in the morning. There we are leaving the water and coffee at room temperature over night. Is that allowed? It’s not optimal, and I do not do it, but I’m not sure it would ruin everything else you have done.
- It has a special function for when you are not making much coffee. I.e., it is designed to make my one large cup.
- It takes (and may even have come with) a gold mesh filter. No paper filters to throw away.

Then Hammacher Schlemmer said the Zojirushi coffee maker was the best, so I got one of those. It is not better than the Capresso. Any good coffee maker should do.⁸ I now use a Tehcnivorm. It makes better coffee than my previous makers, but not necessarily good enough to warrant its high price.

A good rule in buying a coffee-maker is to avoid those that take flat-bottom filters. You want one that takes a cone, or filters (paper or gold) whose bottom is an edge. The taper forces the water up and out the sides. Note that both Chemex and Melita are like this, as are the Capresso, the Zojirushi, the Technivorm, and the one-cup maker from Hario. On the other hand, Katie Cargulio “from the Counter Culture Coffee’s training center” “prefers the flat base of the Kalita Wave.”⁹ And she’s a credentialed expert! OK, we disagree, except for the flat bottom AeroPress one cup maker, through which you force the water by pressing down on a plunger.

Corby Kummer, whom we will meet again below, compares six coffee makers, none electric. His own, the Soft Brew, also makes good tea, he tells us. Although the characteristics of the brewed coffee differed, “No one brewer emerged as the clear winner.”¹⁰

I fill the water compartment of the Technivorm to its four cup mark, and put four rounded coffee spoon measures of my blend into the filter. If a particular blend calls for more coffee, I round the measures more (a “heaping” measure). Each blend

8 You can find a good discussion of coffee makers at Oliver Strand, “3 Steps To Brewing A Better Cup of Coffee,” *New York Times* February 24, 2016.

9 “Making A Great Cup of Coffee,” *Real Simple*, March, 2013 at 50.

10 Corby Kummer, “Java Script,” *The Atlantic*, March 2014, at 46.

will be slightly different, so after your first cup you will want to adjust the water-coffee ratio. The craft of blending requires a complementary craft of brewing.

My brewing “coffee measure” must be about $\frac{3}{4}$ of a tablespoon. It is made from wood, and has the advantage that it fits in the clasp of the daily storage container. Some porcelain containers come with a metal measure in a loop built into the cannister’s side. Within a week you will have figured the right number of “scoops” using whatever measure is convenient.

Never add heat to made coffee. Better to throw it away and start again. You can and should occasionally clean your brewer’s cannister with vinegar, baking soda or Oxi-clean. I put a tablespoon of Oxi-clean in my cannister, fill with warm water, and wait at least a half-hour. Pour it out and rinse several times.

Purchase a good travel cup. My travel cup is not a thermos of the glass vacuum type, but it is better than a plastic cup. It isn’t exactly no-spill, but by having just a slit to sip out of (and a pinhole to let in air), it is pretty good. Mine has my name on it. As it is going out in public with me, it should be identifiable as mine.

You see that there are a lot of compromises here: the beans aren’t fresh ground, today’s grind may not have been refrigerated, and some of the coffee (and chicory—gasp!) came out of a can. But you will cherish this information, if you follow it. It will save you time and money, and satisfy your palate. This is the best combination of good coffee made quickly, with an investment (besides for the two grinders) of a little shopping time (you can get everything from the internet) and once-a-week or every-other-week grinding. If you currently buy brewed coffee on the way to work, this will save you over \$20 a week (that’s after-tax money!), and should give you whatever you get out of coffee just fine.

And here’s the capstone. In 2016 a “panel of experts,” reporting to the World Health Organization, endorsed regularly drinking coffee. So-called experts say it’s good for you!

An Alternative Approach

I am sure there are many other approaches to coffee. To make cappuccino, for example, you brew a dark roast and add steamed milk. There is one other method in particular you might be interested in knowing about: coffee with butter. It requires far more work than my morning cuppa. Besides, butter is just churned cream. Why not use cream? I am passing this information along because it could be that Dave Asprey is more of an expert than anyone else. Or, it could be that he is not.

Bulletproof coffee is described as part of a diet, based on “counterintuitive” principles aimed at losing weight and suppressing inflammation.¹¹ One of the interesting features of Asprey’s approach is understanding *when* to eat foods with certain characteristics. He tells us not to drink orange juice in the morning, which is when most people do. Coffee, however, is OK, if it is made from carefully selected beans (to minimize toxins) and blended with MCT oil (from coconuts) and unsalted butter (from grass-fed cows). Apparently one should not use paper filters, but I trust he means *bleached* paper filters. I have to appreciate a guy who takes space in his book to tell you how to make coffee, whether he is right or, let’s say, beyond the pale.

Knives

Although Alton Brown at one time (as in the photo at the top of this chapter) represented Shun Knives—no doubt honestly thinking they are excellent, but also taking money to say so—some so-called experts rate them highly, but not highest.¹² The MAC MTH-80 Mighty Chef 8" with dimples was first in Michael Chu’s testing.¹³ There is a fallacy to his procedure, but I have no way of knowing whether correcting it would have altered the results. In a comment, Chu tells us:

The tests were performed over two days (two Saturdays) and meticulous notes were kept. After the first day of testing, I really didn’t want to continue with the article because I didn’t want to deal with continuously washing and drying eleven knives and performing all the comparisons over and over (mainly due to limited counter space).

No testing was done over time and long use. Initial testing was done out of the box. Subsequent testing was done soon thereafter, first honing the edges. The knives were never sharpened, other than at the factory. We want a \$100 kitchen knife to last for years. Forever. Alton Brown says his are re-sharpened every year. He also tells us that European knives are sharpened at a 22° angle, but Shun knives (as all Japanese knives) are sharpened at 16°. That raises questions about those multi-slot knife sharpeners that contain grinding wheels of different levels of fineness—the slots used to align the knife at the “proper” angle as well as to access the desired grinding wheel. What angle is that? Is it proper for every knife? Shun? Global (which are angled only on one side)?

11 Dave Asprey, *The Bulletproof Diet*, Rodale, 2014. The coffee is discussed on pages 68 ff., and the coffee recipe is on page 253. Reminder: I am not endorsing this concept, only describing it.

12 <http://www.cookingforengineers.com/article.php?id=129&title=Chef's+Knives+Rated>

13 Chu's article was written in 2005. The MacMTH-80 is also rated the best chef's knife at www.thewirecutter.com in January, 2018.

A solution to sharpening, discussed below, is to get sharpening stones. Aside from sharpening, the best knife is one that not only feels good and cuts well, but can be brought back to excellent condition time and again. Although Chu honed, he did not sharpen, and so we do not know that all knives were equal at the start.

Coincidentally, for a long time my favorite large knife was a Shun “classic,” which implies that Shun makes an even better knife. At one time you could view an Alton Brown video, in which he minimally explained knife construction (he did not indicate how the handle is attached to the blade, for example) and care (including washing and storage). The URL that used to take you there now directs you to <http://shun.kaiusaltd.com/knives>, which shows you over 100 Shun knives, but not Alton Brown.

Megan McArdle writes:

I call my Shun chef’s knife beautiful, but objectively, nothing about its form is particularly lovely. . . . It cuts brilliantly, of course, with formidable balance and heft. But my potato masher does a fine job of smashing tubers, yet I never tell people it’s pretty.¹⁴

She goes on to theorize that cooking used to be a necessity, and our bent is to spend minimally to cover such things. Recently, although we do less of it, cooking has become a luxury. So we spend more for kitchen equipment, and then spend less time in the kitchen, using it. Well, it’s a theory.

I think she is wrong on several counts. Just one of them is this: What differences are there among potato mashers? Every one seems to work, not one better than the other. We do not praise our masher because it is apparently an easy implement to make. But one knows immediately the differences among knives. My Vmatter knife is so far and away the best knife in the house that I seldom use it, for fear of hurting it. Yet, as I am the knife cleaner in the household, I find I need to wash it almost every day. Bethanne, also, considers it the best knife in the house (except for items on which she uses a serrated Global), and her attitude, more sensible than mine, is why wouldn’t one use one’s best?

I have a reasonably large Mac knife (surely this is a joke—Mac the knife!) made of molybdenum, which I particularly like on vegetables, especially greens. I also have a Mac paring knife and two Globals. All are superb. Mac, Shun and Global leave the European knife manufacturers far behind. Epicurious tells us (in 2015) that the Misono UX10 Gyutou might be the best knife, tapered on both sides,

14 Megan McArdle, “The Joy of Not Cooking,” 307 *The Atlantic* 4: 34, May, 2011.

although at different angles. How would you hone it? Forschner, an American brand, is considered by many chefs to be among the best, but I have no personal experience with it. OK, a knife expert I'm not.

Corby Kummer, the author's blurb says, "is an Atlantic Senior Editor." Now that's a so-called knife expert's credential! Kummer writes about kitchen knives in addition to coffee. At least about Adam Simha, a no doubt interesting fellow who founded a knife company, MKS Design in Cambridge, Massachusetts.¹⁵ His may be excellent knives, yet their most interesting aspect is the "bicycle grip" handles, with ridges to go between your fingers. I have never lost the grip on a knife handle, not even the Globals, whose handles are justifiably criticized for being too small. If you do, MKS can solve your problem. Whether they are otherwise good knives, I do not know.

Kummer does not think much of Damascus steel, as in the Shun classic, "folded and pounded as many as 32 times to make it flexible and strong, and said to be of samurai-sword quality." His last knock on the folding process: "the pretty moiré pattern that folding produces can be mechanically applied." The logic seems to be that something is inferior if its appearance can be imitated. This guy is an expert? It is the imitation that is inferior! A Rolex watch's quality is not reduced by the fakes bearing its name, sold on every New York City corner. Perhaps it is because folded steel really *is* superior that ways have been found to imitate its appearance.

Kummer presents four knives for consideration, one being a Mac 8.5 inch, not exactly the same as Michael Chu's winner, but what looks like the Mac MBK-85, which Chu listed as in the top three, along with the winning Mac and a Global. So Mac appears to be a strong contender for top knife, among so-called experts. I spent many years selecting, discarding and selecting again, until I have a collection with which I am happy. (Only someone pretending to be an expert would keep on going. I pretend to nothing more than being an informed consumer with some very good kitchen knives.) My collection includes several Sabatier knives purchased at an outlet on I-95 in South Carolina. One is a high carbon knife which, true to its reputation, turns black after use. A little scouring powder and very careful washing (and immediate drying) cures that ill. Both its heft (say for cutting through hard cheese) and the fine edge it takes make the effort worth while. Mama Ro makes pretty knives, but not particularly good ones. Ikea knives may not be the best but,

15 Corby Krummer, "Never A Dull Moment: What to look for when buying knives," *The Atlantic*, April, 2007.

except for their inferior serrated paring knives, may well be the best deal. Their good knives are *very* good.

Mark Bittman, a former *New York Times* food editor, has expert credentials. He says you can get high quality at low prices.

[F]amous TV chefs use gorgeous name-brand equipment, you might say. And you'd be right. But a.) they get much of that stuff free, the manufacturers hoping that placing it in the hands of a well-known chef will make you think it's essential; b.) they want their equipment to be pretty, so you'll think they're important; and c.) see above: a costly knife is not a talisman and you are not a TV chef.

Finally (and this is crucial), the best chefs may use the best-looking equipment when they are in public view, but when it is time to buy equipment for the people who actually prepare those \$200 restaurant meals, they go to a restaurant supply house to shop for the everyday cookware I recommend to people all the time.¹⁶

Some of this is surely true, but some is not. Have you ever seen a professional chef who did *not* possess not only expensive carefully selected knives, but a custom-made carrying case for them? I, too, shop in restaurant supply houses for pots and pans and specialty items. And, as noted above, I will pull off the Interstate to shop at a knife outlet. I also have a couple of excellent white plastic-handle paring knives made in Brazil by Tramontina (now sold as "Bakers & Chefs"), a small nondescript Santoko, a long flexible knife for carving standing rib roasts (usually called a "ham carving" knife), a more substantial one for turkeys, etc. I have a serrated-edge bread knife as well as the serrated edge Global. I even have a ceramic knife that works well, but this is not my first: I had one years ago. It chipped. That is the problem with ceramic knives: Nice as they are when whole, they are fragile.

Bittman's concept that two knives and a mandoline are all that you need in the long run is extreme, although it may be all you need *at first*. Julia Moskin suggests three knives to start.¹⁷ Brendan McDermott, although he presents many more knives (as pictured, below), tells us that only four are essential.¹⁸ If you start with nothing and have a \$300 budget for your entire kitchen, you do not want to blow it all on knives. But there are real quality differences, and a fine knife set increases the pleasure of cooking. At whatever level you start, you can improve that kitchen over time. You will always eat, and hopefully always cook. Why not always cook better, more easily?

16 Mark Bittman, "'A No-Frills Kitchen Still Cooks,'" *New York Times*, May 9, 2007.

17 Julia Moskin, "Basic Knife Skills," *The New York Times* May 3, 2016 and January 11, 2018..

18 Photo from an advertisement for a McDermott class on Crafts.com, May, 2015.



To Sharpen, or Not To Sharpen

Over-all, there is some expertise to assessing knives, followed by a personal choice. Then there is expertise required to care for them. For example, some people recommend that one *not* hone a Japanese (hard steel) knife on an iron. The best honing, they say, is a leather strap, like those we old geezers remember being used on the straight blade at the barber shop. Others say to use a porcelain rod, but again not steel. Let's first understand the difference between honing and sharpening.

"Keeping knives sharp should be a part of your process."¹⁹ A sharp edge hitting a cutting board will become dull. That does not mean that metal has been lost. Rather, it means that the fine edge curls over. One cannot cut as well with the round of a curl as with the edge. The point of honing, then, is to straighten the curl back up, exposing the edge.

Over time, and over much bending and straightening, the edge will become corrupted. The purpose of sharpening is to reconstitute the fine edge. In principle, although the words are not always precisely used this way, honing does not remove material from the blade, but sharpening does. For example, what would "Smith's TRI-6 Arkansas TRI-HONE Sharpening Stones System" mean? Are there three sharpening grits, or two plus a hone?

19 David Tanis, "Go for the Sharpest Knife in the Drawer," *New York Times*, September 24, 2014

Sharpening is indeed generally done using stones, and these stones, like sandpaper, come in various grits. You need at least two. My friends tell me that the Norton two-grit system works fine. You soak the stones in water for ten minutes, and then sharpen as in the picture here, from Norton.



But wait! You remember that earlier I discussed the different angles, especially of European vs. Japanese knives. How do you account for them? There are accessories that will set the knife at a particular angle while sharpening, but this is getting a bit too expert for us. A good rule is that you should have good knives, and you should have at least two grits of sharpening stone, and that every once in a while you should sharpen your knives. Over time, you will figure out the rest.

Sharpening is usually done to expensive knives. But once you get with it, you will find that almost any knife will sharpen well. Kitchen Aide or Tramontina stainless steel knives, for example. The major difference among knives is not how sharp you can get an edge, but how sharp you can get an edge by honing. The better knives require only a touch up to restore the edge. The cheaper knives require more sharpening. So it comes down to whether you like to sharpen. If so, you do not need Mac or Shun knives. Even though I do think you get a better edge from folded steel, I also think that stuff is for experts. You can sharpen a knife while watching football. If that activity pleases you, get less expensive knives that sharpen well, and good quality stones, and enjoy the game.

This discussion, again, raises questions about knife comparisons straight out of the box. The comparison an expert would make is a) how sharp can you get the edge, b) how much cutting can you do before it needs honing, c) how sharp will it be at each honing, which is similar to d) how many honings will it take before it again needs sharpening. To make this test requires, as Chu states, that the same cutting be done with each knife. A lot of cutting. This test will take more than a weekend. Among equally sharp edges, the best knife will stay sharp in use, and hone back up to near its original sharpness time and time again. I think no one knows what knife that is.

See <http://www.knifeforums.com/forums/showtopic.php?tid/759892/> for sharpening and honing advice. Jacques Pepin recommends one of those six-slot electric sharpeners I mentioned above. Remember, though, that Pepin's strength is practicality, not perfection. I take it that such a convenient gizmo is "good enough" for most purposes, although I am not about to subject my best knives to it. Sabatier, at <http://www.sabatier-k.com>, displays a number of honing steels, but calls one a "sharpening steel." Do they mean it? I do not know. Perhaps their web site is not as expert as their manufacturing. There are also "sharpening" rods that have embedded diamond flakes. Presumably they can remove metal, and therefore do more than hone. I do not think so. I have one. It hones well.

Finally, if all this maintenance seems like too much of a bother, check out a Vmatter knife, if you can find one. It is made of a space-age alloy—literally, one NASA concocted—that, they boast, "never" needs sharpening. "Never" in this instance means not for ten years. When first introduced, a Vmatter knife cost hundreds of dollars. They went on sale at www.Amazon.com for around \$50, but are no longer available. Whether the sharpening and honing time saved is worth it—assuming what they say is correct—well, only you are an expert on that question.

Sugar and White Flour

"Sugar is your friend." That was the advice given to Phyllis, my first warper, in her former job as pastry chef at an upper class gated community. Sugar is the chef's friend because the eater's immediate reaction to "sweet" is "Hmmm, good." Sugar in some form is found in many fruits, one reason one can purchase "naturally sweetened" 100 percent juice. I find it hard to believe that a natural sweetener is "bad" for you in moderate quantities, but in the quantities Americans consume it, sugar is very, very bad.²⁰

What to do? Stop drinking soft drinks. Someone has calculated that we doubled the per capita consumption of sugar in the 20th century. It probably was already too high, but the human body cannot take that pace of change.

When we eat sugar or white flour—foods with a high "glycemic index"—blood levels of glucose rise rapidly. The body immediately releases a dose of insulin to enable the glucose to enter cells. The secretion of insulin is accompanied by the release of another

20 In addition to Gary Taubes, *The Case Against Sugar*, Alfred a. Knopf (Borzoi), 2016, other people are coming to this same point of view: Use sugar only moderately, but do not avoid it fanatically. See Stephanie Strom, "Foods Loaded With Sugar, Salt and Fat? Bring It," *New York Times*, April 22, 2016, and Nina Teicholz, "Don't Scapegoat Big Sugar," *Los Angeles Times*, September 26, 2016.

molecule, called IGF (insulinlike growth factor), whose role is to stimulate cell growth.²¹

What is wrong with cell growth? Two things. One is that when our bodies cannot process the sugar, the cells made from it are fat cells.²² The other is that, if not fat cells, they are cancer. Cancer feeds on sugar. Oh, and if you are a teenager, you might want to learn that acne is unknown in communities that do not consume sugar and white flour. At least that is what David Servan-Schreiber tells us, and he knows because he read it in an article in *Archives of Dermatology* (2002). This is the scary part of reading experts who have studied the literature and formulated rules about what is good for us. Is their source literature correct? In a judicial context, testimony from a witness quoting a study he had read (not one he had done) would be called “hearsay.” It might not be admitted into evidence.

One way to come to some acceptance of what some experts tell us is to find many examples of the same thing. If we learn, for example, that breast cancer is more related to high insulin levels than to body fat—even though the two are correlated—we might conclude “oh yes, the insulin was produced in response to sugar and white flour.” A 2009 article in the *Journal of the National Cancer Institute* makes that connection, but not from a double blind study in which one group consumed more sugar and white flour than the other, but neither knew who got which, and both groups weighed the same. I do not blame the researchers—it would be difficult to impossible to construct such a study. But neither do I necessarily believe their conclusions.

How far one will go to avoid sugar and white flour depends on one’s experiences. You may not have cancer-consciousness, and may therefore not want to change your life to try to prevent it. Bethanne purchased Servan-Schreiber’s *Anticancer* soon after I was diagnosed with bladder cancer. She changed our cooking and eating habits, both as prevention and as remediation. One good scare and you go looking for experts. Even advertisements for diet regimens brag about providing “low glycemic index” foods, and although that concept might be over-done, it does make sense. Fortunately, we live in an era in which alternatives are available (agave, stevia, etc.—but avoid aspartame) because many people are taking note of the bad food being sold in stores, some of which leeches BPA from its plastic containers.

21 David Servan-Schreiber, *Anticancer* (2010), in Chapter 3, at 67.

22 When energy is needed, the body will look for glucose before fat. Therefore, in high energy-use situations, sucrose or glucose are not particularly bad for you. For most people, most of the time, the body will not need that energy, and will store it as fat. One will do better accumulating fat from sources that provide other nutrients (plants, meat or fish), which will then be burned when needed.

There is so much to take into account, we cannot get around all the bad stuff being foisted on us. But we can follow some general rules. Avoiding sugar and white flour and plain rice (use Basmati) seem to be a good start.²³

High Fructose Corn Syrup

HFCS: You don't want it. Always look at the ingredients. Always reject items that have it, like applesauce or peanut butter. Shop in the more careful stores for applesauce that has one ingredient: apples, and peanut butter that has one ingredient: peanuts. All the standard brands add high fructose corn syrup.

Chemically, HFCS is sugar, about half fructose, half glucose. As above, that is bad for you, at least in the quantities western cooks use it. But we also know that sugar occurs naturally in foods we love. So why is HFCS special?

Removed from its natural matrix (there is fructose in all fruits) and mixed with glucose, it can no longer be handled by the insulin our bodies produce, at least not without collateral damage.²⁴

This seems a bit confused. Fructose is not broken down by insulin, which is generated in the pancreas. It goes to the liver to be processed. The more important point, perhaps, is that what you eat and the amount you eat are not independent. Artificially sweetened foods enhance one's hunger, whereas naturally sweet foods (like fruits) help satisfy that hunger. Sugar not used for energy will be stored as fat, which may be a good thing temporarily, but "excess" sugar not only becomes fat, but induces you to eat more, some of which surely becomes fat, and induces a lot of bad bodily reactions, especially if, as does HFCS, it overloads the liver. In Jumex or Goya language, "nectar" means "HFCS added." OK, you have been warned.

Government

A difficult question is how to balance between government protection of the populace and the freedom that people must have to make bad choices. If one had a theory of government functions, providing real health information would be one of

23 Beware of organizations with expert-sounding names. Mark Bittman warns us about the School Nutrition Association, half of whose budget comes from the food-producing industry.

[T]hose representatives of Big Food are scared to death that more fruits, vegetables and whole grains means less pizza, fries and, well, junk. This is a legitimate fear.

"Feeding Kids Well," *New York Times*, March 11, 2015.

24 Servan-Schreiber, *Anticancer* (2010), at 68. See also Carolyn Dean, *The Magnesium Miracle*, Ballantine (Revised Edition, 2014) where we learn that fructose requires twice the amount of magnesium as sucrose to be processed by the body, leading to magnesium deficiency.

them. But when one looks at how government actually operates, we see little reason to believe that government personnel are experts; indeed, that they are allowed to be. Economic interests will prevail. Government, which does not tell you about HFCS, will never be a neutral source of information.

Decades ago some agency was regulating the names used for peanut butter. Most such concoctions have little peanut stuff in them, and so must call themselves “peanut spread.” Thus the phrase “peanut butter” assures some minimum peanut content, but how much? Of course manufacturers were asking that the required peanut percentage for the term “peanut butter” be low. Even industry accepts regulation, as long as they control it. I wrote to the agency asking for a phrase that would mean 100 percent peanuts, nothing else. I suggested “old fashioned.” They did not take my advice. Read the label. Do not purchase peanut “spread” at all, or peanut “butter” with sugar or HFCS added. Many grocery stores now have nut grinding machines. You are supposed to be grateful for the “freshness” of the product, although you do not know how fresh the ingredients—the nuts—are. Still, fresh ground is something, and 100 percent nuts is something special. Go for it.

But wait! There’s more! When an ingredient like HFCS is added to a product, it is listed on the label, in order of weight. The listing implies that this ingredient is a sugary corn syrup, and that is all. But suppose HFCS is contaminated with mercury. It may be. There are two methods of making HFCS, one of which uses mercury grade caustic soda, leaving mercury in the final product. It would seem to be easy enough for the government to ensure consumer safety by banning the process that leaves mercury in its wake.

The federal government is already implicated in the high use of HFCS, because only through its activities to increase the domestic price of sugar did manufacturers look for cheap sugar substitutes.²⁵ Although raising the price of sugar assisted sugar farmers, it also assisted corn farmers. Those farmers wanted more, and got it in a mandate to blend ethanol into gasoline,

costing American motorists \$83 billion in higher fuel costs since 2007.²⁶

25 Quotas and tariffs imposed on imported sugar in the late 1970s prompted food manufacturers to begin relying more on corn syrup. Coca Cola and Pepsi both switched from sugar to high fructose corn syrup in the 1980s.. “High fructose corn syrup sales down 11%,” *Chicago Breaking Business*, June 2, 2010.

26 Thomas Pyle, “Ethanol mandate hurts Iowa corn farmers,” *The Hill*, January 26, 2016. How does a costly mandate hurt those it was enacted to benefit? The Renewable Fuel Standard allows other crops to be used as the basis of the bio-fuel mixed with gasoline. The “harm” to Iowa corn farmers is only a reduction in the benefit they are expected to derive from the legislation. Sensationalism, bias in the article’s title.

Thus the government is used by “special interests”—surely sugar farmers and corn farmers fit under this title—to improve their economic positions, at the expense of everyone else. We might be willing to pay this expense—it is a worthwhile political topic—if the government also oversaw production of HFCS, to assure that it did not contain mercury.

A scientist at the Food and Drug Administration studied the presence of mercury in HFCS samples in 2005. Some samples from only certain manufacturers, contained dangerous amounts. Manufacturing processes are proprietary, so the investigation stopped there. The lead author took her study public after she left the agency.²⁷ Knowing that HFCS can be made mercury-free, the FDA could ban mercury in HFCS without specifying the manufacturing process. But it won't.

A Little More About Government

Even if government will never have the expertise to make better decisions than we do, it does have access to the “best” information available. One role for government is inspecting food so that truly harmful ingredients are prevented from being marketed. Another role is recalling faulty products. It does not do either of these tasks well.²⁸ Yet another role is to provide information to the public. If they cannot do that—which often seems to be the case—then the second best task is assuring that producers do. Promulgating and enforcing labeling laws, in short, are proper and necessary government functions. Does providing critical information to consumers hamper capitalist enterprise? It may, and properly so.

I discuss how government functions under the topic “Nutrition,” below. The federal government's advice about what to eat—what a “balanced” diet is—has turned out to be more industry-oriented than health oriented. And now I mention the government's function as insurer that what is sold will not harm us. Alas, government fails in that endeavor, also.

27 Eight of the nine HFCS samples exhibiting mercury levels between 0.065 ig to 0.570 ig mercury/g HFCS were produced by [only] two manufacturers. This could indicate the use of mercury grade caustic soda or hydrochloric acid in the manufacturing processes used by these two manufacturers.

Renee Dufault, Blaise LeBlanc et al., “Mercury from chlor-alkali plants: measured concentrations in food product sugar,” 8 *Bio-Health 2* (2009).

28 See, for example, Jayne O'Donnell, “Pace of food recalls creates risks,” USA Today, December 26, 2017, reporting that the federal recall process for about 80% of the nation's food is so slow it can take up to 10 months to get unsafe products off all store shelves -- even when people are getting sick. Dan Flynn points out that, the position of US Department of Agriculture Under Secretary for Food Safety has been vacant for four years. “The shameful vacancy at USDA,” *Food Safety News*, December 13, 2017.

As in my discussion of coffee, we should be reasonable. We know that most produce is grown in poison—in pesticide soaked soil. I do not know how much of that pesticide remains in the product, how much can be washed off. It is to avoid these pesticide residues that consumers look to organic produce. That is a half-measure or, we might say, a good first step. “Organic” relates to how it was grown, whereas what was done subsequently could be quite as harmful.²⁹

Even if raised on organic feed, meat products can be contaminated by disease. In principle, we have a federal inspection system to keep such food from consumers. First, the U.S. Department of Agriculture is moving from a 100 percent hands-on inspection system to one based on random sampling and electronic inspection. What happens when a sample is found to be bad?

We need a concept of “lots.” A lot might be defined by the farmer and date of arrival of the animals at the processing plant. Two things might follow from finding a defective animal. It could result in 100 percent inspection within that lot, or destruction of that lot. Apparently neither happens now. Only the sample is discarded. Bad meat undoubtedly goes to the stores.

Second, if we are going to automate inspection, it needs to work as well as actual, expert, inspectors.

In 2011, however, the program changed from allowing meat inspectors to decide which carcasses to inspect to a computerized system that set the sampling schedule and recorded results electronically. The system failed repeatedly that year, rendering all data unusable. Inspectors also reported failures in 2012 and 2013 that sent at least 100 million pounds of uninspected meat to market.³⁰

This system should have been an experiment, backed up by 100 percent hand inspection, to determine its efficacy as well as efficiency. Neither apparently was the experiment’s goal. The program was designed to allow producer companies to control inspection, the very process that should be independent.

29 From my own experience as a weaver, let me point out that “organic cotton” is weak. That is why most of it is used in knitting, not weaving. If it is woven, particularly if it is used as warp material, it is probably coated with something (“slashed”) to get it through the weaving process. Then, it is washed, presumably eliminating the coating. Or not. I use Egyptian long-staple cotton, grown with pesticides. But my end product—I know this because it has been tested—is more free of contaminants than products produced from organic or other “clean” cotton. That is, if you do not have complete information about the production process, you cannot trust that information only about the source materials tells you what you want to know.

30 This and the next quotation from Ted Genoways, “Making a Pig’s Ear of Food Safety,” *New York Times*, December 13, 2014.

In fact, over the course of the study, contaminated carcasses were found in the experimental plants at a rate of about five to seven animals per 10,000 processed, with little variation over time. That may sound low, but given the volume of production and the weight of market hogs, it means that an operation the size of Hormel's would "approve" about 4,000 pounds of contaminated pork a day.

If inspection were well done, there would be no need for the government to worry about how a producer like Hormel does its work. If they are required to meet certain standards, they should be allowed to do it any way they can. Regulating the outcome, not the process, would reward innovation. (See my suggestion that mercury in HFCS could be banned, without controlling how to do it.) But large corporations have found an easier way: Get political control of the inspection system and they do not have to meet outcome standards.

Unfortunately, but not unexpectedly, industry stifles the provision of good information by the government to the public.³¹ One example of the importance of labeling laws is that when high fructose corn syrup is present, it is noted—and it is almost always one of the first five ingredients (i.e., one of the most prominent in the mix). The problem is that many members of the public do not know what to make of that information. You do: Don't buy it. Shopping takes longer if you review the ingredients, but I urge you to do it. As in much in this book, you may not be able to manufacture the alternative you prefer. The best you can do is to be an informed shopper. Economic theory assumes that you are. Yet industry counts on your not knowing what they are doing, even if they are required to tell you. And of course they are not required to tell you how many sick pigs or cows were in the lot the animal you are eating came from.

Agave syrup is widely available as a sugar substitute. It has a lower glycemic index number than sugar, but otherwise is not much different, except that it comes as a syrup. I think it is sweeter than sugar, so you use less of it.

When Coca-Cola announced the demise of its standard drink, I bought a six-pack of cans. My first ever. Then, when they presumably brought Coke back, I purchased a six-pack and compared ingredients. This apparent turn-around, this "greatest managerial mistake of all time," was a carefully planned fraud. They changed one ingredient. It's right there on the labels. They substituted high fructose

31 As I demonstrate in almost every chapter of this book, producers do not seek correct information themselves, nor do contractors provide it. Mike Adams notes that "many commercial labs that cater to food companies are in the business of producing artificially low metals test results because that's precisely what their customers want to see." *Food Forensics*, BenBella Books (2016) at xvi.

corn syrup for sugar.³² That is why they had to retire “Coke” and bring it back not as Coke, which it wasn’t, but as a modern version thereof, “Coke Classic.” That whole turmoil about ceasing production of Coke and then, oh my god, what have we done, admitting their “error,” was a contrivance to change the formula. The sugar was bad enough. Now they give us HFCS.

Either is bad. The city and county of San Francisco enacted an ordinance (in June, 2015) that would force beverage providers to warn consumers about the health effects of some sweet beverages, in some specified forms of advertising. The American Beverage Association, and others, sued. One of their arguments is familiar from the tobacco industry defense of smoking, that

there is still debate over whether sugar-sweetened beverages pose unique health risks.³³

It is in the industry’s benefit to sponsor expert-looking research that concludes that sweet drinks are not harmful. What court will read the conflicting research and determine that “studies” supporting the beverages are phoney? No, the court will conclude that “there is still debate.”

The industry’s suit to enjoin the government from enforcing its ordinance failed at the district court level, but succeeded at the Ninth Circuit.

We conclude that the factual accuracy of the warning is, at a minimum, controversial . . . The warning provides the unqualified statement that “[d]rinking beverages with added sugar(s) contributes to obesity, diabetes, and tooth decay . . .” and therefore conveys the message that sugar-sweetened beverages contribute to these health conditions regardless of the quantity consumed or other lifestyle choices.

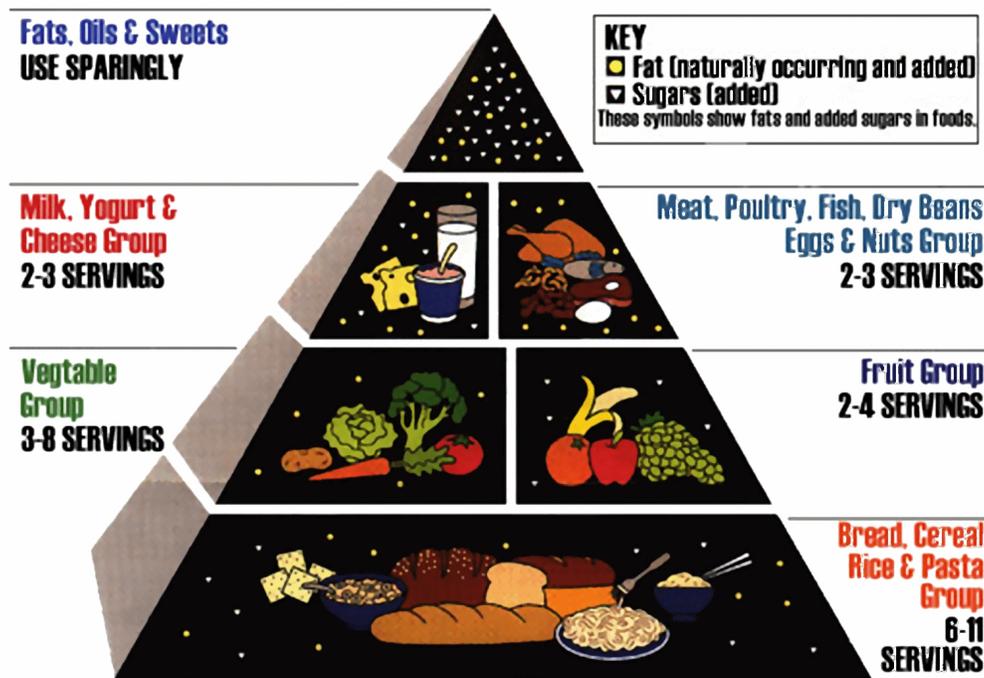
Given the lack of expertise within government, it is hard to know what to make of the fact that courts restrain what government wants to tell consumers about products. This ordinance might have been acceptable had it covered other foods, not just beverages, and had it warned against *over*-consumption of sugared products, not just consumption. Maybe the Ninth Circuit is right to limit government warnings of this type, on products. They cater to an uninformed public. I would rather these topics be taken up in public schools—warning students to be smart consumers, that what they see and hear is dominated by financial interest, not truth.

32 Why? Because in the United States sugar was, and still is, regulated to sell at above the world price. Outside the U.S., Coke is still made with sugar.

33 *American Beverage Association et al. v. City and County of San Francisco*, (9th Cir., 2017), p. 20

Nutrition

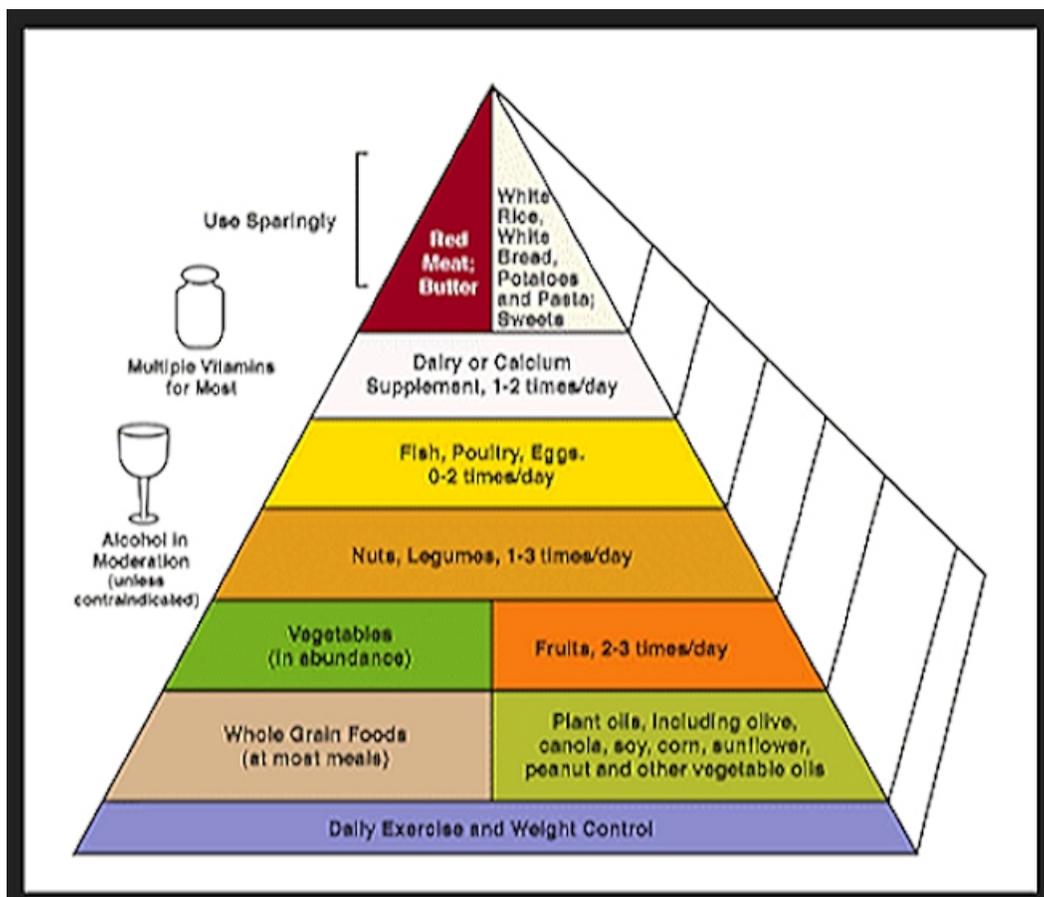
We care about nutrition because we care about our bodies, the carriers of our brains. No matter how “alert” your brain is, perched atop a deteriorating body it will focus on that deterioration, and deteriorate itself. Older people take to walking the dog, hiking, swimming. Bethanne uses a Gazelle, a machine in which you “walk” without lifting your feet. I have no data and have seen no study asking whether the Gazelle does you any good; but, like a stationary bicycle, like a Nordic Track, it does allow one to exercise without impact. Decadent, yes. But illustrative of the fact that even we older people like to have (and need) some physical activity. Our bodies count, and so we look for nutritional advice.



The U.S. Department of Agriculture (USDA) devised a “food pyramid,” but over the years has told us different stories about what it looks like. The one above is from 2005. It was declared obsolete in 2011. In it, bread, cereal, rice and pasta are all substitutes, the foundation of good nutrition. I do not think so. Multi-grain breads are surely better than those made with white flour, as sourdough leavening is better than packaged yeast. Michelle Obama thinks the government should be giving good advice on nutrition, and enforcing it, whenever it is providing the funding. Can it? Can government ever advise correctly about anything, when its advice has economic consequences? Where will it get that knowledge? From “experts”?

The notion that fats produce fat, and are therefore to be avoided, was promulgated by Ancel Keys in the 1950s. Although proclaimed as the product of scientific study, it was not.³⁴ It was the product of faulty reasoning. In 1957 the American Heart Association renounced that theory, but then reinstated it a few years later, when Mr. Keys himself was on the relevant committee. It was then taken up by Surgeon General C. Everett Koop, who in 1964 lambasted Americans for eating too much ice cream. That line of thinking, and the “experts” who followed it, led to a previous but equally faulty pyramid.

Professor Walter Willett, upset by that previous pyramid, devised his own.³⁵



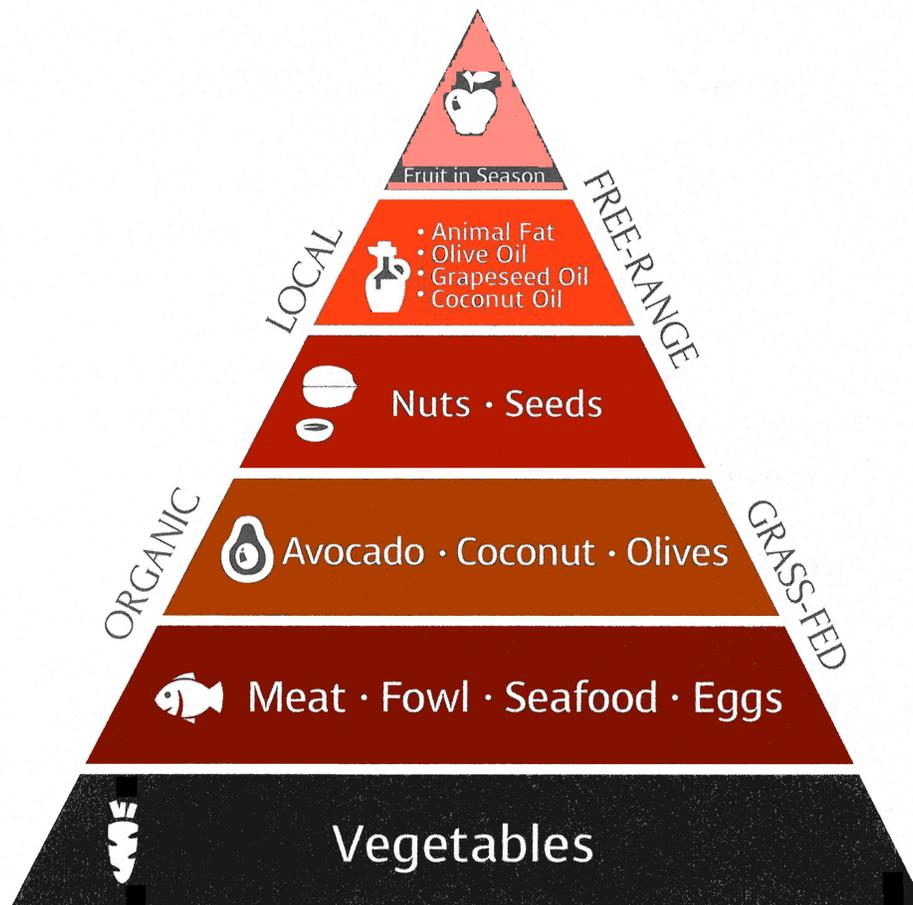
34 Keys organized the “Seven Countries Study,” which still lives as a web site of that name (without spaces). It was written up by many people, one of the earliest being Keys, Aravanis, Blackburn, Buzina, Djordjevic, Dontas, Fidanza, Karvonen, Kimura, Lekos, Monti, Puddu, Taylor: *Epidemiological studies related to coronary heart disease*. (Characteristics of men aged 40-59 in Seven Countries.) *Acta Med Scand* 1967. Among that many co-authors, one might have thought that someone would notice that Keys chose seven countries to study, out of 22 for which comparable data were available. Or that one could have chosen a different seven and come to completely different conclusions. See Chapter 14 of this book, on Science, for another but similar co-author story.

35 Walter C. Willett, *Eat, Drink, and Be Healthy* (Simon & Schuster, 2001).

The difference from the government's pyramid to this professor's pyramid is striking, not just in detail, but in concept. What to the government is the base, the starting point (bread, cereal, rice) is what Willett says, along with red meat, "Eat Sparingly." Willett would start with exercise and weight control, perhaps strange in a food pyramid, but not out of place for someone whose goal is health.

Dr. Jack Wolfson, a reformed cardiologist, also devised a pyramid. In text he also starts with exercise, but limits his pyramid to food. Although a medical doctor, he warns:

The opinions in this book are not in agreement with the American College of Cardiology, the American Heart Association, or any other organization with financial ties to Big Pharma and corporate America. Let the reader beware.³⁶



THE DRS. WOLFSON PALEO PYRAMID

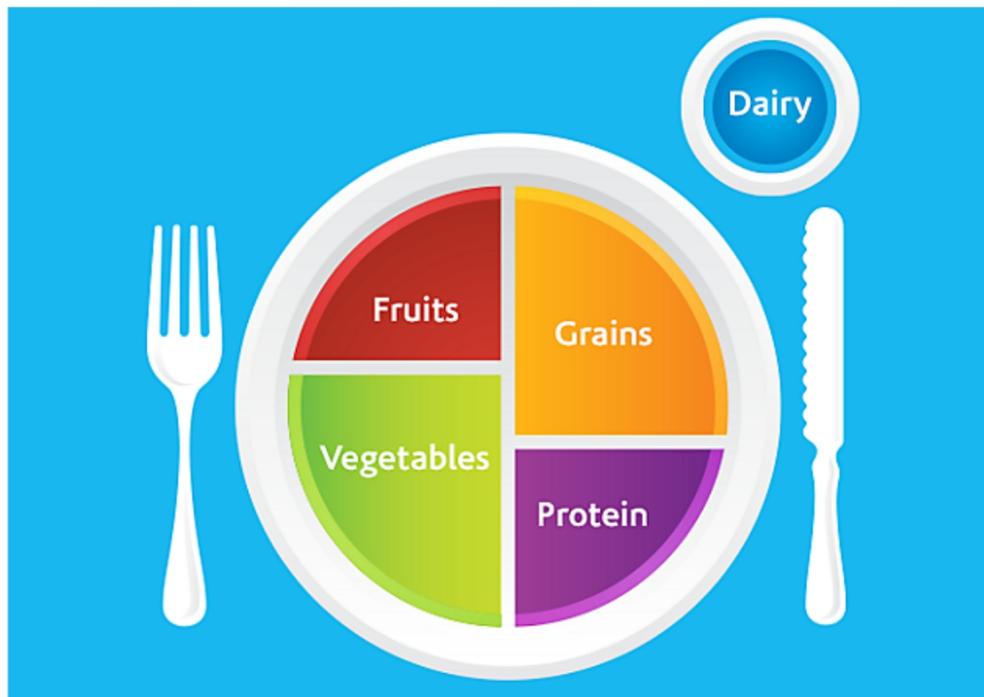
36 Jack Wolfson, *The Paleo Cardiologist*, Morgan James Publishing (2015) at xv. His pyramid, on page 23, is in black and white—the colors are mine. Wolfson's information and opinions are consistent with Johnny Bowden and Stephen Sinatra, *The Great Cholesterol Myth*, Fair Winds Press, 2015.

Although the book has a single author, Wolfson practices with his wife as The Drs. Wolfson. They argue for a Paleolithic-era diet, claiming that humans were healthier then than now. We will see shortly that they are not alone.

The government pyramid, above, and the dinner plate that replaced it, below, are meant to be only rough outlines.³⁷ Still, more than a decade after Willett's Pyramid, and compared also with Wolfson's, the government's recommendations seem bound by commercial lobbies (such as bread companies), not by science. Wolfson concludes:

The only thing the government Food Plate gets right is recommending many servings of veggies per day.³⁸

Most web sites that start with a hierarchy of food types go on to provide recipes and menus. Then there are the various diets—sponsored by doctors—because we have this notion that you have to be licensed to provide information.



The Federal Government Dinner Plate–2015

That is, you need credentials. Even Adelle Davis, guru of nutrition, had a Master of Science degree. Did she know less than doctors? I do not think so. More

37 U.S. Department of Health and Human Services. (2015). *Dietary Guidelines for Americans*. Washington, DC: U.S. Government Printing Office. <http://health.gov/dietaryguidelines/2015/guidelines/>

38 Wolfson (2015) at page 25. He calls the initial food pyramid “moronic” at 50.

than thirty years after her death, she remains a good read, and the information she imparts still seems sensible. Perhaps she wanted a credential to get more of an audience, but I do not think that credential was the source of her expertise.

Similarly, my Taiwanese physical therapist Spencer Liu has a United States degree and license. He plays the game they make him play, and then utilizes the skills he gained elsewhere to do his work.

In this society we are treated with pictures, not words; with conclusions, not concepts. The shift from a pyramid to a plate occurred in the government's 2010 presentation. The only difference in 2015 was the addition of the knife. Will a spoon be next? Assuming that one's beverage is dairy may disappear in 2020, with the increase in soy, almond, flax, cashew and other nut- or seed-based "milk" products. Also, in 2015, the text for the first time did not disparage coffee. Dessert, apparently, is unhealthy no matter what it is made of. Maybe that is why there is no spoon.

What economic interest convinced the Department of Agriculture to list "protein," not "meat or fish," not "appropriate mixes of vegetables?"³⁹ If four compartments neatly make 100 percent, what percent is dairy? Where are herbs and spices?

They contain tremendous antioxidants and nutrients that protect against heart disease, cancer, and brain disorders, Many spices are antimicrobial and fight bacteria, viruses, candida and other yeasts, as well as parasites.⁴⁰

Are all grains equivalent? People who cannot tolerate gluten do not think so. I am sure the government thinks it is doing a good job at this, giving us better pictures over time, but I have my doubts whether this is really a good expenditure of the peoples' money.⁴¹

39 In 2015, the advisory committee for federal dietary guidelines urged a shift away from meat and toward a plant-heavy diet that is "more health promoting" and "associated with lesser environmental impact." The meat industry's friends in Congress made sure the environmental precautions were left out of the final guidelines.

Maddie Oatman, "The Case for Lo Pro," 41 *Mother Jones* 5, September/October 2016 at 67.

40 Wolfson (2015) at 39.

41 In the *Scientific Report of the 2015 Dietary Guidelines Committee*, January 28, 2015, we read that these guidelines "have provided science-based advice on promoting health and reducing risk of major chronic diseases through a healthy diet and regular physical activity." But previous guidelines have *not* been "science based." The Committee seems unwilling to admit or tell us why they have been wrong. See Nina Teicholz, "When the Government Tells You What to Eat," *New York Times* February 20, 2015. See also Steven E. Nissen and Nina Teicholz, "The Food Pyramid Scheme," *Wall Street Journal*, January 28, 2016,

Besides Adelle Davis, there have been other health gurus. Carlton Fredericks, for decades, gave us practical advice on the radio. Now it appears that the Adkins diet, which shuns the carbohydrates that sit on the bottom of the government's 2005 food pyramid, really is good for you. Carbohydrates really are bad. However, there is no single "Adkins Diet," so it may be a good place to start, but it is not the end.

What About The Paleo Diet?

I imagine who we were, homo sapiens, coming out of the trees, walking upright. What did we eat? Fruits and berries and nuts, I think. And animal protein. So I have always tried to eat fresh fruits, berries, and especially nuts, because they would have lasted through the winter. That is what we evolved to eat. Unfortunately, I eat many peanuts, which are not nuts—they are legumes. Some so-called experts say they are not good for you. Oh well, to err is divine. However, I expect "knowledge" to catch up to the obvious, and eventually praise my peanut consumption (with minimal salt, of course). Those who lived near water surely ate raw fish. Hundreds of thousands years later we acknowledge this as a healthy diet.

Some hominids learned to cook. If brain size relative to body size is a measure of intelligence—of the capacity to become the incredible creators humans became—it is now thought that cooked food is the answer.⁴² Humans have more waking hours in a day than, say, cats, but it is our ability to find, cook and consume food and have time to spare—time to create—that surely sets us apart. Then, 10,000 years ago or so, we started deliberate agriculture. And, later, agriculture became corporatized, which means the point was to make profit, not food.

After World War II, with soldiers returning from abroad and a general boom in the domestic economy, the beef industry changed. Soy and corn replaced grass as cow feed. Cows did not have to follow the agricultural cycle to reproduce. The meat tasted OK, but it no longer provided the nutrition consumers expected. Did the government know and not tell us? Or did they just not know?

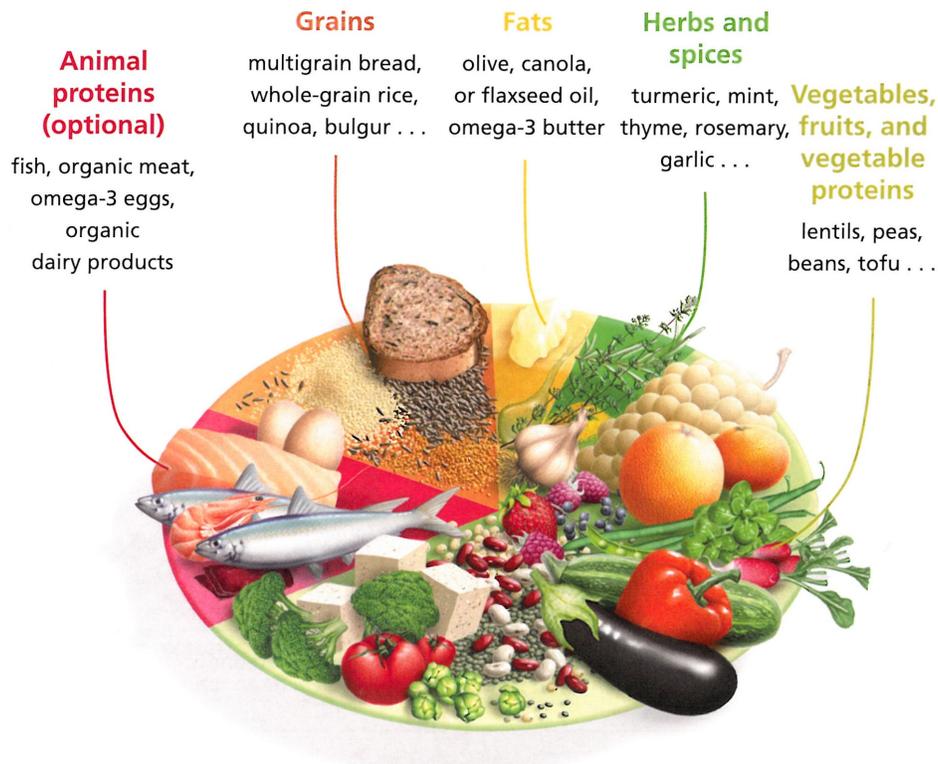
Some ranchers knew the difference, and persisted in raising their cattle on grass. Michael Pollan discovered this change in technology, and its consequence. Alice Waters, the famous west coast chef, after hearing Pollan talk about it, directed that her restaurant would no longer serve any beef but grass-fed. By the second decade of the 21st century there were a few grass-fed farms, and a loyal consumer base generated by co-ops, groceries like Whole Foods and Earth Fare, and a general spread of knowledge about food to people who cared to know.

42 Richard Wrangham, *Catching Fire: How Cooking Made Us Human*, Basic Books (2009).

Next in this capitalist adventure will come a form of branding, a special meat section for “grass-fed” beef in otherwise unremarkable stores.⁴³ Ultimately, some people will proudly announce that capitalism works, as it brought back healthy meat. They will not talk about the many decades during which cattle raisers polluted their product for the sake of profit, and the government did not even pass that information on to consumers.

Although the west is new to eating raw fish—coming from contaminated oceans, it is not clear that we should—it is not at all a new food source to humans. This does not seem difficult to grasp: our bodies evolved over millennia, whereas manufactured would-be food has evolved only over decades.

Anticancer Plate



My speculations on evolution have no better a basis than Ancel Keys' speculations about the origin of what he saw as a heart disease epidemic (likely

43 Regular grocery stores now carry “organic” products, but with meat, organic is not sufficient. In western North Carolina one looks for “Hickory Nut Farm” beef, which sells for \$2 a pound more than other beef, but is local and grass-fed. In 2016 Sam’s Club started carrying grass-fed ground beef. For a more general picture of the rise of the industry, with its branding ambitions, see Kathryn Shattuck, “Where Corn Is King, a New Regard for Grass-Fed Beef,” *New York Times*, June 18, 2013 page A11. The “Where Corn Is King” title comes from raising grass-fed beef in Nebraska.

caused by people living long enough to have it). Deducing what is good for us from our evolution is not original, and is rejected by some so-called experts. The experts who have consistently been wrong, whose pyramids and plates constantly need revising. Can't we have real research on this topic?

Decades ago an “exchange” arithmetic was developed by which one could alter one's diet, maintaining certain “values” that were supposed to lead to reduced weight. I was shocked to see how few peanuts were allowed in one exchange one of my nieces made. I think the metrics were all wrong. Walnuts are better, and almonds, but the only reason to restrict nut intake is if they are salted or cooked in oil. Buy unsalted dry-roasted nuts and eat as many as you want.

It is not surprising to find that a basic diet concept that does not emanate from a political environment has a different feel. Above is “The Anticancer Plate” from David Servan-Schreiber's book:⁴⁴ Servan-Schreiber might have put a cup of green tea next to his plate. He recommends several cups of green tea each day, each steeped for ten minutes; but he does not mention nuts, positively or negatively. Some people would put a glass of red wine next to their plate. Resveratrol, a natural phenol found in grape skins, we were told, is life preserving. Until a study published in an authoritative journal told us is isn't.⁴⁵ What can we believe?

More research is necessary to develop additional “plates”—ingredients specific to combating certain maladies, like cancer or heart disease. Such concepts of diet would be more helpful than generic plates. People will change their eating habits to prevent something in particular, or to ameliorate something they already have.

There are “back to the land” movements all over the world, as people figure out that industrialization has processed the goodness out of foods. In England, for example, some people went “back” to the land on small islands, found dairy herds the only productive enterprise there, and started making splendid cheeses. However, civilization would dissipate if we all tried to live off subsistence farming. The market system is a true marvel. Most cities have “farmers markets” where residents can get fresh foods. Health “professionals” were not in the lead on these fronts. We, the eaters, have to become expert because the mass producers and distributors will not. “Experts,” including doctors, seem to have little to say about staying healthy.⁴⁶

44 This is a scan from “Anticancer Action,” an insert in Servan-Schreiber's *Anticancer* 2nd edition (2010).

45 Richard D. Semba et al., “Resveratrol Levels and All-Cause Mortality in Older Community-Dwelling Adults,” *JAMA Intern Med.* 2014;174(7):1077-1084. doi:10.1001/jamainternmed.2014.1582.

46 The federal government established PCORI—Patient-Centered Outcomes Research Institute—in 2010. Sounds good. But it is not a place where natural, low-cost “medicines” are evaluated. Nor are

We do have some writers on the subject. Here, for example, is Michael Pollan's description of those moving towards better health through better eating:

One of the most interesting social movements to emerge in the last few years is the "food movement," or perhaps I should say "movements," since it is unified as yet by little more than the recognition that industrial food production is in need of reform because its social/environmental/ public health/animal welfare/ gastronomic costs are too high.⁴⁷

In 2008, in an open letter to whomever might win the presidential election, Pollan recommended that some of the White House lawn be turned over to an organic farm.⁴⁸ And then, under Michelle Obama, it was! One can see that as a token of no practical importance, or as part of the consumer education that is necessary to change the food-production system. Perhaps Michael Pollan is the expert we have been looking for.

However, at the end of the Obama presidency, Pollan returned to the pages of the *New York Times* to tell us the larger implications of his 2008 letter and the Obama organic vegetable garden.⁴⁹ It is not a pretty picture. Big Food is in command, and our health is not its primary concern.

Before Agriculture

In a popular book, Jared Diamond argued that one of the reasons for the rise of western civilization was the broad array of plants available at the latitudes where people flourished, from which only a few turned out to be able to be "tamed" (my term), modified, turned into reliable, cultivatable food.⁵⁰ Those few, through careful selection, have turned out to become wheat, rice, potatoes, corn and, in general, the vegetation that we eat.

It is curious that, although most people accept Diamond's conclusions about how agriculture became the backbone of industrial society, he himself had penned a contrary view:

pharmaceutical data sets retrieved and re-evaluated from a patient (cost and benefit) perspective. It is, rather, a typical over-staffed government enterprise, in which "experts" will tell us what they think they know, but don't.

47 Michael Pollan, "The Food Movement, Rising," 57 *New York Review of Books* 10, June 10, 2010. (This article is available from Michael Pollan's web site, but it is listed there with the wrong date.)

48 Michael Pollan, "Farmer In Chief," *New York Times Magazine*, October 12, 2008, at MM62.

49 Michael Pollan, "Big Food Strikes Back: Why Did the Obamas Fail to Take On Corporate Agriculture?" *New York Times*, October 5, 2016.

50 Jared Diamond, *Guns, Germs, and Steel: The Fates of Human Societies*, W. W. Norton (1997)

. . . recent discoveries suggest that the adoption of agriculture, supposedly our most decisive step toward a better life, was in many ways a catastrophe from which we have never recovered. With agriculture came the gross social and sexual inequality, the disease and despotism, that curse our existence.⁵¹

Diamond provides evidence that as agriculture replaced hunting and gathering, the health of humans declined: There was more disease (brought about perhaps by the rise of cities which could not have occurred without increased agricultural production), people were shorter, and worked more hours in a day.

He has been joined, recently, by James Scott. Rather than congratulating ourselves on our advancement, Scott wonders why we abandoned the hunter-gatherer life.⁵² It is generally agreed that humans turned to agriculture around ten thousand years ago, maybe elsewhere, but specifically in Mesopotamia, between the Tigris and Euphrates rivers. Agriculture, and its characteristic of geographic stability, raised issues humans had not dealt with (at least not well) before. One of these was garbage and waste disposal; another was disease, which followed. Another was government, how to deal as a unit with humans in a different unit, how to deal with property, etc. Government thrives on agriculture, because, as harvest occurs at a certain time, it is easy to measure, hence, to tax.

Settling down into city-states was not the great advance we are taught in school.

Virtually every infectious disease caused by microorganisms and specifically adapted to *Homo sapiens* has arisen in the last ten thousand years, many of them in the last five thousand years as an effect of 'civilisation': cholera, smallpox, measles, influenza, chickenpox, and perhaps malaria.⁵³

One letter writer suggests that "the old guys, often in positions of authority as sages, shamans or just family patriarchs," dominated the choice of a sedentary life, which also resulted in increased fecundity. Another wonders why people started to eat grain which, growing wild, hardly looked like a source of food. There are indeed a lot of questions about both how we evolved, and why.

51 Jared Diamond, "The Worst Mistake in the History of the Human Race," *Discover Magazine*, May 1987, pp. 64-66. Although the magazine bears the date 1987, the article itself, retrieved from the internet, bears the date May 1, 1991. Huh?

52 James C. Scott, *Against the Grain: A Deep History of the Earliest States*, Yale (2017). Jack Wolfson, in *The Paleo Cardiologist* (cited above), at 44, says this is where the human race "went wrong."

53 Steven Mithen, "Why did we start farming?" review of Scott's book in *39 London Review of Books* 23, November 30, 2017.

For us, however—having mastered (in theory) the garbage and waste disposal issue, and presumably winning the war against disease—the question is what we do with the knowledge we now have that not all evolutionary turns have been beneficial to us as a species. I think looking at transition states is a poor way to assess whether the future state is better than the past state. Diamond acts as if what was had to be, and concludes that the problem is agriculture itself. Scott and Wolfson may be less dogmatic, but, like Diamond, they miss the point.

Developing crops, rather than finding them in nature, could well have become all that we think it is. Rather than everyone looking for food, some specialize in growing it. Specialization leading to expertise is not a bad thing, if it is directed toward good outcomes. If the outcomes have been bad—if agriculture produces the wrong diet for humans—we should ask *how* that came about, not conclude that division of labor, or a particular technology, was the cause.

As I have described above, and will below in other areas, the economic power of business interests (here, agri-business) have dominated the regulatory requirements of good government. Those who proclaim that “the market” will produce the best solutions should seriously consider the bad agricultural solutions that the “market” *has* produced. Diamond’s essay and Scott’s book would help in making this assessment, but not in asking the political question: Why did civilized, governed society allow commercial interests to so over-ride human interests?

Decades after Diamond’s article, Brian McElroy wrote a response.⁵⁴ McElroy asks what is the point of Diamond’s theory, as we cannot possibly go back to a pre-agricultural society. Changing the topic is not a contribution to a debate. Of course we cannot go back, nor should we. But if agriculture *as it has evolved* harms us as much as it feeds us, we can learn how it does that, and why it does that, and try to devise alternative institutions to change it. McElroy, saying that learning cannot lead to action about the past, ignores the future.

One thing we can do is the Paleo-diet, which tries to emulate how humans ate before there was agriculture. Elizabeth Kolbert brought her family through one week of such food, to no apparent ill effects.⁵⁵ She adds to Diamond’s evidence that pre-agriculture humans were healthy, that the height and weight we have added recently—now eclipsing the sizes of earlier humans—are not signs of health, but of

54 Brian McElroy, voices.yahoo.com/jared_diamonds_worst-mistake_202780.html. This url no longer works.

55 Elizabeth Kolbert, “Stone Soup,” *The New Yorker*, July 28, 2014 starts at 26. Carolyn Dean, in *The Magnesium Miracle*, asserts that the Paleo diet is deficient in magnesium.

oncoming disease. Like her predecessors (Diamond and McElroy), Kolbert does not deal with the lessons we might learn, particularly about how decisions are made in this post-Paleo society, and why they have turned out to be bad decisions if the metric is human health. And why we are still making them.

Let Them Eat Grass

A lot of things changed after World War II. The United States became the predominant military power on the planet, and then wasted its strength in Korea and Vietnam. Not learning its lessons, it has continued to fight senseless wars in Afghanistan and Iraq. Although, as measured, we are the wealthiest economy in history (but not the healthiest), the measures are misleading.

Suppose we substituted bad food for good food. Suppose that bad food makes us feel good for some time, and then leads to diseases. Suppose, finally, that there is no outward sign that the new food was “bad.” It tastes just like the “good” food we used to eat, but is plentiful and historically inexpensive. We would not, as a civilization of reasonably smart but inexpert people, associate the later diseases with a “badness” in our food that we could not taste. At least we would not do so quickly, and many would not believe the conclusions of the real experts who figured it out. Besides, we do have a Food and Drug Administration to protect us, don’t we?

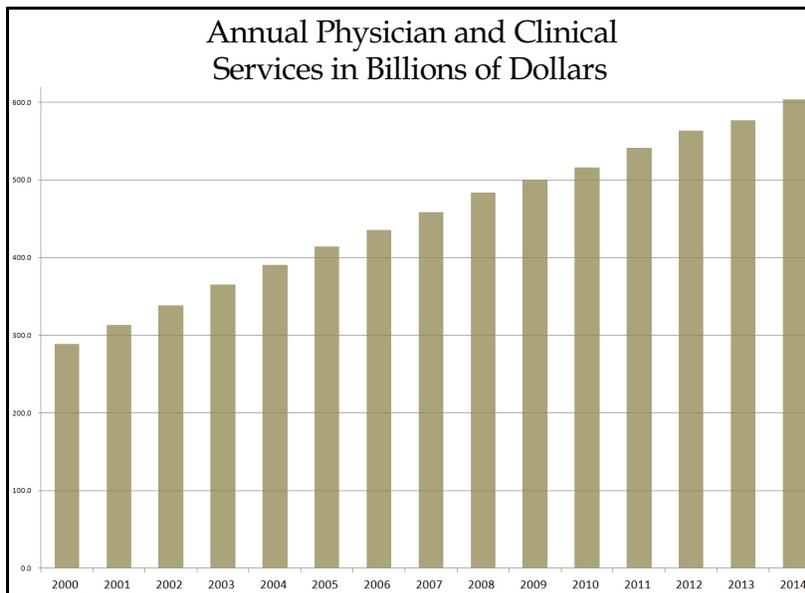
After World War II farmers, raising cattle and pigs, substituted soy and corn for grass. Grass is really only available in the spring and summer, when cattle will naturally give birth. With the rise in demand for meats and milk, and the rising price of land, substituting storable grains for grass allowed animals to be fed and born and raised independent of the seasons. Cattle were bred for docility and taste. Chickens were fed marigolds to give their flesh more color, just as farm-raised salmon, naturally grey, are dyed pink. The meat industry boomed.

Both the demand and the supply of medical care increased. Even though most people find the need for medical care to be a negative aspect of their life style and an absorber of their income, it is as much a part of the Gross Domestic Product (GDP) as automobiles and food. If we eat more meat because it is produced more cheaply, the result is an increase in “income.” If that meat lacks certain ingredients, because the constituents of feed have been changed, we require more medical care. And that increases “income” (GDP) even more!⁵⁶

56 See Philip Lymbery with Isabel Oakeshott, *Farmageddon: The True Cost of Cheap Meat*, Bloomsbury (2014).

The Centers for Medicare and Medicaid Services (CMS) is charged with collecting and disseminating health care data. In 2014, the latest information they provide is for 2013:

In 2013 U.S. health care spending increased 3.6 percent to reach \$2.9 trillion, or \$9,255 per person, the fifth consecutive year of slow growth in the range of 3.6 percent and 4.1 percent. The share of the economy devoted to health spending has remained at 17.4 percent since 2009⁵⁷



In 2016 the 2014 figures are available. They are similar, health expenditure rising to \$3.0 trillion, or \$9,523 per capita. Thirty-six percent of that total expenditure is made by Medicare and Medicaid combined. The restriction on Medicare Part D, that it cannot negotiate the price of drugs, is an example of government catering to industry rather than

humans. Why are the “free market” (“right-wing”) politicians united in preventing a single-payer system for a government sponsored health system?⁵⁸ Why have they tried, in the “Ryan Plan,” to destroy the federal system in favor of private insurance? And, finally, why is drug money and physician money behind all of this?

Medicare reduces fees for service. Doctors don’t like it, and who can blame them? But I do not see doctors faring badly in the income wars, even though, it is true, they do not fare as well as much less deserving investment bankers. Doctors want to be as free to steal from us as bankers, a reasonable desire given that we not only let the bankers do it, we rescue them when they do it badly.

57 <http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/downloads/highlights.pdf>

58 Paul Krugman, “Where Government Excels,” *New York Times*, April 10, 2015: Internationally, the American health system is unique in the extent to which it relies on the private sector, and it’s also unique in its incredible inefficiency and high costs.

Unfortunately, all of that debate misses the point. The food we eat is deficient, which leads to illness and a demand for medical care, much of which is drugs. Yet our measure assumes that all of these transactions are positive. When soy and corn were substituted for grass, we ended up with more Omega-6 fatty acids, and less Omega-3. Both are essential, but so is their balance. That balance has been upset, leading to bad health consequences.

It is therefore not sufficient to drink organic milk and eat organically raised beef, because both the milk cows and those slaughtered for food may have been corn and soy fed. The purpose of this book is not to tell you to find grass-fed beef, milk, and even cheese; it is to illustrate how complicated this all is.⁵⁹ Most importantly, my goal is to point out how your experts have failed to provide you with this information. Meanwhile, your government has been complicit both in this decline in food quality and in failing to disseminate information about it.

It would be splendid if this material were taught in high schools throughout the land. High school graduates should understand how changes in food (corn syrup for sugar, soy and corn for grass) have affected health. Discussions about health should start by asking who controls our food, and our environment; on what basis have decisions been made, etc. Other than corporatized agriculture, there are few villains in this tale. Why would a farmer not switch to less expensive and seasonally independent feed, especially if told that there were no health consequences? And especially if he *saw* no health consequences in his animals?

Why would a farmer not use the latest pesticides on his fields? The representative from the USDA tells him it will increase his productivity, and it seems to do so. So does plowing a deeper furrow with the latest tractor, available for purchase over time. Then the farmer receives an offer to sell his farm for far more than his income from it would value it. Is he wrong to sell? The result is huge corporate farms that are managed by people who are good at numbers, even if they understand little about land, and less about food.

These numbers represent only internal costs, but not those costs (such as water and air pollution) that the farm passes off to everyone else. A good starting point for government regulation that would benefit citizens, not corporations, would be to demand that all costs of production be borne by the producer.

59 Mark Bittman, for example, says he is interested more in “well-raised” than organically raised meat. See “A Better Pig,” *The New York Times*, July 11, 2011.

Why is government regulation not organized around this principle? As they get larger, these corporate farms gain political power. Farming may, by any sensible measure, be worse. It may more expensively produce poorer quality food. But “experts” value enterprises by their profit. That measure seems to indicate that the system has worked well. Rather than being slaves to a measure, we should question the measure when it contradicts other evidence, including the public good.

OK, But Why?

The farmer who adopted pesticides to increase his productivity was provided incorrect information. The so-called experts on whom he relied were not only wrong, but were going in the wrong direction. Using modern tools to do what humans have been doing since the start of agriculture, developing new strains, cannot be bad in principle. Telling us not to consume products of “GMO” technology, which many “progressive” organizations do, is foolish. It is not our ability to make new strains that has created problems. It is the particular new strains that have been created.

That there can be good uses of GMO technology is illustrated by the development, in Kansas and Minnesota, of the grain Kernza. One issue with wheat production, one that especially brings profit and opportunity for new strains to seed companies, is that wheat is an annual. It must be planted each year, which involves tilling the soil, which creates problems in releasing carbon into the air and inducing topsoil runoff. For some decades farmers have sought a perennial grain that holds its seeds until they are picked by humans (or their machines). Kernza may be the answer.⁶⁰

GMO as practiced by seed companies has not only not improved agriculture, but has been performed without any consideration of a larger concept, including harm to the land, to animals, to humans. Where did it all go wrong?

There are two answers. One is that corporations do not take this large view. Some would argue that they should not, that corporations exist to create and enhance shareholder value. In that model of how the economy works, we need some actor that is responsible for the larger picture, and has the authority to do something about it. This is a dilemma: It is the political right that tells us that innovation comes

60 See Madeleine Ostrander, “Hacking The Grain,” *The Nation*, October 30, 2017. In describing the work of the University of Minnesota plant geneticist, Ostrander avoids the term “genetic manipulation.” He plotted out pieces of their genetic code [which] helps the breeders put together a set of statistical predictions about which plants will be the hardiest and best-yielding . . .

Those that score highest will be replanted. This is GMO as it should be.

from corporations (well, from companies, but it is the corporate structure that limits individual liability when the corporation is found to have done harm). But that same political view tells government to lay off, get out of the way. I see essentially no role for government in the 21st century version of “conservative” politics. That leaves corporations free—indeed, required—to pursue their own interests, with no institution to represent society’s interest in such things as clean water and long lives not polluted by the food this structure produces.

Jeffrey Smith describes the development of the “Flavr Savr” tomato,

the very first GM food crop to be consumed in the US. It was arguably the most radical change in our food in all of human history. . . . placed on the market without required labels, warnings, or post-marketing surveillance.⁶¹

Not only had the Food and Drug Administration been “officially mandated with promoting biotechnology,” which seems like an odd mandate for an agency whose purpose is to protect the public, it

bent over backwards to push GMOs onto the market. As a result, their evaluation was woefully inadequate.

Were government evaluators not up to the job?

FDA scientists had repeatedly warned their superiors about the serious health risks of genetically modified organisms [GMOs]. They were ignored by the political appointees in charge, who allow GMOs onto the market without any required safety studies.

We can understand that people need shortcuts, simple phrases that distinguish “good” from “bad,” that say “buy this” and not “that.” But if such a phrase does not contain a clue to the problem, those who advocate solutions will not find an audience. “Do not buy GMO,” the shortcut, confuses GMO, the process by which we modify agriculture, with the role of government, which is to see that such modifications are safe and perhaps even progressive.

GMO is simply the way major corporations, most notably Monsanto, go about changing agricultural outcomes. As a process, it is not harmful. Unfortunately, most of what we know as its results are. As a mantra, avoiding GMO is the wrong lesson to learn. The problem is corporate dominance over the very government agencies that should be forcing GMO to be of benefit to mankind. Solutions, we are told, should

61 Jeffrey Smith, “Throwing Biotech Lies at Tomatoes,” *The Huffington Post*, December 31, 2010. More from Smith can be found at <http://www.responsibletechnology.org/blog/552>.

be directed at eliminating the “political appointees in charge.” No. The solution is to empower them. If FDA scientists are experts, we should let them do their job.

Slowing Down

I do not think the fact that much of our food consumption is “fast” is as much of an issue as it is made out to be. Sure, a lot of fried potatoes cannot be good for you, but I do not see why whether your hamburger is cooked in a fast food place or on your own stove makes much difference if it is imbalanced meat. What counts is what is in that hamburger. That is Omega-6, not Omega-3.

Decades ago, my friend Mark Zanger praised a bacon substitute in an article in the Boston *Phoenix*. Oh, the reaction! Did he not know that he had called a soy product superior to the meat product; that is, something second rate over something first rate, an imitation over what it is imitating? In his reply, he tried to educate. Real bacon contains nitrites and other preservatives, as well as soy-fed (Omega imbalanced) pig meat and fat. The substitute is a vegetable—processed, yes, but not toxic. I do not know how many other people paid attention to this answer.⁶² After all, Zanger (the model for, Zonker in Doonesbury) is not a recognized “expert.” But he knew what he was saying.

We have this class of people we look to for advice on food. They are called cooks, or chefs. They thrill us with their combinations and methods, on TV and in books. Many are expert at what they do, but they cook for looks (“presentation”), smell and taste, not health. Other so-called experts, called “nutritionists,” are neither better informed nor immune to corporate domination and corruption.

As with farmers, we should question their expertise, not their motivations. The *New York Times* did so, although this is not what they claimed to be doing, in 2016. They compared opinions of nutritionist “experts” with those of a sample from “the public.”⁶³ The differences between these groups were interesting, but so was the lack of uniformity of opinion among “experts.” Let’s start with those foods considered healthy by the public, but not by experts:

62 Michael Pollan did not. One of his “Food Rules” is to avoid “textured vegetable protein,” which may well be better for you than the meat it is posing as.

63 Kevin Quealy and Margot Sanger-Katz, “Is Sushi ‘Healthy’? What About Granola? Where Americans and Nutritionists Disagree,” *New York Times* (The Upshot) July 6, 2016.

Foods considered healthier by the public than by experts

Percent describing a food as "healthy"	Nutritionists	Public	Difference
 Granola bar	28%	71%	43
 Coconut oil	37%	72%	35
 Frozen yogurt	32%	66%	34
 Granola	47%	80%	33
 SlimFast shake	21%	47%	26
 Orange juice	62%	78%	16
 American cheese	24%	39%	15

but when the juice is stripped from the pulp, it is mostly sugar. That sugar, in fact, ~~expert~~ nutritionists do not consider orange juice healthy. Orangers are; encapsulated in other plant material, is digested slowly, but when released from that other materikal it is digested quiuckly, the same as if it were the sugar in a soft drink. Otherwise, one sees here the results of advertising, food producers telling the public what is "healthy," and the public believing them

Foods considered healthier by experts than by the public

Percent describing a food as "healthy"	Nutritionists	Public	Difference
 Quinoa	89%	58%	31
 Tofu	85%	57%	28
 Sushi	75%	49%	26
 Hummus	90%	66%	24
 Wine	70%	52%	18
 Shrimp	85%	69%	16

If there were an expert consensus, then we should see numbers like 15% (or less) expert approval of foods that are not good for you, where we see in the first table above, far higher numbers; and 90% (or more) expert approval of foods that are good for you, a number only one product attains in the next graphic, below. The silliness in this kind of questioning is perhaps best illustrated by coconut oil. For what purpose? Compared with what? Olive oil is the only other oil considered “good” for you, by real experts. But olive oil has a low smoking point, so for some purposes, coconut or avocado oil is to be preferred. Raw fish is good for you, but some fish are contaminated and so should not be eaten on that account. Other fish are nearing extinction, so should not even be available for consumption. The question does not allow for this consideration. And doesn’t how much of it you consume matter? Say, when considering wine, for example?

The government shows us a plate with all types of food on it, because agricultural interests would not allow anything else. Can you imagine the government telling us that what went wrong after World War II—as evidenced by the skyrocketing of health expenditures starting around 1960—was the switch from grass to soy for animal feed? The switch hastened and encouraged by government policy? Can you imagine the government understanding that their sugar subsidy induces the substitution of HFCS—some with mercury? Or that pesticides have seriously polluted our water supply, and caused grievous damage to the public’s health?

Consider even your pet’s nutrition. Surely you have read the ingredients, and found corn near the top in almost all mixes. Neither dogs nor cats can digest corn. If you look for it, you can find pet food based on rice, or no grains at all. These are the foods you want. Ask your veterinarian.

Our government subsidizes the use of corn—a food stuff!—to generate ethanol to reduce our consumption of gasoline. In Brazil, they use switchgrass and the husks of sugar cane—that is, products good for nothing else—to do the same thing with fewer adverse consequences. The United States government is not going to tell you to buy only grass-fed beef. It is not going to tell ranchers to produce it, or stores to label it. But if people inquire, and are willing to pay for it, grass-fed beef and milk from mostly grass-fed cows are both available. Experts who could tell us why we should pay more for grass-fed beef, free range chickens, etc. are hard to find. So people remain ignorant while corporations increase their wealth but do not improve our health.