

Peak Oil, Peak Food

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For the most part of human history, the cost of eating was a brutal, hard day of death defying exertion. You found food or you died, and you probably died trying. As civilization advanced, the cost of food fell. Social organization added efficiencies to food gathering, freeing time to reinvest in technology, develop specialists, get drunk, or fight. Commerce grew, trade developed, and the production of food ceased to be simple individual effort, becoming pooled resources that traded food for other commodities in ever increasingly complex exchanges. This primitive separation of end user from producer in no way relieved the individual from contributing to the general pool of wealth - idle laggards still starved to death with nothing to trade in the markets for food. Whether you bartered in kind, or used some form of money, you still had to expend a hard life's toil to eat. Again, many died trying.

This is what has essentially driven the pace of history; ever-creative ways to produce more food per unit of person labour. It worked well enough. People ate better, mortality rates improved, populations grew, and technology and specialized work gained from the surplus of labour that could be directed their way. In the western world, and in particular England, receding amounts of arable land were required to feed more and more people. By the end of the 13th century, land became fenced and enclosed in a crude form of assembly line privatization; surplus people were forced into small subsidiary "cottage" industries, or streamed by the thousands into the safety of larger communities and cities. The factory, and unemployment, was born. Starvation was no longer reserved for lazy n'er-do-wells and became the providence of the economically displaced. Human exertion and effort became unlinked from the land.

Of course, as private property displaced whole communities, the new landed parvenu aristocracies gained control of the lands complete suite of resources. These new "capitalists" drafted up the economically useless as modern workers, returned to the land now as wage slaves who toiled for meagre subsistence, exchanging the better part of their labour for wretched scraps at the edges of the growing marketplace. The landowner took the rest as personal wealth, which people call profit now. Technology advanced at greater rates and civilization picked up steam...literally.

In 1712, at the Conygree Coalworks in England, the local capitalist—Lord Dudley—was having a devil of a time improving his bottom line. Half-starved and wretched labourers slogged below the earth's surface in claustrophobic blackness, hacking coal from stubborn seams under his private lands. The mines kept filling with water, drowning his workers and cutting into profits. At this time, a remarkable new device appeared saving the unhappy aristocrat from such frustrating declines in production. Thomas Newcomen had perfected his "atmospheric engine", a steam propelled device that could pump the water out of the mines with only a handful of dimwitted attendants. Free from the prospect of drowning, workers could now beaver away at an increased rate (i.e. productivity),

padding the pockets of the Dudley's at a pace never before encountered. It was a miracle, and the beginning of the glorious Industrial Revolution. Another separation became enshrined between humans and the earth.

For the first time, human beings were considered as productive chattel and productivity the measure of increasing profits. Commerce exploded and people left the land in droves, crowding into cities of productive convenience where labour became plentiful and the distribution of goods, cheap. Food became one of those goods. The aristocracy of private ownership rejoiced at the gap between sustenance wages and profitable consumer goods. Machines provided economies of scale that allowed a growing middle class to expend only a part of their lives trying to eat, and the aristocrats—none at all.

Law followed. Growing and complex states began to learn how to utilize the expanding power of the marketplace. Trade laws, taxation, and growing defences of private capital grew. Economies of scale visited both the growing hordes of urbanized landless, as well as the increasing foothills of private capital. Conglomerates of vested interests pooled resources, dragging legal scripture behind them. The earliest known "corporation" was founded in the 14th century in Sweden, however the concept of a legally protected business venture with an infinite life of its own quickly spread. By 1602, with the Dutch East India Company established in Amsterdam, the "conglomeration of vested interest" became the principal means by which sophisticated nation states launched the age of exploration and coloni-zation.

Not since the advent of the steel plough—when tilling fields moved from dragging a sturdy stick across hard land—had the productivity of food taken such a monumental leap. Where once an individual could feed only himself and his dependents, now organized teams of agricultural workers employing wondrous new machines could feed dozens, and then hundreds of humans with ever decreasing human effort. For the emergent middle classes, less and less time was required working to feed one's self. With the falling cost of food, more and more people could spend their time and money on other goods or pursuits. Machine made clothes, machine made furnishings, machine made gewgaws of all manner and description (i.e. consumerism). In a very real sense, western humanity was liberating itself from the tyranny of essential sustenance, and investing the freedom in greater liberty —and pointless, mass produced crap. Snow globes sold like hot cakes. Exactly like hot cakes.

The global food chain became organized thus; grow it, ship it to a central location, distribute it back to regional and then local markets and retailers, sell it to hungry consumers. At each step along the way, "value" was added to calories, where value meant profit. Where little value was realized there was malnutrition and starvation, where lots of value was available, there became increasing participation by corporations. By their nature, corporations squeegeed out the inefficiencies and brought increasing amounts of capital to bear. No profit, no food. Or snow globes. As the Industrial Revolution gripped the earth, colonization and mercan-tilism gave way to capitalism. Market places expanded and stratified, layers of value added enterprise employed less and less people to produce more and more food. Horses gave way to tractors; local farm markets gave way to dedicated food retail chains. Rail lines and steamships moved food

across nations, continents, and the globe. Economies of scale at every step lowered the cost of eating along with everything else.

As the 20th century clicked forward, for the burgeoning masses of wealthy western nations, cheap food became a right, and then just simply assumed. Poverty and squalor remained the providence of the economically marginal, as it always had and in that sense, little had changed. However, for increasing members of affluent western societies, prodigious amounts of capital moved away from food production and into all the things that make powerful capitalist states breathless nations of discretionary consumers. Rich meant less and less time feeding one's self, and more and more time accumulating stuff.

In 1914, western humanity inexplicably took time out to spend three decades denuding the earth of healthy, well-fed men, women, and children. A blind and irrational invisible hand swatted from the earth about 200 million or so. All these human folk had to be properly fed and supplied prior to their excruciating death, and industry celebrated by rising to the challenge. Machines leapt into the breach in a symbiotic reciprocating engine of feeding and killing on a truly industrial scale. "Total war" entered modern lexicon. Airplanes moved food and bombs in alternating waves. With the entire continent of Europe momentarily out of the food making business, America and good old Yankee know how took up the slack. America was an island fortress, island as in thousands of miles away by sea. Transport logistics was born; convoys of hundreds of specially designed ships moved back and forth across the oceans. The costs were staggering, food went short, and rationing was imposed on the rich and middle classes. For the last time in history, the cost of food rose to life and death again. And then peace broke out.

The next great step forward in food history came at the close of global hostilities in mid-century. Having invested the no-cost-too-high capital of military supply and distribution, the ships, trains, trucks, and airplanes manufactured in the thousands were returned to civil use. Private, corporate industry vacuumed up legions of military logistics specialists. Transport and distribution costs collapsed around the world. The "container" ship was born. At the same time, complex munitions processes moved into synthetic, inorganic fertilizer production that dramatically increased crop yields. Incredible plenty drove prices down at the same time transportation costs fell. Abundance rejoiced. Farmers went broke. In their place arose massive agricultural conglomerates that vacuumed up the great diversity of the world's local farms, replacing them with hectares upon hectares of dedicated crops, mechanically worked, industrially fertilized, and hooked by rail, sea, and air to far-flung markets offering the maximum return on investment.

Today, entire heartlands of biodiversity, countless expanses of small rural farms and communities, have been purchased by syndicates of corporate finance wizards from the urban bowels of Wall Street. Banks, hedge funds, and trusts receive billions of dollars worldwide from the accounts of thousands of scattered investors - most unwittingly - through pension funds and other retirement and savings vehicles. None of whom would recognize a carrot in the ground if it kicked them in the groin. Their only task is to maximize their clients' return on investment. And food is a reliable investment it turns out. Once assembled and

sold forward to international agri-businesses, hundreds of hectares are mechanically and scientifically ploughed under and replanted with "monocultures" of single crops. Electronically monitored machines prepare and renew the soil with mountains of synthetic fertilizer, more machines plant the crop, and more machines harvest it.

The crop is delivered to massive central terminals by rail and truck, where it is rerouted towards regional complexes and ports. Sometimes travelling the breadth of a continent, and sometimes travelling the expanse of the sea on huge ships designed for the purpose, the happy crop is delivered to yet more terminals where it is assembled, packaged, and labelled with paper, tin, and other things - all of which arrive in exactly the same way - for sale to food distributors. Large retail grocery outlets contract to have the increasingly angry crop loaded on yet more trucks, rail, or ships, after which it is finally delivered to urban hubs of people in the form of canned creamed corn, lined up on brightly lit shelves and slathered in marketing. Two cans for under a buck and a hat for your kid.

Millions of western homemakers in mini vans will spend twice that on fuel to drive to the store; pouring out of their urban sprawl like microbes, leaving behind their suburban castles, hot tubs, motorbikes, and heated driveways, bitching about the cost of food the entire way. They will spend twice what they can eat and throw out the rest. They will have money left for iPods and plasma TV's. Absolutely none of them will toil from sun up to sun set for the single purpose of eating. None. A can of creamed corn from the other side of the planet for nothing more than a few moments worth of inconvenience.

Humanity may have landed a man on the moon, but nothing compares with two cans of creamed corn for under a buck. It's a freaking miracle. A miracle when one considers all the open palms that creamed corn had to pass through from seed to plate, throwing off profit into every sweaty one. Food is now corporate, and driven by the bottom lines of dozens of invisible enablers, corporate charters all regulated by law and designed for no other reason than the maximization of each share-holder's value. Built atop every golden kernel of corn is a golden edifice of economic interconnectivity.

According to the US Department of Agriculture, US households may have spent as much as a third of their disposable income on food at the dawn of the corporate age in the early 20th century. By 1933, that number had shrunk to 25%. Well into the post war era, 20%. When the Beatles appeared on Ed Sullivan, 15%. Iraq war-10%. Economic meltdown...9.7%.

Consider then, that all the efficiencies that are the miracle of cheap food rest entirely on technology and mechanization. Consider further, that each and every technological piece depends on—in its turn— nothing more substantive than gooey black oil. No oil, no food. The global edifice of cheap food rests on the volatility of a single input; the expo-nentially depleting supply of easy, cheap oil.

But of course, oil is infinite—or so one thinks. People don't actually believe that, but they think it just the same. When people worry about oil, they actually worry about it running out, which is in all probability not going to happen. However, while people fret away their time worrying about the earth's supply of fossil fuels they completely miss the point. They will never run out of oil if only because the cost of slogging it out of the planet will become so exorbitant, they

may never get a chance to pump that last, precious barrel. As the price of oil rises, and those costs are passed along the conga line of civilization, the real question becomes the effect those rising costs will have on everything. Everything, including creamed corn and snow globes.

The oil community has a name for this—peak oil. Peak oil is the place on the graphs where the easy, cheap to access oil runs out, and there is nothing but expensive stuff ahead. While all agree that the oil supply bell curve is real (the "Hubbard curve"), and that the world is very near to conquering the air thin summit of said Hubbard curve, there is dispute about when the actual downward part of the trip will begin. Pessimists argue that people are there now, while sunny optimists say the world won't reach it for years...say about 2015. 2015 as in five years from now, when people will in all probability be bitching and screaming about spending eight or nine percent of their disposable income on food.

The cost of food will rise with the cost of oil and the problem with that problem is that technology won't save the situation. Food in the ground can be made cheaper by simply making more of it. However, the issue is that all that food is way over there, and all rich westerners live way over there, tightly packed into teeming centers of urban sprawl. Between production and distribution is a complex system of oil dependent logistics. Planes, trains and automobiles; combine harvesters, container ships, and mini vans.

Quick fact : it can take as much as 50 barrels of oil to produce a single calorie of food energy. Healthy people need about 2100 calories a day. If that seems ridiculous, consider that the average American calorie travels over 1500 miles, or that nearly 70% of seafood products are imported. Nearly 10% of beef stocks are also imported, and all those rump roasts require 35 parts of energy to produce a single unit of beef food energy. Grain is grown in one place, cows in another, fertilizer in another, and mountains of manure are collected and shipped to yet another. Think about how many of these people, places, and things are powered by oil in some way. All of them—including the consumer. It is not necessary to be an economist to get it; as the price of oil rises, the cost of food will keep in step. One only need think about it.

Oil prices must rise, and food prices must rise with them. What does that mean? It means that people will have less disposable income because they have to eat.

All that technology, all those machines and synthetics and drive and energy and Yankee know how that are directly responsible for food production are not owned by the humans that depend on them. Every link in the modern food chain is owned and operated by legal bundles of contracts and agreement called corporations. Absolutely everyone of which is required by law to increase profits and return on investment. Not one is going to take a "haircut" on food. Not one cares who eats, and who does not. Instead, guaranteed an end user who must purchase by a separate law of nature, all will simply pass along the costs, no matter what they become. Falling purchases of calories will simply be made up by increased margins from smaller and smaller pools of rich folks who have the wherewithal to pay. History will regress and retrace its steps, back to times when great swaths of humanity spent the better portion of their lives simply trying to eat. Or more correctly, paying to eat.

For several generations now people have taken food for granted, its collapsing cost ensuring that it became a small but necessary evil every grocery day. Spending even 10% of hard work on the necessity of food was too much. The sudden reversal of that historic trend, and its effects on every other facet of consumer societies, is indeed the greatest challenge facing the world today. Food is too cheap, a "correction" is coming, and there is not a damn thing anybody can do about it. □□□

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