



Creation Care

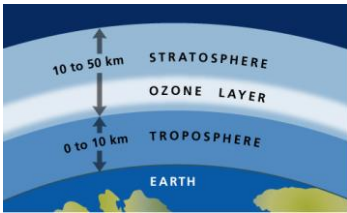


The world and all that is in it belong to the Lord, the earth and all who live on it are his. --Psalm 24:1

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WHEN WE END DESTRUCTIVE BEHAVIOR, IT DOES MAKE A DIFFERENCE!

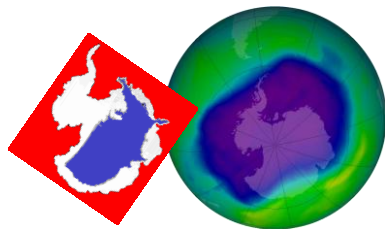
The OZONE is a special layer of three oxygen atoms that lie between the Troposphere and the Stratosphere above the earth. It shields the entire earth from much of the harmful ultraviolet radiation (a very common cause of skin cancer, etc.) that comes from Sun exposure.



In the early 70's a series of studies had concluded that the manufacture and use of chlorofluorocarbons emitted by dry-cleaning processes, refrigerators, and a broad variety of aerosol sprays find their way up through the air and through a complex series of chemical reactions destroy ozone.

In 1973 an alarmed public created an unprecedented cooperation of scientists, business, and political leaders to sign the Montreal Protocol, an international treaty designed to reduce and replace the use of chlorofluorocarbons.

The ozone hole (dark purple) appeared first over the cooler land mass of the Antarctic continent (in the light purple). The red box is a size comparison of the Antarctic continent in white with the USA in blue. This is the largest hole ever recorded by NASA (2006).



The NASA Nimbus 7 satellite tracked ozone conditions making "Antarctic Ozone" a common reference.

The good news is that a team of scientists, Ellen Swallow Richards, professor of *Atmospheric Chemistry and Climate Science at MIT*, Diane Ivy, research scientist in the Department of *Earth, Atmospheric and Planetary Sciences*, along with researchers at the *National Center for Atmospheric Research* in Boulder, Colorado and the *University of Leeds* in the U.K., report that the ozone is on a path to heal: "...we're seeing the planet respond!"

Bottom line: When we end destructive behavior, it can make a difference. Praise God! ✠



Recycling the Carbon Locked in Plastic Products

Over the last decade we have produced more plastic than we did during the entire 20th Century...with the result that the stuff is filling our landfills and oceans...plus, it has a life-span of 500 to 1000 years. What can we do about it? Industry is finding creative uses for recycled plastics including reusing "end of life" plastic to make new products such as park benches, tables, chairs, and building materials, etc. Something new is also on the horizon.

About a third of the oil that we pump from the ground is used in making plastics. The carbon in the oil is permanently locked into those plastics. University of Sydney Prof. Thomas Maschmeyer has found a way to get rid of the plastic waste, "unlock the carbon" it contains, and extract high quality oil suitable for blending into standard hydrocarbon fuels. The remnants of the mixed plastics that are left over are also usable in papermaking. That's the good news.

The bad news is that the process, like oil well fracking, creates its own environmental emissions issues and the product's use contributes to air pollution.



UNWISE AND UNCONTROLLED CONSUMPTION, THE RELENTLESS PURSUIT OF PROFIT, AND UNDISCIPLINED LIFESTYLE has created a variety of problems that are of troubling and even crisis proportions.

For the first time in human history we are a society that possesses more than it needs and therefore eats and consumes too much. Until now societies always struggled to have enough to survive! For example, underweight was the issue, not overweight. Only about one third of the population today is in a healthy weight range. Currently, the statistics show that around 33% of the US population is obese and 67% of the US population is overweight. It is estimated that if the current trend continues, by 2030 86.3% adults will be overweight or obese. (source: *Obesity Research Journal*).



A second example is housing. In 18th century America, living spaces were very small, one room, one-story, with about 450 square feet of space. The average family was quite large; about 7 household members. Today, the average living space is 2000 square feet with 3.14 house-

hold members. Housing has radically changed, especially since the end of WW II. The historic house, in a Chicago suburb, in which I grew up is an interesting study in how housing has changed.



The house was built on the homestead of the founder of my home town. The founder's son constructed the house from both new timbers and the timbers from his father's log cabin. It was "state of the art" in its time with fancy woodwork, narrow

width oak flooring, high ceilings and floor to ceiling windows to provide plenty of ventilation during summer's heat. There were two cisterns that caught rainwater, one under the "kitchen" floor, accessible through a trap-door, rope, and pail, and one just outside the back door with an old homemade wooden hand pump. There was a little "trunk room" and one small enclosed clothes closet at the end of the upstairs hall. There were no other closets, but each of the three bedrooms had a row of six clothes hooks mounted on the wall.

The second owner, a wealthy quarryman, improved the house with "knob and tube" electric wiring, an "out house" with concrete sanitary catch basin allowing it to be only 25' from the back door, a central heating system, and a drilled fresh-water well 10' from the back of the house.

We were the third owners (1939). My father added small bedroom closets, city water and sewer, a modern kitchen, and an indoor restroom with tub.

Everyone, in the neighborhood, living in old houses, made similar improvements to their buildings during that same era. We all raised gardens, baked, canned, and dried foods, raised chickens and/or rabbits for "Sunday Dinner" and bought a few cans of this or that from the "corner grocer" now and then. Ice-cream was a rare treat (available only in pint sized boxes), but puddings, pies, cakes, jams/jellies, and bread spread with brown sugar or honey were relished desserts.

Life was good and we were very happy.

It is hard for newer generations to understand how little average people lived on and how much hands-on work they did for self-survival throughout most of human history. Self-sufficiency was king. Necessity demanded that the average person, in pre-modern times, developed multiple self-sustaining skill sets and what they themselves lacked was found in a community of neighbors who depended upon each other and willingly shared what they could to help meet each other's needs. They were real "neighborhoods," not just "housing allotments."

In our money driven economy and the complicated technologies we have come to depend upon, the need for personal skill development and community sharing have drastically changed. We depend, more and more, upon the skilled stranger and professional outsider. We seldom exchange our personal skills or participate in the sharing of skills for the common good. Today we have moved from being private producers ourselves, to being contractors who sell our time to professionals who put us to work in the office or on "the line" in exchange for the

artificial medium called "money." Our economy is profit centered and depends upon the constant consumption of second party produced goods and services. Consumer credit, engineered "design life", the options of "makes and models", new innovations, gadgets and trinkets keep the consumption going.

Today the majority of the garages in the USA are not used for cars, but to store the stuff that we don't have room for anywhere else. The storage locker business, with its rental spaces and abandoned goods auctions, is booming everywhere (There is even a TV series about it). Americans do recycle some of their excess goods with donations to charity and "garage sales" but we continue to overload our landfills because we recycle less than a third of the excess "stuff" that we discard (compared to 80% in many countries where there is little landfill space available).



We must improve, not only our personal abilities and habits, we must also change the economic systems that depend upon endless consumption to keep themselves going. It means, among other things, that we must find new ways of "doing business." This will be tough enough, but there is even a more drastic change to face -- the effects of automation on employment. It is argued that automation and technology will create new jobs to replace the old jobs they eliminate. The record shows that this is not happening as expected. Today, many business leaders and economists across our nation and around the world are struggling with the reality that technology will permanently eliminate so many human tasks that there will no longer be enough payable work for millions of people to do under our current economic system!

In a world of continuing automation and rapidly developing artificial intelligence, how can people "make a living?" Many economic "futurists" believe that nations must discover other ways by which people can live. Several primary questions in the new era to come are: "Is money an adequate medium of economic exchange? How is economic value to be measured and meted out? Is there a difference between working for a living and making a living? Money based labor is, in many ways, the product of the Industrial Revolution. What are its alternatives?"

More and more people are beginning to conclude that nations must find ways to provide some sort of guaranteed minimum income for all its citizens. For Americans and others this would mean an enormous emotional and intellectual change from "welfare" thinking to "inalienable human rights" thinking. At least fifteen nations have instituted some sort of minimum family income plans as a part of their economies. A more revolutionary conception for us "earn your keep" ideologists is that freedom from money-based labor, may allow for a kind of human self-

development that will promote a new humanity that returns us to God and the Garden of Eden creation that the Creator envisioned in the first place! When God created Adam and Eve he didn't give them employment, he gave them space, responsibility to preserve their setting, and freedom in which to develop their humanity! Sin brought "sweat of the brow" labor into the picture! Is God using



our self inflicted modern dilemmas to push us back to Eden and His creative plan? That thought could unhinge medieval theology!

If this is not enough to stir up your thinking, just add the complications of warming temperatures and rising sea levels created by our warming climate and you have a set of political, social, and economic problems that will challenge borders and nationalism itself. At any rate, we had better be thinking "outside the box" if we are going to avoid tragedy for our grandchildren and their offspring!



"We must work passionately and tirelessly to bridge the gulf between our scientific progress and our moral progress. One of the great problems of mankind is that we suffer from a poverty of the spirit which stands in glaring contrast to our scientific and technological abundance. The richer we have become materially, the poorer we have become morally and spiritually." -Martin Luther King, Jr. (1929-1968)



Sugar Stewardship

In the Disney film, Mary Poppins, the song goes "Just a spoon full of sugar makes the medicine go down"-- and it surely does, but unfortunately it makes the waistline grow! Overuse of sugar is connected to health problems like diabetes and heart disease. We are drawn to its use and it is used in almost everything we eat! Check out the list that follows; perhaps it will help to make us more thoughtful about our sugar consumption.

How much sugar is in a chocolate bar?

- Snickers bar (52.7g) - 6.75 teaspoons of sugar
- Milk chocolate bar (44g) - 5.75 teaspoons of sugar
- Milky Way bar (58g) - 8.75 teaspoons of sugar
- 3 Musketeers bar (60g) - 10 teaspoons of sugar

- Butterfinger bar (60g) - 7 teaspoons of sugar
- Dove chocolate bar (40.8g) - 5.5 teaspoons of sugar
- Hershey's Milk Chocolate bar (43g) - 6 teaspoons of sugar
- Twix bar (50.7g) - 6 teaspoons of sugar
- Milk chocolate M&M's packet (47.9 g) - 7.5 teaspoons of sugar.

How much sugar do soft drinks contain?

- Coca cola (one can) - 8.25 teaspoons of sugar
- Pepsi cola (one can) - 8.75 teaspoons of sugar
- Red Bull (one can) - 6.9 teaspoons of sugar
- Sprite (one can) - 8.25 teaspoons of sugar
- Mountain Dew (one can) - 11.5 teaspoons of sugar
- Old Jamaica Ginger Beer (one can) - 13 teaspoons of sugar.

How much sugar is in your serving of breakfast cereal?

- Alpen - 5.75 teaspoons of sugar
- Cheerios - 1 teaspoon of sugar
- Corn Flakes - 2.4 teaspoons of sugar
- Cocoa Krispies - 9.75 teaspoons of sugar
- Froot Loops - 10.5 teaspoons of sugar
- Raisin Bran - 7.75 teaspoons of sugar
- Frosted Flakes - 8.75 teaspoons of sugar
- Honey Smacks - 14 teaspoons of sugar
- Rice Krispies - 2.5 teaspoons of sugar
- Special K - 3 teaspoons of sugar
- Wheaties - 3.75 teaspoons of sugar
- Trix - 8 teaspoons of sugar
- Lucky Charms - 9 teaspoons of sugar
- Rice Chex - 2 teaspoons of sugar
- Wheat Chex - 2.5 teaspoons of sugar
- Corn Chex - 2.75 teaspoons of sugar
- Honey Nut Cheerios - 8.25 teaspoons of sugar
- Reese's Puffs - 8.75 teaspoons of sugar
- Golden Grahams - 8.75 teaspoons of sugar
- Cocoa Puffs - 9.25 teaspoons of sugar
- Cookie Crisp - 8.75 teaspoons of sugar
- Shredded Wheat - 0.1 teaspoons of sugar
- Cocoa Pebbles - 9 teaspoons of sugar
- Banana Nut Crunch - 4.5 teaspoons of sugar.

How much sugar does fruit contain?

- Mangos - 3.2 teaspoons of sugar
- Bananas - 3 teaspoons of sugar
- Apples - 2.6 teaspoons of sugar
- Pineapples - 2.5 teaspoons of sugar
- Grapes - 4 teaspoons of sugar
- Lemons - 0.6 teaspoons of sugar
- Kiwi fruit - 2.3 teaspoons of sugar
- Apricots - 2.3 teaspoons of sugar
- Strawberries - 1.3 teaspoons of sugar
- Raspberries - 1 teaspoon of sugar
- Blueberries - 1.7 teaspoons of sugar
- Cranberries - 1 teaspoons of sugar
- Tomatoes - 0.7 teaspoons of sugar.

How much sugar do cakes and desserts contain?

- Banoffee pie** (1 medium portion) - 4.25 teaspoons of sugar
- Carrot cake** (1 medium slice) - 3 teaspoons of sugar
- Custard** (1 medium portion) - 3.25 teaspoons of sugar
- Chocolate mousse** (1 medium portion) - 3 teaspoons of sugar
- Donut** (1 jam doughnut) - 3.5 teaspoons of sugar
- Fruit pie** (1 medium portion) - 3.5 teaspoons of sugar
- Fruit cake** (1 medium slice) - 5 teaspoons of sugar
- Muffin** (one chocolate chip muffin) - 4.75 teaspoons of sugar
- Ice cream** (1 scoop) - 3 teaspoons of sugar
- Rice pudding** (1 portion) - 3.75 teaspoons of sugar
- Sponge cake** (1 medium slice) - 5.5 teaspoons of sugar
- Swiss roll** (1 roll) - 2.5 teaspoons of sugar.



**As the World gets Warmer,
How are We going to keep Cool?**

Nanotechnology is manipulation of matter on an atomic, molecular, and supramolecular scale (*whatever that means!*) The bottom line is that because of rising earth temperatures scientists are developing fabrics to be used in producing clothing that will help us shed body heat and keep cooler. This is where "Nano" comes in.

Current fabrics are very good at keeping us warm, but are not very good at keeping us cool. That is because the only mechanism that current textiles have for cooling us is evaporation. You must get hot enough to start sweating which means that you are already uncomfortable.



A corresponding problem is that current natural and synthetic fabrics are opaque to infrared rays, which means they hold in the heat. Forty to sixty percent of our body heat is dissipated as infrared radiation. Nano structure is used in plastic fibers (*magnified pictured above*) that allows both perspiration and infrared waves to escape. Regular plastic is transparent to infrared radiation, but it is also waterproof and airtight, trapping heat, so a University of Stanford team re-engineered polyethylene to produce a low cost fabric that allows infrared radiation to escape along with the ability to breathe so it can more effectively keep us cool. Presto! Nanotechnology! Cool clothes!



**How is the contest between
the Believers and Non-Believers of Climate
Change/Global Warming coming along in the U.S.A.?**

Here is the latest Barna Research Report (April 2016)

The survey question: *Have Humans caused Climate Change and/or Global Warming?*

% Among All Adults:

- 42% Yes, Absolutely
- 29% Yes, Possibly
- 10% No, Probably Not
- 11% No, Definitely Not
- 9% Not Sure

% By Education:

- High School or Less: 36%
- Some College: 41%
- College Graduate: 50%

% By Generation:

- Millennials: 46%
- Gen-Xers: 43%
- Boomers: 39%
- Elders: 35%



**Are Pharmaceutical
Companies fueling
the rise of Super-
bugs from the in-
dustrial Waste that
they leak?**



According to an article by Madlen Davies, Bureau of Investigative Journalism (9-17-16), they are.

The majority of the world's antibiotics are produced by factories in China and India where environmental regulations are weak. The ingredients used in antibiotics production infiltrate natural bacteria into local soil and water systems through industrial leaks. The picture above shows polluted water flowing into Isnapur Lake, India (Photo: Nordea Asset Management/Changing Markets). Such carelessness leads to the proliferation of antibiotic resistant bacteria which is said to cause an estimated 25,000 deaths across Europe each year. If no action is taken antimicrobial resistance will kill 10 million people worldwide every year -- more than cancer. According to the article, "A drug-resistant bacteria, first found in India in 2014, has since been found in more than 70 countries around the world."



Cultivate and Guard

In Genesis 2:15 God places man in the Garden to "cultivate and guard" it. It is our responsibility to do just that! Psalm 24:1 declares God's ownership of the total creation and Genesis 2:15 declares our guardianship of that creation. A guardian is one who cares for the property of an owner. We are responsible to guard the earth.



The two major destroyers of the earth are **profit** and **warfare**.

PROFIT: Self-interest drives all progress; its built into us; it's a part of our DNA. The earth's harsh treatment by humanity is caused by ignorance, carelessness and the desire for profit, often at any cost. For example: The hunger for ivory and the money it brings has pushed the great and grand elephant to near extinction in both India and Africa. The Passenger Pigeon became extinct because of the joy and thrill of hunting them. Ravishing the earth's resources through over-consumption of material "blessings" is often rationalized by believers with a simple "Thank God, I will enjoy them without guilt."

In the Christian perspective, we must have enlightened self-interest; which is self-interest that is built upon the disciplines of Christian Stewardship and modesty.

WARFARE: Warfare gobbles up precious resources, destroys natural & humanly created structures, and poisons the environment, sometimes for hundreds of years. It is the greatest waste of life and structure that there is.

