The Volcanic Theory of Climate

Here is a new volcanic theory of climate that refutes and disproves the CO2 theory of climate.

This new theory compares the Earth to a giant bottle of soda water. Both have bubbles of CO2 gas constantly bubbling out of their liquid centers, through a hard shell. The planet's volcanic bubbles, its volcanic outgassing are not pure CO2, but about 95-96% CO2, just like the atmospheres of Mars and Venus.

The new theory says that this gas leakage is the driving cause of all active geology, atmosphere, and climate on earth. This is because when the gas bubbles out, it typically comes up as a froth, bringing up large quantities of super-hot rock from near our planet's center.

The new theory says that variable gas leakage, primarily at the sea floor ridge/ rift is the cause of climate change. And this is why CO2 levels move in step with temperature. It is because both CO2 levels and temperature are mostly caused by the same thing, the outgassing froth that also drives seafloor accretion/ warming, seafloor spreading, earthquakes, tsunamis, and volcanos.

The new theory also says that this seafloor gas leakage is variable because as the planet warms, and the oceans deepen, the seafloor rift behaves as if was buried deeper underground, only it is buried with water, not rock. So as the oceans deepen, the seafloor rift gets hotter and softer, and allows more CO2-rich gas and heat to escape. And this warms the planet and melts more ice. Then the warming and ocean deepening go on in feedback style-until the planet starts to run out of ice to melt. At this point, ocean deepening and seafloor rift softening slows and then stops.

Then with the surface far above its long term average, the feedback loop begins working the same way, only in reverse, shallower oceans cause the seafloor rift to behaves as if was shallower underground, only it is buried with water, not rock.

Thus the seafloor rift grows colder and harder. Thus the cooler surface causes less heat and CO2-rich gas to escape. Thus the ice caps build and this goes on until sea levels reach the average edge of the continental shelf. And this precisely matches what we see in the Antarctic ice core data that is the cornerstone of the global warming theory.

So here is a new interpretation of the data. The Earth is clearly warming and here is another version of why that is happening. This is important.

However, before we move on to a deeper explanation of the new theory I want to spend a couple pages on disproving some things about the CO2 theory of climate.

How can CO2 be 36-million times stronger on Earth than on Venus?

The planet Venus is often used to support the idea of greenhouse gasses and the CO2 theory of climate. People say, look at how Venus has an atmosphere full of CO2 and look how the planet is 445 degrees hotter than Earth.

But few people realize that the supposed greenhouse effects of CO2 are about 36-million times more powerful on Earth than on Venus.

This is because Venus' atmosphere is 92 times as dense as Earth's, and it is 96.5% CO2. Earth by contrast has an atmosphere that is only around 400-parts per million or 0.04% CO2.

So Venus doesn't just have a little more CO2 in its atmosphere, it has 221,950 times as much atmospheric CO2 as

Earth by volume (92 x 0.965/0.0004). And Venus averages 445°C hotter than Earth. So for each degree Venus is hotter than Earth, it has 499 times as much CO2 (221,950÷445)

Now back on Earth, CO2 levels were around 170ppm (parts-per-million) at the bottom of the last ice-age (see graph), and today they are around 300ppm.

And 170 parts-per million is just <u>over</u> 1-in-6,000. And 300 parts per million is just <u>under</u> 2-in-6,000.

And according to all ice core climate data, this 1-in-6,000 change in CO2 levels corresponds to about a 12°C change in Antarctic temperatures.

And if we multiply these two numbers together (12°C x 1/6,000) we realize that on Earth, each degree hotter corresponds to a tiny 1-in-72,000 change in CO2 levels.

On Venus 500 times more CO2 = 1°C On Earth 1/72,000th more CO2 = 1°C 500 x 72,000 = 36,000,000

Now let's compare the two planets:

On Venus, 500 times more CO2 equals 1 degree Celsius, while on Earth, 1-in-72-thousand times more CO2 equals 1 degree Celsius. If we multiply these two numbers, we get 36-million. So the effect of CO2 is supposedly 36-million times stronger on Earth than on Venus.

How can this be?

And doesn't such a wide discrepancy in the power of CO2 sort-of disprove the greenhouse gas theory of climate all by itself? For how could CO2 be 36-million times more powerful on Earth than on Venus? Clearly there is no relationship between CO2 and temperature when comparing Earth and Venus.



VENUS STATISTICS	And the second se
Discovered	Known from antiquity
Average distance from the Sun	67.2 million miles (108.2 million km): 0.72
Equatorial diameter	7,521 miles (12,104 km)
Axial rotation period (sidereal)	243 days (retrograde)
Mass (Earth = 1)	0.82
Volume (Earth = 1)	0.86
Surface gravity (Earth = 1)	0.91
Average density (water = 1)	5.24
Surface atmospheric pressure (Earth $=$ 1)	92
Escape velocity	6.4 miles/s (10.4 km/s)
Orbital eccentricity	0.007
Surface temperature (negligible variation)	867°F (464°C)
Sunlight strength	190% of Earth's (cloud tops), 5% (surface)
Albedo (reflectivity)	65%
Number of satellites	0

Venus' temperature is 464°C and its atmospheric pressure. Is 92 times that of Earth

How big is mankind in proportion to the environment?

New subject. How big is mankind in proportion to the environment? Do you have a clear understanding? And if you don't have a clear understanding, how can you make sound environmental policy decisions?

I mean, what if the environment was actually ten, or a hundred, or a thousand times bigger than you thought in proportion to mankind?

The oceans weigh 2,800,000,000 times as much as humanity. Did we really warm all that water?

Al Gore had a picture of ocean circulation patterns in his film. So earth's liquid oceans certainly mix.

If we assume that the average human weighs 71kg (156 lbs.), then 14 humans weigh 1,000kg. This is about the weight of 1 cubic meter of water by definition.

A cubic kilometer is 1,000m x 1,000m x 1,000m, or a billion cubic meters. Thus 14 billion humans would weigh about as much as a cubic kilometer of water. Thus the 7.1 billion humans alive today weigh about as much as half a cubic kilometer of water.

Now Earth has almost 1.4 billion cubic kilometers of water. Thus, all the water on Earth weighs about 2.8 billion times as much as humanity.

Did humanity really warm 2.8 billion times its weight in water over the past century? 2 point 8 billion is just an ENORMOUS number. To put this ratio in perspective, the average Walmart store contains about 60,000 cubic meters of volume. If we divide this volume by 2.8-billion, we get 21 cubic centimeters, or about the volume of a man's index finger.

Thus to compare the mass of mankind to the mass of Earth's hydrosphere is to compare a finger's volume of water with the volume of water that could be contained by a Walmart store.

How can it be that this tiny finger amount of matter is altering the temperature of the other immense amount of matter? And how could we by any means direct, or indirect, cause 2.8billion times our weight to warm by any measurable amount? Of course we couldn't possibly have done this, even if we tried. The hydrosphere is just too big in proportion.

To see it another way, 2.8 billion minutes is 5,327 years. Therefore, if every minute of every day, every human alive today warmed their weight in water by 1°C, it would take 5,327 years to warm the oceans by 1°C. Did humanity really warm the oceans by 1°C over the past 50-years?

Someone is lying with statistics



Now this graph, in its many forms, is the cornerstone of the entire CO2 theory of climate. Al Gore even used a version of this graph in his film. But look at how temperature falls tend to precede CO2 changes. How can CO2 be the causal variable if CO2 levels mostly change AFTER temperatures change?



Now here is someone else's version of the same graph. Note how the temperature and CO2 lines are separated here. And isn't it normal to see these two data lines like this... separated that is?

But why would anyone separate these data lines if they were trying to show the correlation between them? Why not always super-impose them? It doesn't really make any sense, does it?



Unless someone wants to fudge the data and hide how temperature falls generally precede CO2 changes... especially when temperatures are falling. And here is someone else's version of the same graph.

Strange how if we use our computer's rectangular selection tool as a straight-edge, we see that temperatures falls do not generally precede CO2 falls on these graphs with separate data lines.



Funny how when the two data lines are shown superimposed they generally show how temperature falls precedes CO2 changes, but when they are shown separately, that fact usually is not shown. Anyway, here we see 3 giant problems with the CO2 theory:

1) An effect can't occur before its cause.

2) Someone is trying to hide this fact from the world.

3) Someone is tampering with evidence so it supports the CO2 theory.



We have the causality wrong

The graph below shows the same Antarctic ice core data that everyone in climate science uses for the past 420,000 years. Notice how:

1. Earth experiences cyclical ice-ages of varying durations, but there is clearly an ice age cycle of 90,000 to 120,000 years.

2. There are bottom and top temperatures, and this cycle has been going on for at least 420,000 years, that being the oldest believable ice core data.



We know that Earth's climate bottom was last reached 22,000 years ago, and approached many times over the last several ice ages. And we know from drilling coral reefs (graph below) that sea levels were about 140 meters lower 22,000 years ago, at a particularly cold ice age maximum, with extremely high levels of volcanic ash/dust (see graph). So we not only have a consistent bottom temperature for Earth's climate, but we can also infer a consistent bottom sea level $\pm 135m$ lower, only briefly reaching 140m in the last particularly deep ice age.



Now outside the polar regions, the average depth of the continental break is also ± 135 meters below sea level. The continental break is where the barely sloping continental shelf abruptly becomes the continental edge, and a steep descent to the deep sea floor, as shown below. In fact, the continental shelf is practically flat, with an average slope of only 0.2% or 2-in-1,000.

Clearly, sea-erosion of the continents is something that mostly happens near the ocean's surface, in the wave and tidal zone. Then, over the eons, and countless climate cycles, as sea levels cycled between ice-ages and warm-ages, wave and tidal action eroded the continental shelf. The remarkable abruptness of the continental break worldwide speaks of a climate bottom that has remained constant for eons. If the climate bottom temperature had varied by much, the continental break would have a rounded edge, not the remarkably abrupt edge we see.



Note the abrupt edge at the continental break. The average width of the continental shelf is 60km and the fall is 135m, thus a 0.225%-slope.

Now the way Earth's climate bottoms coincide with the continental break—this does make sense within the CO2 theory of climate. The problem — <u>a fact that disproves the CO2</u> theory – is how planetary temperatures and CO2 levels consistently peak right when the planet starts running out of <u>ice to melt</u>. You see, in each of the 5 climate tops we have believable ice-core data on, planetary temperatures approached a couple degrees higher than today. And obviously, a couple degrees higher, and Earth will start to run out of ice to melt. After all, Earth is already starting to run out of ice to melt, isn't it?

Surely it can't be a coincidence that Earth always starts running out of ice to melt right when CO2 levels peak. But under OPEC's CO2 theory, it must be a mere coincidence. You see, according to the CO2 theory, CO2 levels determine temperatures, which then determine ice cap size — and not the other way around. So under the CO2 theory, it must be a mere coincidence that Earth starts running out of ice to melt right when temperatures peak — a coincidence repeated in all 6 of the 6 ice ages we have data on.

But surely this can't be a coincidence. <u>Surely the</u> running out of ice to melt must cause temperatures to peak. And sea levels must in some way drive CO2 levels rather than the other way around.

Now there is undeniably a relationship between CO2 levels and climate—however, there are three possible causalities for the relationship:

- a) CO2 drives climate (OPEC's old anti-coal theory)
- b) Climate drives CO2
- c) Another thing drives both CO2 & climate (the new theory)

The Volcanic Theory of Climate, or Gaia-genesis <main title> Imagine a freshly opened bottle of soda water. Imagine the bubbles slowly coming out of the gassed liquid and rising to the surface. In a similar way, primordial gas constantly bubbles out of Earth's molten center to replenish the atmosphere. The quantities and distances are immense, so our planetary soda bottle takes billions of years to go flat.

This is the new volcanic air that we see exploding from volcanos. It is also the new volcanic air that replaces the CO2 constantly lost to buried seashells. And this new volcanic air is 95%-96% CO2, like the atmospheres of Mars and Venus.

Now consider of the chalk-white cliffs of Dover England (left), which are hundreds of feet tall. These cliffs are white from



calcium-carbonate in seashell that have been mostly pulverized, although many were fossilized and still to be found. Marine creatures took calcium and carbon dioxide from the water and air and turned it into shells and bones. Then they died and fell to the sea floor and were buried 'forever'. Later the seafloor was raised due to the wellaccepted theory of continental uplift. And there are massive and thick calcium-carbonate and limestone deposits like Dover all over the planet. All that carbon bubbled out of the planet as new volcanic air before it was accreted back to the surface of the planet by life forms. After all, where

else could it have come from?



Now recall Earth's 80,000 kilometer seafloor-ridge system (see image above). This is well documented as an 80,000km hot-zone, a planet-scale volcanic water heater operating 24-hours a day, every day. Here is where most of the CO2-rich new volcanic air bubbles escape. Yet there are few bubbles in the water because high-pressure water can contain lots of gas without bubbles—just like a sealed bottle of soda. Open a bottle, and lower the pressure, and bubble appear, due to the lower pressure.

The sea-floor-ridge averages 2.5km under sea level. Here, immense pressure not only permits bubble-free sodawater, but it also permits water to remain un-boiled at extremely high temperatures, like in a pressure cooker. In some places, the water streaming out of the seafloor vents has been measured over 410°C. This is almost 412°C, the temperature where steelframe buildings first start to barely soften and weaken in structure fires. And it is close to 460°C, the temperature where some forms of magma become not entirely solid.

So here, at the sea floor rift, Earth's hard shell is hot, thin and barely solid. And here is where super high-pressure volcanic gas bubbles melt, crack, break, and force their way through the thinnest part of Earth's skin.

These gas bubbles come up from great depths. And they normally come up as a froth of gas and super-hot magma from deep within our planet. Thus, when there is more gas leakage, there is also more magma and heat leakage. And when gas leakage slows, so does heat leakage from the planet's hot and molten center. Also, more gas leakage causes a thicker, hotter "low altitude" atmosphere, just as less gas leakage causes a thinner, cooler "high altitude" atmosphere worldwide. So the reason why temperatures move in lock-step with CO2 levels, is that both are aspects of seafloor spreading.

The thermostat mechanism

When Earth's surface is warming and melting ice, the oceans deepen. This causes the already thin, hot and soft rock at the sea-floor-rift to grow a bit hotter and softer, just as if it was buried deeper underground—only it is buried with water, not rock. Then in the softer rift permits more bubbles of CO2-rich new volcanic air to force their way out—along with more columns of the super-hot magma froth that normally comes up with them. This further warms the planet's surface, melts more ice, deepens the oceans, and softens the rift still more, allowing still higher levels of CO2 and heat leakage.

The increases in CO2 and heat leakage continue on feedback-style until Earth starts running out of ice to melt. At this point ocean deepening slows greatly and the system becomes more vulnerable to reversal than continued warming. This especially considering how the planet is far above its average temperature. Then at some point due to variability, or a volcano erupting, the process starts working the same way, feedback style, but in reverse. More ice causes shallower oceans. This makes the seafloor rift more solid, permitting less outgassing, less heat leakage, and causing more ice to build.

The 135-meter change in sea levels between ice-age and today's warm-age sea levels is about a 5.4% change in ocean depth on average at the seafloor ridge. And the rift/ridge is hot and thin, and poised at a tipping point. Thus a small change in ocean depth has an exaggerated effect on the rift's strength, gas permeability and heat leakage. Thus we see that Gaia's thermostat is primarily a pressure mechanism.

Now again, when the 'bubbles' of new volcanic air force their way out of the planet, they tend to be followed by a column of very hot magma from deep within the planet. As this magma cools, it gives off heat and warms Earth's oceans and surface. But in cooling, it also accretes as rock the sea floor rift/ridge. So while the bubbles of new volcanic air replenish the atmosphere and warm the surface, they are also drive sea-floor spreading. Then this spreading drives earthquakes, plate margin volcanos, and continental drift. Thus these 'soda bottle' gas bubbles are Gaia's primary driving force, directly or indirectly giving rise to all active geology, as well as atmosphere and climate.

Volcanos and Ice ages

There is another separate mechanism, a volcanic ash shading mechanism at work during ice ages. After global warming runs its course and Earth starts running out of ice to melt, the oceans will grow shallower. But more importantly, due to the almost-flat a 2-in-1,000 slope of the average continental shelf, the "infinite" waters of the oceans will grow 1km more distant from the world's coastal volcanos for each 2-meters that sea levels fall. And because this is insufficient slope for water to flow through fissured rock, it results in many volcanos periodically drying out during ice ages. (The average width of the continental shelf is 60km and the average fall is 135m, thus it has only a 0.225% slope on average.)

This sea water is critically important because it is the difference between volcanos filled with gas-porous dry ash and volcanos filled with much less gas-porous ash mud and baked ash mud called pumice. Thus when water is present, the world's volcanos become self-clogging and build up gas pressures. And then when that water goes away, they erupt.

The climate bottoming mechanism is that when sea levels fall to the average continental break, the oceans stop retreating horizontally from the world's volcanos. Instead, they only fall, and this does not have nearly as great a drying effect on the world's volcanos. Now humanity should be able to mostly counteract the retreat of the seas for thousands of years by proactively digging wide seawater channels for the world's at-risk volcanos. — by using its immense blue-phase populations for this purpose. And many of these volcano irrigation projects will each by themselves be tasks greater than any excavation project mankind has achieved before. And there will be hundreds of volcanos to irrigate. But given enough decades and centuries, we should be able to delay the next ice. And during this time we will become expert at using explosives to dislodge ash plugs. Thus we will "open our soda bottles slowly" and bleed down gas pressures in the world's volcanos — while they are still wet and self-clogging.

If we don't do this, if we don't counteract the retreat of the seas, Gaia will much sooner end the current 20,000-year period where Earth's volcanos have seen increased amounts of water due to global warming and melting ice. Instead, the increases will taper-off and then reverse.

Then, at some point, a volcano will erupt. Then another and another and another. Then the dry stratosphere will fill with microscopic ash particles and the Earth will be enveloped by a great sunlight reflecting haze. The ancients called this haze the 'end of days', the end of bright sunny days.

Then without bright days, more of the Earth's surface will freeze, sea levels will fall further, and more importantly coastlines will retreat from more of the planet's volcanos. Then seawater will stop delaying still more volcanos in feedback style. Thus Earth's 20,000-year warm, wet, beautiful blue phase, the world as we know it will end. And then, as surely as winter after summer, the planet will go into another cold, dry, filthy, volcanicash-driven ice-age of around 110,000 years. And to be clear, <u>all</u> <u>climate data sources describe this ice-age cycle without</u> <u>exception</u>. Thus the real problem that humanity faces is not global warming or manmade pollution, but the cold, dry, filthy volcanic-ash-driven ice age that ALWAYS happens when global warming runs its course.

And we must store-up many years, if not decades of buffer food supplies while the sun actually shines. Today's 3month food buffer is completely inadequate. If we don't do this, then humanity may experience a great murderous famine of all famines. A famine where machine-enabled mankind combs the planet looking for food, wiping out most of the planet's ecosystems at their moment of weakness. A famine where most of mankind dies in a futile quest for food and survival.

And finally, it must be pointed out that 7-billion industrialized humans will dig irrigation works for Earth's volcanos 10 times faster than 700-million. However, with regard to the ice age famine, it makes little difference whether we are 7billion or 700-million. We will still have a horrible murderous famine and eco-system catastrophe at the dawn of the next ice age if we only have 3-months food supply. Thus the key to prosperity for mankind is not so much to reduce populations, but to have many years of food stored up as a buffer.

What happens after global warming?

If you look at the climate graph above, we obviously face another 110,000 year ice age with huge amounts of volcanic ash in the skies. How come nobody talks about this in our supposedly free press? What could be more important than the end of the world as we know it?

2.. REPAIRING MISCONCEPTIONS





Before explaining the new theory of Gaiagenesis, we must do away with some common misconceptions our planet. <u>Misconception-1</u> is the thickness of Earth's hard shell. This is shown out of scale in most illustrations of Earth's interior, such as the two illustrations above. The thin line between the hot, molten orange part of the planet, and the cool blue of the sea floor is Earth's hard shell. It is called the litho-sphere meaning rock-sphere and it averages just 40 kilometers in thickness under the oceans.

A common size for globes is about the size of a basketball or 31.8cm (12.5") in diameter. At this scale, the lithosphere, Earth's hard shell, is only 1-millimeter thick under the oceans.

Thus, over 99% of our planet is still hot molten magma. In fact, Earth is basically a big ball of hot liquid or semi-liquid rock—with an eggshell-thin coating of cool solid rock outside. This gives our planet its structural integrity and thermal insulation. But calling the lithosphere eggshell thin is actually an overstatement, because the lithosphere is proportionately less than half as thick as a chicken egg shell.

Fred M. Bullard, Volcanoes of the earth, Ch. 5

"Lava, like all rock, is a poor conductor of heat, and it cools very slowly. The scoriaceous [frothy] nature of the surface layer, with its many cavities and entrapped air spaces, provides <u>a splendid</u> <u>insulation</u> [foreigner English] to prevent the heat of the lava from escaping. It is possible to walk over a lava stream in which only a few inches below the surface the rock is still red-hot. In my

experience the gases rising from the cooling lava, particularly from fissures, are more of a hazard than the heat of the lava surface.

How long will a lava flow remain hot? Naturally, this will depend on the size of the flow, for it will take a large mass longer to cool than a small one. The hot springs and geysers of Yellowstone National Park <u>attest the fact</u> [foreigner English] that an acidic lava buried only a short distance below the surface will remain hot for thousands, even hundreds of thousands, of years."

And Earth's thin shell is 'cracked' too. You see, Earth has an 80,000-km seafloor <u>rift</u> system—a slow and steady linear volcano known as the seafloor-<u>ridge</u> system. This is shown on the following illustration:



National Geophysical Data Center 1996

<clip of sea floor ridge vents with heat ripples and occasional bubbles in the water split screen with a thermal imaging clip of the same>

The seafloor ridge is the main source of heat leakage from the molten center of the planet. In fact, the sea floor ridge-rift can really be viewed as an 80,000 kilometer-long, high-pressure, circulating, water-heater, as evidenced by the streams of super-heated water coming out of undersea vents. And the ridge is a circulating water heater that has obviously been operating 24 hours a day for eons.

The surrounding water is near 0°c, but the water circulating out of the vents is heated to upwards of 410°c. The water doesn't boil due to the intense water pressure at the bottom of the ocean.



The chalk white cliffs of Dover England. Note the people at the top for scale. These are chalk white from all the (CO2 containing) seashells that fell to the ancient sea floor. Later the seafloor was raised by the well-accepted process of geological uplift.

Misconception-2 is that the atmosphere is a static thing that never depletes or replenishes. However, the atmosphere is constantly losing gases for a variety of reasons. Helium and unreacted hydrogen zip ever upward, until they drift out of Earth's gravitational field and are picked up by the sun's gravity. Indeed helium is from Greek Helios=sun and helium is literally, the stuff of the sun. On the other hand, most hydro-gen reacts with oxygen on its ascent and generates water. Gr.hydro=water + Gr. gen=generate.

Heavier atmospheric gasses are also constantly being lost to space, although at a much slower rate. And CO2 is eagerly consumed by both plants and shellfish-some of which get buried, "forever" removing these gasses from the atmosphere.

Here we note the famous white cliffs of Dover England. These are chalk white from all the seashells that fell to the ancient sea floor. Later this sea floor was raised by continental uplift. Uplift is the process whereby earthquakes from subducting sea floor repeatedly hammers, compresses and raises the continental plates over the eons.

<outgassing cycle; arrows from sea floor ridge to ocean to shellfish to limestone, as well as to plants and burial>

The world is full of carbon-containing formations like Dover formations largely made-up of the shells of living creatures and CO2 removed from the atmosphere. All together, these formations contain millions of times more carbon than mankind has produced over the last century. Where did all this CO2 come from?

<clip of gas burping out of liquid lava>

Well, the process by which new volcanic air bubbles out of our planet's molten middle and enters the atmosphere is called

'outgassing' or 'degassing' and this new volcanic air is over 95% CO2. Basically, Earth's molten middle is like a giant, planetscale soda bottle that takes billions of years to go flat. This gas bubbles out on a geological time scale, over billions of years, slowly replenishing the atmosphere, replacing the gasses slowly being lost to a variety of ways.

Volcanic gas is 95.8% CO2

Bullard reports that the Larderello geothermal plant in Italy used/uses naturally occurring steam to drive turbines. Aside from water vapor, this steam is/was 95.8% CO2. This is precisely in the middle of Mars' atmosphere which is 95% CO2, and Venus' atmosphere which is 96.5% CO2. These 3 planets are 3 of a kind with the same 96% CO2 outgassing, more or less.

But on Earth, life is clearly greedy for the carbon it is based on. Clearly plants gobble up as much CO2 as they can. After all, CO2 is not even 1% of the atmosphere. It is about 1/25 of 1% in the atmosphere. And this is because plants are so hungry for CO2.

Cicero, d. 43BC, On the nature of the Gods, 2.83

"Vapor rising from the earth feeds the air and the ether and all the heavenly spheres. ... animals are sustained by breathing air, and air is a part of our seeing and hearing and speaking." [This was obvious 2,065 years ago.]

Did you learn about climate science from Star Trek? Star Trek science propaganda 'Return to Tomorrow' 1968.02.09

"Sulu: Planet dead ahead captain, becoming visual.

Spok: Class M planet captain.

Kirk: Close to Earth conditions.

Spok: With two very important exceptions. It is much older than Earth and about half a million years ago, its entire atmosphere was totally ripped away by some sort of cataclysm. The planet has evidently been dead since then. Sensors detect no life of any kind."

Star Trek science propaganda 'That Which Survives' 1969.01.24

"Spok: The facts do not fit any known categories of planet. Kirk: Let's take the facts one by one. That should explain something.

Spok: Undoubtedly. The age of this planet would seem to be only a few thousand years. It would be impossible for vegetation to evolve in so short a period.

Kirk: Its size is approximately that of Earth's moon.

Spok: But its mass and its atmosphere are similar to Earth. Kirk: That would be difficult to explain.

Spok: It would be impossible captain. An atmosphere could not evolve in so short a period of time.

Kirk: And yet it has.

Spok: Evidently. But the inconsistencies are so compounded as to present a seemingly impossible phenomenon."

[Endless re-runs of Star Trek brainwashed many of us while we were still in primary school. The always logical and never-wrong Spok character, the make-believe science officer got us while we were young and our minds pliant - while we were too young to realize that Spok wasn't a real authority on anything at all.

Clearly someone wants us to think of planetary atmospheres as something permanent. Some lies tell the truth with perfect clarity once you see through them.]

Astronomy Today textbook, Chaisson, McMillan, 8.3 "all planetary atmospheres slowly leak away into space. Don't be alarmed—the leakage is usually very gradual! As a rule of thumb, if the escape speed from a planet exceeds the average speed of a given type of <u>molecule</u> by a factor of six or more, then <u>molecules of that type will not have escaped from the planet's</u> <u>atmosphere in significant quantities in the 4.6 billion years since</u> <u>the solar system formed</u>. Conversely, if the escape speed is less than six times the average speed of molecules of a given type, then <u>most of them</u> [foreigner English] will have escaped by now, and we should not expect to find them in the atmosphere.

For air on Earth, the mean molecular speeds of oxygen [8] and nitrogen [7] that we just computed are comfortably below one-sixth of the escape speed...

Hydrogen molecules (H2: molecular mass=2)...have had time to escape <u>since our planet formed</u> [repetition of ideas frequently indicates propaganda] ..Consequently, we find very little hydrogen in Earth's atmosphere today. However, on the planet Jupiter, with a lower temperature... has retained its hydrogen—in fact, hydrogen is the dominant ingredient of Jupiter's atmosphere."

[1) all planetary atmospheres slowly leak away into space. 2) This propaganda tries to make earth's atmosphere seem like something that formed once and then depleted. If we don't believe this, then the CO2 greenhouse theory becomes much harder to swallow.]

Apple dictionary: carbon

"carbon dioxide or other gaseous carbon compounds released into the atmosphere, [are] associated with climate change: the level of carbon in the atmosphere has been consistently rising... fossil fuel consumption and carbon emissions continued to rise." [Here we see a climate change ad in a dictionary.]

Apple dictionary: carbon

"Compounds of carbon (organic compounds) form the physical

basis of all living organisms." [Where does all the carbon come from, and how is it replaced when seashells and plant matter are constantly being buried? All the carbon in the cliffs of Dover shown above must have come from somewhere. Where can it have come from but from within our planet?]

Its carbon-based life, right?

Ultimately the critical ingredient that drives life is carbon, and carbon is in terribly short supply thanks to life. I mean, new volcanic air comes out at around 95.8% CO2 and then thanks to the planet's life infection, that number is reduced to 0.04% CO2 in the atmosphere. And during an ice age, that number falls to say 0.02% CO2 because not much new volcanic air is getting out. But the plants are still there gobbling up the CO2, even if there is much less sunlight.

3.. THE PRIMARY MECHANISM

<lllustration>

Today, during a "warm age", the surface of the seafloor-rift is about 2,500 meters down below the surface of the oceans. There is also a deeper underground water-circulating vent system that has been robotically probed to 240m below the seafloor. And this system may go deeper, we simply do not know. But at the known bottom of these vents, the added 240m brings us down to 2,740m.

Now for every 10m in depth, the pressure increases by about 1 atmosphere, so at 2.5km down, the pressure is 250 atmospheres. And at 2,740m down, the water pressure at the ridge is about 274 atmospheres. And given that 1-atmosphere = 14.7 pounds per square inch, the pressure works out to 3,675-psi and 4,028-psi respectively.

Now the water coming out of this vent system has been measured at up to 410°C. Here, at 2.5-kilometers down, the submarine-crushing pressures permit un-boiled liquid water to exist at more than quadruple the boiling point at sea level. It is just like in a pressure cooker, only with more pressure and higher temperatures.

Now if we add 240m for the added vent depth, we have a 9.6% increase in depth, and around a 9.6% higher temperature or around **449°C** for our vent bottoms. And this is today during a warm age.

But during the coldest part of the last ice•age, the seafloor ridge was around 135m shallower. This amounts to around a 5% decrease in ocean depth, water pressure and the maximum temperature of un-boiled water cooling the sea floor ridge. Here we have water that boils at around **427°C**.

Ponder first how these are threshold temperatures on the edge of solidness for the rock at the seafloor rift. After all, the temperature where steel-frame buildings first start to barely soften in structure fires is 412°C. And some forms of magma become not entirely solid at 460°C. So it is easy to see how a temperature range of 427-449°C is on the edge of solidness and the edge of gas permeability for Earth's hard shell at the sea floor ridge. It is a significant difference at a critical temperature level. And here is where most of the super-high-pressure volcanic soda bubbles come out to replenish Earth's atmosphere. Thus the depth of the ocean plays on the solidness and gas permeability of the seafloor rift.

Ponder second how deeper waters cause the already hot and weak rock at the sea-floor-rift to grow a bit hotter and softer, just as if it was buried deeper underground. Essentially, the coolant sea water at the rift never gets hotter than the boiling point for water at that depth. Once the boiling point is reached, the water will form bubbles that will increase water circulation and increase cooling almost to infinity. Thus the depth of the water cooling the sea floor rift determines the maximum temperature of the water and limits the temperature of the rift. And the temperature of the rift determines the softness and gas permeability of the volcanic rock at the seafloor rift/ridge.

Ponder third how we would never see liquid magma in direct contact with liquid water. If we had this situation, heat leakage would go exponential thanks to the dual convection of both liquids. So we should expect some sort of solid layer — at least in planets where we don't have Venus-like surface conditions.

Sub-summary

- 1) Ocean depth determines water pressure.
- 2) Water pressure determines the boiling point of the rift coolant.3) The boiling point of the rift coolant determines maximum temperature of the rift.
- 4) The maximum temperature of the rift determines rift softness.
 5) Rift softness determines gas permeability and gas leakage rates for the volcanic gas trapped under the planet's hard skin gas that is always under extreme pressure.

6) Gas leakage rates determines atmospheric concentrations of new volcanic air (which is 95% CO2) as well as surface temperatures.

Therefore:

7) Ocean depth determines atmospheric CO2 concentrations and surface temperatures.

Climate is regulated by a pressure mechanism

Temperatures determine sea levels and sea levels determine the outgassing and heat leakage rate at the seafloor ridge.

Geology, Leon E. Long, 16th edition textbook, Ch. 21

"a continuous, 75,000 <u>kilometers</u> long ocean ridge system" [The length of the seafloor rift ranges from 55,000 to 80,000km in textbooks. If we are concerned with heat leakage, we should probably be as inclusive as possible and include the East African rift.]



Columnar-basalt at the seafloor rift - ITWO

Rifts as vertical plane with deep roots

Gas bubbles escaping from our planet, and the super hot magma following them form high-temperature vertical-panes, two-dimensional hot-zones through the non-fluid skin of the planet.

Rifts are composed of one-dimensional line after onedimensional line of magma, making a plane. And we can see dead rifts in many parts of the planet, frozen as columnar basalt such as in the following photo.

The above illustrations from a geology textbook shows the way that magma froth columns form at the rift. It fails to mention that each red basalt "dike" leaks its gas out through the "cold seam" and then freezes like a wet tongue touched to subzero metal — but slowly and on a geological time scale. It also doesn't mention that new dikes are always coming up in the hottest, weakest, least viscous part of the rift every 5 to 5,000 meters perhaps.

You should also probably imagine all the red parts as super-hot magma from down deep that is full of gas bubbles. You also might imagine that lots of gas never makes it out at the rift and instead gets trapped under the new sea floor.



Columnar-basalt-at-sea

Because Earths' hard skin offers a great amount of resistance for escaping gas, the gas tends to be focus on a small number of linear rifts and subduction zones.

But at the sea floor rift, Earth's shell is hot, thin and weak. Here is where the inside of our planet leaks most gas and

heat into the relative vacuum of the planet's surface. Here is where Earth's 'soda bottle'.

And don't get confused, the CO2 bubbles are not coming out of water, they are coming out of Earth's molten magma and going into ocean waters and then the atmosphere.

Hammond World Atlas 2003 ISBN 0-7607-5361-X

"Scientists studying samples from a lake in southern Italy recently learned that local vegetation changed from dense forest to sparse steppe growth and back again within only 200 years about 75,000 years ago. The discovery came as a surprise to the many people who believed that the natural phenomenon of climate is constant over extended periods of time."

1/1,000th x 330 years = 33%

Now ponder how the planet's 80,000-kilometer-long sea-floor-rift has been leaking new volcanic gas, accreting magma, and warming the oceans for eons. The rate of leakage might not change much each year, but a change of 1/1,000 in sea floor ridge outgassing activity, each year, over 330 years still adds up to a 33% change in both heat leakage and outgassing of new volcanic air rich in CO2. So basically, all the changes in atmospheric CO2 levels and temperature seem to be coming from tiny incremental changes in sea floor ridge activity, annual changes of around 1/1,000th per year. And sometimes this happens slower, and sometimes it happens faster.

The warming mechanism

Earth's climate regulation system is both a pressure mechanism and a feedback mechanism:

- 1) warmer oceans and atmosphere melt ice,
- 2) which raises (increases) the depth of the oceans,
- 3) which raises water pressure at the seafloor ridge/rift,
- 4) which raises the boiling point of the coolant seawater,
- 5) which raises the temperature of the ridge
- 6) which raises the softness of the ridge,
- 7) which raises gas leakage from Earth's molten center,
- 8) which raises heat leakage from Earth's molten center,
- 9) which warms oceans a bit more

10) which causes more ice to melt — until Earth runs starts running out of ice to melt.

The cooling mechanism

And this system also works in reverse, feedback style:

- 1) colder oceans and atmosphere build ice,
- 2) which lowers (decreases) the depth of the oceans,
- 3) which lowers water pressure at the ridge,
- 4) which lowers the boiling point of the coolant seawater,
- 5) which lowers the temperature of the ridge
- 6) which lowers the softness of the ridge,
- 7) which lowers gas leakage from Earth's molten center,
- 8) which lowers heat leakage from Earth's molten center,
- 9) which cools oceans a bit more

10) which causes less ice to melt — until Earth runs out of freshly de-watered volcanos on the continental shelf. (This mechanism is explained later).





The topping mechanism

The warming process never goes much beyond the point of fully melted ice caps. This is because without more ice to melt, the oceans stop getting deeper, the sea floor ridge stops getting hotter and thinner, and seafloor spreading stops increasing. However, should the planet then start to build a little ice, whether from random variation or volcanism, the same mechanism will work just as well in reverse.



Rift-heat-flow-by-distance ITWO

A rough estimate of seafloor heat leakage

Let's say that on average, Earth's 80,000-km seafloor ridge accretes 6-cm of material per year -3 cm per side. The way earthquake waves are transmitted tells us that the hard sea floor is about 40-km thick. Thus about **192 cubic kilometers** of magma are accreted each year (80,000km x 0.00006km x 40km). As this rock has about 3.18 times the mass by volume as people and water (for guesstimate purposes), this is about 610 times the mass of humanity that is accreted and is cooling each year.

Now this magma comes from very far down and is as hot as the planet's center. So let's say it starts at say 5,500°C, and like sticking your tongue to a frozen spoon, it freezes and hardens pretty much on contact at least near the surface. And then over some millions of years, if hardens to a depth of 40km. But each year we have about 610 times the mass of humanity accreting and eventually cooling by say 5,000°C. This is equivalent to about 3,050,000 times the mass of humanity cooling by 1°C each year. This is 5.8 times the mass of humanity cooling by 1°C <u>each minute</u>.

Earth science and the environment 6.4 Textbook by Thompson and Turk

"Basaltic magma that oozes onto the sea floor at the ridge creates about 22 cubic kilometers, or 70 billion tons of new oceanic crust each year." [This is 10 tons per person per year. This is about 140 times the weight of humanity that is cooling by say 5,000°C each year. This is equivalent to about 700,000 times the mass of humanity cooling by 1°C each year. This is 1.33 times the mass of humanity cooling each minute.



I argue that the light blue portions of this graph, the parts older than 420,000 years are OPEC propaganda.

I mean the link between the 5 recent temperature peaks and fully melted ice caps is a pretty obvious one. So what did OPEC do? They concocted new ice core data to add to the previous data.

And this new data looks completely different. It has peaks that are 1/3 lower. And the periodicity is gone. And no longer is the role of fully melted ice caps so obvious. In fact, the data before 420,000 years ago is just so different in every way. And look at how the change comes right when they start using the newly discovered deeper ice that goes back almost twice as far back in time.

And you know what the Vostok cores were? There were these annual Antarctic expeditions. And they drilled all over Antarctica for three decades and the deepest ice they could find was 2.4-kilometers thick, or about 420,000-years old.

It's hard to believe that once the original group was out of the picture, a new group could come in and found ice that was twice as old (800,000 years old) and about 4.6-kilometers thick. And this implies a 2.2-kilometer-deep valley in Antarctica. And the Grand Canyon at its deepest is only 1.85 kilometers deep. So for these reasons, I am skeptical and call all the ice core data older than 420,000 years as OPEC supporting propaganda and throw it out.



OPEC friendlies also seem to have produced climate graph of based on benthic or seafloor sediments. After all this was done by people with access to deep sea drilling rigs, rigs generally owned by oil companies.

Here is their 5-million-year chart. But isn't it strange how the warming that completely melted the Antarctic ice cap doesn't show up on the temperature charts that use other means of determining temperature? After all, one would expect high temperatures 800,000 years ago. Where are the high temperatures on this graph?

And isn't it strange the way planetary bottom temperatures have fallen by an incredible 9°C in only 3 million years?

And what a coincidence that the fall in temperatures stopped right at the time that we started having ice core records? Then average temperatures flat-lined for the past 700,000 years. And how did the continental shelf form if not from sea erosion?

And again, this chart was produced by people with access to deep sea drilling equipment. So for these reasons, I also call this graph as OPEC propaganda and throw it out And we also see this benthic data produced by people with access to offshore oil rigs. So this information clearly comes from OPEC.

So for these reasons, I call the portions of the climate graph older than 420,000 years as OPEC propaganda. It is the Mideast ministry of truth at work, telling lies, pruning (br•oo'en•ing), or ruining (our•oo'en•ing) the tree of knowledge so it would be fruitful for the Mideast.

4.. VENUS, EARTH AND MARS

(Venus pics)

Venus has an average surface temperature of 480°C. This is close to the over 400°C temperatures we find at Earth's sea floor ridge. And water may exist deeper and at higher temperatures on Earth, it is just that we have not been able to probe any deeper.

Venus' atmosphere (93 times as dense as Earth's) also has a surface pressure (not counting added depth for rift valleys) that is similar to Earth's sea floor — equal to almost 1 kilometer of sea water here on Earth. The point is that a similar temperature/pressure mechanism on Venus appear to do roughly the same thing as here on Earth. However, on Venus this TEMP-PRESS mechanism works at a slightly lower pressure and a bit hotter, making it a sort of double match.

VENUS STATISTICS	A REAL PROPERTY AND A REAL PROPERTY AND A
Discovered	Known from antiquity
Average distance from the Sun	67.2 million miles (108.2 million km); 0.72
Equatorial diameter	7,521 miles (12,104 km)
Axial rotation period (sidereal)	243 days (retrograde)
Mass (Earth = 1)	0.82
Volume (Earth = 1)	0.86
Surface gravity (Earth = 1)	0.91
Average density (water = 1)	5.24
Surface atmospheric pressure (Earth = 1)	92
Escape velocity	6.4 miles/s (10.4 km/s)
Orbital eccentricity	0.007
Surface temperature (negligible variation)	867°F (464°C)
Sunlight strength	190% of Earth's (cloud tops), 5% (surface)
Albedo (reflectivity)	65%
Number of catellites	0

(Greek ROI = flow Greek PTR = terra, rock Long tail curve in lower left)

Let's look at the big picture, The big inter-planetary picture on gas coming out of thin skinned magma balls — also called planets. It is that gas slowly settles out of the liquid parts of planets just like it takes some time to come out of a bottle of soda water. And because we are talking about planet-scale soda bottles here, the process occurs on a geological time scale, over billions of years.

Now this outgas might continue to exist as gas, or perhaps change into a liquid as on Earth and other planets. But whatever form the low-mass surface fluids exist in, we will now call them as ROIA•SPHERE, because Gr.roia=flow. And let's call the rock underneath, whether it is solid or liquid, or full of gas as the PETRO•SPHERE, because Gr. petr=rock.

Basically, if the roiling roia-sphere is thick enough to provide a substantial amount of back-pressure to the planet's petro-sphere, then the planet's outgassing channels will stay hot and open, or at least variably open, and outgassing will continue, and the planet will maintain an atmosphere. The planet will also continue to exchange heat from its hot center with its atmosphere. Anyway, this relationship neatly explains Earth and its two neighbors Venus and Mars:

MARS has less than 1% of the atmospheric density of Earth, so it has no roiasphere to offer back-pressure to its petrosphere. As a result, Mars is no longer geologically active and has now switched-off with respect to geological activity, be it heat leakage or outgassing. Mars thus exemplifies a geologically inert world with little outgassing, little atmosphere, a solid hard lithosphere, and little-if-any convective heat leakage from the presumably still-molten center of the planet.

VENUS by contrast has a thick and heavy roiasphere that always provides a high and constant level of back-pressure to its petrosphere. As a result, Venus remains constantly switched-on with respect to outgassing, volcanic activity and convective heat leakage from the molten center of the planet.

EARTH'S polar ice caps modulate ocean depth and hence the roiasphere's back-pressure on the petrosphere. When the oceans are shallow (and the roiasphere thin), as during an ice-age, Earth becomes more Mars-like, and 'older' with less outgassing, less volcanic activity and less convective heat leakage from the molten center of the planet. It also has a thinner and more Mars-like atmosphere.

When the oceans are deep (and the roiasphere is thick), as during a clear-skied warm•age, Earth becomes more Venus-like, and 'younger', with higher temperatures, and more outgassing of new CO2-rich new volcanic air.

It is conceivable that sea floor spreading will eventually stop on Earth in many millions or billions of years. When this happens, Earth's atmosphere will thin, and the planet will become a geologically inert and frozen world with little atmosphere, like Mars is today. Mars reached this point earlier because it is both 52% farther from the sun, and a mere 11% of Earth's mass.

Greenhouse effect rubbish

Incidentally, Venus's atmosphere is not hot because it has lots of CO2, but simply because it has a fluid atmosphere in contact with the planet's fluid interior. Because both sides convect, heat exchange can approach infinity. Thus the surface temperature is nearly the temperature of molten magma.

Essentials of Oceanography, Alan Trujillo and Harold Thurman, Ch. 3.5

"Although most people are usually not aware of it, <u>frequent</u> volcanic activity is common along the mid-ocean ridge. In fact, 80% of Earth's volcanic activity takes place on the sea floor and every year about 12 cubic kilometers of molten rock erupts under water."

[1) I imagine that volcanic activity is continuous along the ridge. I imagine the columns of basalt coming up here and there when pressure builds sufficiently. For example, hypothetically, one

column of basalt might form 36km to the north, then three days later, another forms 161km to the south. Then another forms 55km to the north, then one 14km to the north. It is probably continuous, but maybe with 3 hours to 3 years between the formation of columns of basalt.

2) Is this new sea floor, or is this lava that hardens on top of the sea floor.

3) This is about 72 times the weight of humanity that is cooling by say 5,000°C each year. This is equivalent to about 382,000 times the mass of humanity cooling by 1°C each year. This is 0.73 times the mass of humanity cooling <u>each minute</u>. My calculation is about 8 times this textbook calculation.]

Earth science and the environment 6.4 Textbook by Thompson and Turk

"Although the convecting mantle brings heat to Earth's surface, it is only 1/5,000th as much as the solar heat that warms the surface and atmosphere. Thus the Sun provides almost all the heat to warm the atmosphere and the oceans, creating weather and climate."

[This looks like propaganda. At the depths of the last ice age, when the sky was filthy with volcanic ash, the planet lost say 1/3 of its solar energy. But this only caused a drop of about 12°C. Thus a total loss of all solar energy might result in a loss of 22°C, which is about 10% of the difference between the Earth's average surface temperature and the temperature of space. Thus the sun seems to provide only about 10% of our planet's heat.]

5.. LEVERAGE OF SCALE COMPARISON

Causal variable / dependent variable

Let's now compare the new Gaiagenesis or Outgassing theory with the old CO2 or Greenhouse theory of climate supported by AI Gore and benefitting OPEC. Both theories say that there is obviously a relationship between CO2 and temperature. The only question is what causes what. Logically, there are 3 possible relationships:

CO2 determines temperature, as the Greenhouse theory says
 Temperature determines CO2, which nobody supports, or
 Both CO2 and temperature are determined by a third variable, sea floor spreading, the new theory.

A highly leveraged explanation

The <u>GAIA theory</u> is a highly <u>de-leveraged</u> explanation, And the <u>CO2 theory</u> is a highly <u>leveraged</u> explanation.

The Gaia theory says that Earth's thin shell leaks gas and heat from the molten interior of the planet at a slightly variable rate. This is a rate that varies by around one part in a thousand per year. This heat leakage then warms the oceans which weigh 6,087x less than the planet overall. So under the Gaia theory, the big-heavy thing, the planet affects the small-light thing, the oceans, which have 6087x less mass.

By contrast, the CO2 theory says that tiny things are affecting huge things. This theory says that we puny earthlings are somehow warming an enormous thing, namely Earth's oceans, a thing with 2.8 billion times our mass.

So does variable heat leakage from our planet's molten center warm the oceans, which weigh 6087 times LESS than the planet overall? Or are we puny humans warming oceans that weigh 2.8 billion times MORE than all humanity? All things being equal, shouldn't we choose the less leveraged explanation even if it is a little bit more complicated?

The new theory is billions of times less leveraged

Don't huge heavy things tend to change the temperature of tiny

weightless things, rather than the other way around?



Al-Gore from his film showing how the ocean surface circulates with the ocean depths.

Did humanity really warm 2,800,000,000 times its mass?

Here is Al Gore talking about heat circulation in the oceans in his OPEC-funded propaganda film "An inconvenient truth". He thinks that mankind is altering the way the atmosphere works and that is causing the oceans to warm, even though the oceans have 2.8 billion times the mass of humanity, as we have previously discussed.

Did humanity really warm 2.8 billion times its weight in water over the past century? 2.8 billion minutes is 5,327 years. Therefore, if every minute of every day, every human alive today warmed their weight in water by 1°C, it would take 5,327 years to warm the oceans by 1°C. Did humanity really warm the oceans by 1°C over the past 50-years thanks to the unbelievably-immense theoretical effects of CO2 heat retention?



Let's look at leverage and scale another way. Here is one of the CO2 charts everyone is worried about. This rise in CO2 is the basis of the entire greenhouse gas theory. Here CO2 levels increased from a pre industrial level of around 285 ppm to 383 ppm today, a change of around 100 ppm.

This may sound like a big change, only it isn't. 100 parts per million is the same as 1:10,000. It is also the same ratio as one day to 27 years. Again, this tiny change is the basis of the entire greenhouse theory. And supposedly this change in CO2 concentrations, from 3-in-10,000 to 4-in-10,000 has supposedly altered the entire way our planet holds on to heat. And why is CO2 so unbelievably powerful? Shouldn't we ask for an explanation of why CO2 is so unbelievably powerful?

How did they know about Roger Revelle?

Strange how the UC regents were so prescient as to name the first college at UCSD after Roger Revelle, with John Muir coming

in 2nd.

Al Gore, Inconvenient Truth film

"The problem is that this THIN LAYER of atmosphere is being THICKENED by all of the global warming pollution that's being put up there, and what that does is THICKEN THIS LAYER of atmosphere."

<Thomas Dolby's music "blinded me with science" 20-sec>

Al Gore, Inconvenient Truth film

"The most vulnerable of the Earth's ecological systems is the atmosphere, because it is so thin."

Now Earth's atmosphere may be thin, but it still is a planet scale system with 10.4 million times the mass of humanity. It is also connected through convection with the oceans, a planet scale system with 2.8 billion times the mass of humanity.



Apparently, the Greenhouse people imagine our planet like the old image above — with a thick and solid lithosphere. Then they assume that the 80,000-kilometer-long sea floor ridge system always works at the same rate. They think it always outguesses CO2-rich new volcanic air at the same rate, and always warms the oceans at the same rate. Then they focus exclusively on atmospheric and biological CO2.

What caused all the pre-industrial climate movements?

Yet another problem with the Greenhouse theory is that it blames temperature changes on CO2 levels. But then it offers no suggestion whatsoever about why CO2 levels go up and go down. Doesn't that make CO2 a black box? Why does our planet spend 93% of its time in ice age? Why do ice ages start? Why do ice ages end? Shouldn't we demand that OPEC's anticoal Greenhouse lobby offer some explanation or even a suggestion for what caused the pre-industrial climate movements we observe?

Geosystems, Christopherson, p.311

[The following describes unanimity, not consensus, and unanimity is impossible to believe.]

"The American association for the Advancement of Science (AAAS) reported in 'The scientific consensus on climate change' (Science 306, December 3, 2004:1686), the results of a survey of all 928 climate change papers published in referenced scientific journals between 1993 and 2003. The papers were divided into six categories and analyzed. As study author Naomi Oreskes concluded, 'Remarkably, none of the papers disagreed with the consensus position.' There is a consensus that human activities are heating Earth's surface and lower atmosphere. The author concluded:

'This analysis shows that scientists publishing in <u>the</u> peer-reviewed literature agree with [the] IPCC, the National

Academy of Sciences, and public statements of their professional societies. Politicians, economists, journalists, and others may have the impression of confusion, disagreement, or discord among climate scientists, but that impression is incorrect... there is a scientific consensus on the reality of anthropogenic climate change."

My neighbor was pushed out of Scripps

I used to live about a mile from Scripps Institute of Oceanography in the early 1980s. My next-door neighbor was a graduate student at Scripps and had been making respectable progress in marine zoology.

After some months, I move a couple miles away. Then maybe a year later, I ran into her. We talked and she told me how she was not longer at Scripps. She described a visiting scientist, a visiting celebrity of some sort. This person went around and talked with many, if not all of the people studying at Scripps. The topics varied, but everyone was asked about how they stood on the CO2 theory of climate.

Then a few weeks later she was told that she was not making acceptable progress and that her studies had been canceled. She told me that she was pushed out for "political" reasons — because she said she didn't believe in the CO2 theory of climate. I bet a great many other would-be oceanographers and climate scientists can tell a similar story.

Economist magazine, 2015.11.15, 'Nodding Donkeys' p.62

"Spencer Dale, its [BP's] chief economist (and formerly of the Bank of England), recently estimated that the world <u>had</u> almost three times the reserves of oil, gas and coal that it could burn if it were to hit the two-degree [global warming] goal." [note the foreigner English underlined.]

Economist, magazine 2015.11.15, 'Nodding Donkeys' p.62 "Plenty of oil firms (Exxon among them) are also calling for governments to enact a 'carbon tax' on emitters of greenhouse gases. Their critics argue that this is less altruistic than it appears. For one thing, such a tax would hurt the coal industry especially, thereby boosting the oil firms' gas business." [However, this helps OPEC even more.]

Economist 2015.11.15, 'Anyone want a power station?' p.62 "Enel is decommissioning old power plants as if its future depended on it. Enel has announced that 23 [coal burning] power stations in Italy with a capacity of 13 gigawatts—enough to power a small country—are to be scrapped within five years. The first to be sold, on November 2nd, was the Giuseppe Volpi coal-fired station near Venice"

Economist magazine, 2015.11.15, 'Nodding Donkeys' p.62

"Policymakers, such as Mark Carney, governor of the Bank of England, talk about the possibility of many oilfields [outside the Mideast] turning into 'stranded assets', or 'un-burnable carbon', if governments get serious about climate-change action. Anthony Hobley of Carbon Tracker, a climate-advisory firm, says that if the Paris pledges are taken at all seriously, the oil and gas industry may become 'ex-growth'. Oil executives dispute that. But shareholders, if motivated, could force the industry to shrink just by limiting the funds they provide for new oil discoveries."

Clearly the Mideast benefit from the highly leveraged CO2 theory of climate.

6.. VOLCANISM IS CAUSED BY OUTGASSING

Think of a volcanic eruption from the news

Think of the giant columns of volcanic ash miles across rising in the sky. Think of the way volcanos cover the surrounding lands with a snow of light gray volcanic ash before they erupt. Is this ash propelled by molten rock pressure, or pent-up gas that suddenly escapes from our planet?

Thomas A Jaggar

"Volcanism everywhere has unity, gas is the prime mover."

Frank A Perret

"Gas is the active agent and the magma is its vehicle."

Fred M. Bullard, Volcanoes of the earth Ch. 5

"It has long been recognized that gas is the primary force in producing volcanic explosions."

Fred M. Bullard, Volcanoes of the earth Ch. 5

"The total volume of gases [expelled] during an eruption of a volcano is stupendous. G. B. Alfano and I. Friedlander (1928) calculated the volume of gas in the 1906 eruption of Vesuvius from the size of the conduit and the velocity of emission and concluded that not only the volume, but also the [mass] of the gases must be many times greater than the total mass of ash and lava" [that is propelled airborne].

Fred M. Bullard, Volcanoes of the earth, Ch. 5

"Although we have discussed the products of volcanoes under the separate headings of gases, liquids, and solids, it must be remembered that this separation does not exist until the material approaches the surface. In the magma chamber [outgassing warmholes] the gasses are dissolved in the magma [as with carbonated water]. When the magma reaches the surface, the gases may escape more or less [slowly and] quietly, in which case the material will flow out as lava, or they may escape with explosive violence [like with a shaken bottle of soda] disrupting the magma into fragmental material, such as ash and cinders. [Ash is a spray or mist of liquid magma that has cooled and hardened.]

Fred M. Bullard, Volcanoes of the earth, Ch. 6

"The 1835 eruption of Conseguina [Nicaragua]... In places, the roar [of the eruption] was practically continuous for seven hours. [This volcano has probably been trapping super-hot high-pressure gas from say a 30km stretch of subduction zone. When this volcano erupted, it took 7 hours for all that gas to stop roaring out out. This was is a multi-kilometer-wide flow of CO2-rich new volcanic air that streamed into the atmosphere for 7-hours.]

Fred M. Bullard, Volcanoes of the earth, Ch. 5

"Magma differs essentially from molten rock in being charged with varying amounts of gasses. While the magma is confined under sufficient pressure, the gaseous constituents remain in solution, but, as the magma rises toward the surface and the everlying [ambient] pressure is reduced, the gasses escape, sometimes with explosive violence. Indeed, it is the expansive force of the pent-up gases which supplies most of the energy released in a volcanic eruption. The expansive force of a gascharged liquid is familiar to anyone who had opened a bottle of soda water or, on a more elegant level, uncorked a bottle of champagne. The frothing of the liquid and the overflowing of the bottle are analogous, on a small scale, to the flashing of the magma into pumice (rock froth) when the pressure is suddenly relieved by the blowing out (uncorking) of the plug filling the crater of the volcano.

The term LAVA, from the Italian LAVARE, meaning 'to wash' [or to wash away] was used to denote anything which 'washes away'. It was first applied in Neapolitan [New•city= replacement•city =Naples] dialect to lava streams from Vesuvius"

Pressurized rock?

Now the current textbook theory of volcanos is that magma wells up from deep underground and form magma chambers. Supposedly the pressure of the molten rock becomes too great and the volcanos then erupt. Under this propaganda, volcanic gas and ash are regarded as byproducts of magma movements. But there is no evidence that magma pressures or magma chambers even exist outside of gas pressures.

<clip of a hot pool of liquid lava spitting upward as bubbles come outgas from the planet.>

A better explanation is that we have our causality inverted yet again. There is just too much evidence that outgassing is the only cause of volcanism, and that magma movement does not exist except in connection with hot super-high pressurized gas bubbling out of our planet's molten parts and into the relative vacuum of our planet's surface.

Fred M. Bullard, Volcanoes of the earth, Ch. 5

"Volcanic ash results when the rapidly expanding gasses (explosions) shatter the rock-froth [aerosolize the molten rock]. The fragments consist of sharply angular glass particles, which under the microscope are easily identified by their 'shard' [sponge] structure (Fig.2) Such material is widely used as a scouring powder, just as it is found, as in Old Dutch Cleanser" [In a chunk of magma blown out of a volcano, it is easy to imagine thousands of tiny bubbles going from say 5 or 50 atmospheres to one atmosphere in a few minutes. This sudden depressurization blows the magma to microscopic bits while it is still molten. Then the bits harden into volcanic ash. Volcanic ash is both highly abrasive and FLYABLE=dust that easily suspends in the air.]



A typical volcano erupting. Is the ash propelled by lava or high pressure gas?

0 30µ

FIGURE 7-27 A Unhealthy to Breathe

Volcanic ash contains tiny particles of glassy solidified magma (shown here in a scanning electron micrograph) and small rock and crystal fragments. The size of this particle is about 0.01 centimeters (0.004 in).

Here is a piece of Volcanic ash under a microscope. Clearly this material is molten rock that has been aerosolized by explosive, high pressure gas flows. Think of the way compressed air blowing through water makes an aerosol or mist. Now substitute hot liquid rock and then imagine the rock mist and droplets cooling into what we call volcanic ash

<Pic of Santorini road cut>

Explosive eruptions tend to produce relatively little flowing lava. The island Santorini is a good example. Look at the road cuts, The island is perhaps 95% volcanic ash and pumice (re-baked ash-mud froth), both of which are light gray in color. There are only small flecks of dark material. Clearly the main solid thing coming out of the world's volcanos is driven by air flows.

Tephra

The word comes from Gr. TOPH = ash, foam, pumice, hell, smoke. TEPHROLOGY = the study of the volcanic ash

Fred M. Bullard, Volcanoes of the earth, Ch. 5

"The cinders and ash are, of course, pulverized [aerosolized molten] lava, broken up by the force of the rapidly expanding gasses contained in it"

Why explosive eruptions cause lots of volcanic ash

Imagine a large chunk of magma blown out of a volcano and into the relative vacuum of our planet's surface. In some seconds or minutes, back-pressure drops say 5 to 50 fold. What happens to the bubbles within the magma? Don't they all expand 5 or 50 fold? What does that do to the magma? Doesn't it blow it to bits?

<various types of lava rock with air bubbles>

The material blown out of volcanos is called pyro-clastic—and most pyroclastic chunks have air bubbles. Most looks in some way like froth or foam that has solidified.

Thus all pyro•clastic material suggests gas forcing its way through liquid magma or in the case of pumice, wet ash mud called lahar. And this sort of material (which includes volcanic ash) is by far the predominant material in volcanic eruptions. And when we see hot fluid lava, if we look where it is coming out of the ground, it is normally accompanied by hot super highpressure volcanic gas as it comes out of the ground.

Most explosive volcanic eruptions are accompanied by huge

clouds of hot gas and ash that rise high in the sky. How could molten rock pressure possibly propel volcanic gas and ash into the sky? And how could rock pressure account for the huge amounts of volcanic gas? Clearly textbook theory has its causality backwards again, and volcanic solids are being propelled by large volumes of new volcanic air entering the atmosphere.



Volcanos are mostly a heap of lose ash and tephra.



Here is the core of a volcano. This is what is left after a volcano's lose ash and tephra are eroded/ washed away.

<'road cut' near Pompeii showing this>

The Roman town of Pompeii was buried under 20 meters of ash. And then only afterwards did it get a thin shell of lava a meter or two thick. If we look at the road cuts near volcanos, the material will be over 85% light gray ash, light gray pumice. Less than 15% will be flood material free of bubbles. Volcanos are all about outgassing blowing through molten rock and aerosolizing it.

<clip of lava pool as gas bubbles come out and blow the lava into the air>

If we look at active lava pools, we frequently see spitting lava. Here we see super high pressure gas bubbles settling out of our planet. When these reach the surface in a pool of molten rock, they frequently blow the liquid rock upward. It is not a steady stream, but bubbles and pockets of high pressure volcanic gas forcing their way out through the heavy molten magma.

Pour yourself a glass of soda and hold your mouth just above the surface. You can feel the gas-propelled spitting liquid on your lips. I submit that this is analogous to what is occurring in a spitting lava pool. And if you shake the soda while it is still in the bottle and then uncap it, the large volume of gas will cause the contents to blow out of the bottle and have an explosive eruption, just like with a volcano. Now imagine the same process occurring while the bubble is still underground in a narrow and constrained channel, a warmhole. This is not really a hole, but a channel of hot melted rock. The escaping gas at one point melted and ruptured a pathway out through the planet's hard skin. Then, over time, the escaping gas and the super-hot magma accompanying it kept that pathway hot and open.

Now imagine the escaping magma that is keeping the warmhole open. This is super-hot liquid magma from deep without our planet. Imagine this as a bubbly froth that is full of super high pressure gas bubbles. If this froth rises slowly, the bubbles can settle out like in a glass of soda water. However, if the froth comes out too fast, the super high pressure gas bubbles frequently blow the magma to bits, as with a shaken bottle of soda water.

MAGMA = molten carbonated rock

LAVA = liquid flowing rock, magma after the air bubbles have settled out.

Fred M. Bullard, Volcanoes of the Earth, P.1

"A volcano is a vent or chimney which connects a reservoir of molten matter known as magma, in the depths of... the earth, with the surface of the earth. The material ejected through the vent frequently accumulates around the opening, building up a cone, called the VOLCANIC EDIFICE. The loftiest mountains on earth are volcanic edifices. The material ejected consists of liquid lava and broken fragments of partially or completely solidified rock (pyroclastic debris), [all of which is either ash, pumice or magma rock with bubbles] as well as great quantities of gasses. The gasses are the motivating force, and the most important factor in volcanic action. Some authors have maintained that the only feature common to all volcanoes is the channel through which the molten or gaseous material reaches the surface, and therefore a volcano should be defined as 'the vent through which the material is erupted'.

This, however, leaves us in the difficult position of trying to explain that Vesuvius is not really a volcano, but merely a mountain built around one! As now used, the term volcano includes both the vent and the accumulation (cone) [anthill] around it.

Volcanic eruptions vary between two extremes. In one, the lava rises more or less quietly to the surface and overflows the lip of the crater. The gases bubble through the lava and escape undramatically, or in some instances, rush out with sufficient force to form lava fountains hundreds of feet in height. Nevertheless, the lava is not disrupted but flows away as a river of lava, with little resulting damage except to objects in the path of its flow. On the other extreme, tremendous explosions occur in a chimney, and as the lava rises into zones of less pressure, it "froths", because of admixture with the rapidly expanding gasses, and is ejected in the form of ash and pumice (pyroclastics). Thus in these volcanoes the magma never reaches the surface as a liquid (lava) but is disrupted and ejected as pyroclastic material (ash). It was this type of material that buried Pompeii in the classic eruption of Vesuvius in A.D.79. The explosions are something so severe as disrupt the cone, frequently blowing away large sections of it, spreading the debris over the countryside. Needless to say, such volcanoes cause extensive property damage as well as loss of life. The essential difference in the two types is the gas content and the manner in which the gas is released when the magma reaches the surface...

The great majority of the volcanoes of the world are intermediate between the two extremes described, yielding both lava and fragmental products. Since it is not possible to examine the magma reservoir which feeds a volcano, our information must be obtained by studying the material ejected from the reservoir... A special problem is encountered in studying the gases, both in collecting them under hazardous—and in many instances near impossible—conditions and also in ascertaining that the gasses collected are true volcanic gases and are not contaminated with atmospheric gasses.

Volcanoes are propelled by gas just like a can of spray paint.
 Volcanic mountains are the equivalent of the debris around an ant hill. However instead of ants carrying sand grains to the surface, there is high pressure gas blowing ash up to the surface.]

7.. VOLCANIC ASH AND CLIMATE

Gillen D'Arcy Wood, Tambora, Ch. 9

"The cold wave of June 5-11 [1816] that dumped a foot or more of snow across the Northeast [United States] fully devastated their corn and grain fields."

Gillen D'Arcy Wood, Tambora, Ch. 5

"the tropical latitude of the Chinese island of Hainan did not protect it from summer snows in the summer of 1815 or a severe winter in which more than half of the forests perished... In Shanxi, the crop-killing summer frosts of 1817 heralded mass emigration from the province, reminiscent of the large-scale refugee-ism being played out across Europe and New England at the same time."

Gillen D'Arcy Wood, Tambora, Ch. 5

"The farmers of Yunnan—crop scientists all—had planted five different strains of rice, each calibrated to specific temperatures and elevations. But none was hardy enough for Tambora."

Gillen D'Arcy Wood, Tambora, Ch. 1

"When crops worldwide failed in 1816, and again the next year, starving rural legions from Indonesia to Ireland swarmed out of the countryside to market towns to beg for alms or sell their children in exchange for food. Famine-friendly diseases, cholera, and typhus, stalked the globe from India to Italy, while the price of bread and rice, the world's staple foods, skyrocketed with no relief in sight."

Gillen D'Arcy Wood, Tambora, the eruption that changed the world, Quoting Benjamin Franklin

"For three years following Tambora's explosion, to be alive, almost anywhere in the world, meant to be hungry. In New England, 1816 was nicknamed the "Year without a Summer" or "Eighteen-Hundred-and-Froze-to-Death." Germans called 1817 the "Year of the Beggar". Across the globe, harvests perished in frost and drought or where washed away by flooding rains."

Gillen D'Arcy Wood, Tambora, Ch. 3

"Crossing into landlocked Switzerland, where grain prices rose two to three times higher than in the coastal regions, the Raffles brothers found the food shortage even more dire."

- [If there is too much ash in the skies
- 1) It is colder

2) There is less ocean evaporation as a result of the cold, and less rain overall.

3) The continental interiors don't warm as much and as a consequence, there is less low pressure to draw in moist ocean air and rain clouds. As a consequence, the continental interiors suffer a great loss of rainfall.]

Gillen D'Arcy Wood, Tambora, Ch. 6

"A notable consequence of Pinatubo's eruption, and the global cooling it produced, was the 'substantial decrease' in rainfall overland for a year following the eruption and a subsequent 'record decrease' in runoff to the oceans. The cause was the chilled, volcanic atmosphere, which repressed evaporation and reduced the amount of water vapor in the air.

Put in its broadest terms, reduced solar radiation in Pinatubo's aftermath altered the flow of energy through the coupled ocean-atmosphere system, with significant implications for the global hydrological cycle. <u>Accordingly, the first post-</u><u>Pinatubo year, 1992, witnessed the largest recorded percentage</u><u>of the global landmass suffering drought conditions</u>. A recent computer simulation of the influence of volcanic activity on global climate since 1600 produced the same 'general precipitation decrease' in the high latitudes of the northern hemisphere, [and this was] especially pronounced over land [over the middle of land masses like American and Ukrainian breadbaskets].

In the case of Tambora, a volcanic event <u>six times</u> the magnitude of Pinatubo, hydrological disruption at the hemispheric scale must have been nothing short of catastrophic. [Tambora had 180 cubic kilometers of ejecta compared to Pinatubo's 1.4 — about 129 times the size. Also, the largest eruptions may be

Fred M. Bullard, Volcanoes of the earth, Ch.18

"The year of 1816, unusually cold the world over and commonly referred to as the 'year without a summer', followed the eruption of Tambora volcano on the island of Sumbawa, Indonesia... dense ash clouds caused <u>complete darkness for 3 days on the island of Madura, 500km away</u>... The climatic effects of the huge quantity of dust ejected into the atmosphere were apparent in many parts of the world... <u>The average summer temperature of the summer months in London was 2° — 3° C. below normal. In New England, there was widespread snow between June 6, and 11, and frosts occurred each month. Some crops did not ripen, others rotted in the fields, and in Ireland and Wales there were serious food shortages."</u>

Gillen D'Arcy Wood, Tambora, Ch. 3

"In his pervious 9 year of temperature observations, 1807-1815—an already below-average sampling owning to the impact of the 1809 Unknown eruption—the average daily temperature in London had been 50°F. In 1816, the average fell by 12 degrees to 38°F. The 'Year without a Summer' appears to mild a description for the meteorological annus horribilis that was 1816. More like the 'Year without a sun'." [12°F = 6.7°C. This is a huge climate swing.]

Hammond World Atlas 2003

"Scientists have learned only fairly recently that the last ice age was market by a series of very abrupt and drastic changes in climate. In the course of these so-called <u>Dansgaard-Oeschger</u> <u>Events</u> (of which more than 20 are known to have occurred during the last ice age), average temperatures in the North Atlantic region rose rapidly — within only a few years — by between 11 and $14^{\circ}F''$ [6 and $8^{\circ}C$.]

Hammond World Atlas, 2003

"During the ice ages, plants, animals, and human beings were forced out of vast areas of the northern hemisphere [because they were buried under the polar ice cap]. Life did not return to these regions until temperatures rose again and the ice gradually receded. We still do not know precisely what caused these drastic climate changes, although experts agree [it is obvious to everyone] that solar radiation [reaching the surface] is a crucial determinant of climate."

Lucretius, On the Nature of the Universe, c. 60 BC, Bk 5.977 "From birth, they were accustomed to seeing day and night alternate. They could never have imagined that the withdrawal of sunlight might plunge the Earth into everlasting night."

Revelation, 6:12

"There was a great earthquake, and the sun[light] became [filtered] as [if through] sackcloth or hair and the moon became blood colored."

Bible, Joel, 2:31

"The sun shall be darkened, and the moon made blood color before the great and terrible day the lord will come."

Gillen D'Arcy Wood, Tambora, Ch. 3

"the popular moniker awarded 1816, the 'Year without a Summer'. sounds altogether too benign, no more than the inconvenience of donning an overcoat in July, when, in fact, 'no summer' meant 'no food' for millions of people. As a result of the prolonged poor weather, crop yields [here and there] across the British Isles and western Europe plummeted by 75% and more in 1816-17... the European harvest languished miserably. Farmers left their crops in the field as long as they dared, hoping some fraction might mature in late-coming sunshine. But the longed-for warm spell never arrived and at last, in October, they surrendered. Potato crops were left to rot, while entire fields of barley and oats lay blanketed in snot until the following spring.

In Germany, the descent from bad weather to crop failure to mass starvation conditions took a frighteningly rapid course. Carl von Clausewitz, the military tactician, witnessed 'heartrending' scenes on his horseback travels through the Rhine country in the spring of 1817: 'I saw decimated people, barely human, prowling the fields for half-rotten potatoes."

Fred M. Bullard, Volcanoes of the earth, Ch.18

"Thus, the dust particles act as a screen which prevents heat from reaching the surface of the earth, but let it escape freely." [Agricultural greenhouses use clear sheeting. But if one of them used light-gray colored 75% translucent sheeting, the solar energy entering the structure would be reduced, while the heat loss through the plastic would be unchanged.]

Mauna Loa Observatory Atmospheric Transmission



Solar-energy-and-volcanic-ash

The eruption of Mt. Pinatubo in 1991 was carefully studied.

Pinatubo, erupted about 1.4 cubic kilometers of material and was the 2nd dirtiest volcano of the 20th century. But more relevant to the matters under discussion, Pinatubo reduced worldwide solar energy by more than 10% for more than 18 months.

Earth science and the environment textbook, 6.4 Thompson and Turk,

"Volcanic eruptions directly alter the atmosphere to change global climate. Volcanos emit ash and sulfur compounds that reflect sunlight and cool the atmosphere. For two years after Mount Pinatubo erupted in 1991, Earth cooled by a few tenths of a degree Celsius." [In fact the planet cooled by much more than this. This seems to be propaganda to minimize the effect of Volcanic eruptions. The problem is that if the world sees climate change as caused by volcanos we will not believe in the CO2 theory of climate that benefits OPEC so much.]

Travis Hudson, Living with Earth, Ch.10

[The following isn't science, it is propaganda. It is someone trying to hide how volcanos are responsible for climate change.] "The impact on global temperature of eruptions like El Chichon and Mount Pinatubo is relatively minor, but <u>many scientists</u> agree that the cooling produced could alter the general pattern of atmospheric circulation for a limited period. Such a change, in turn, could influence the weather in some regions...

The preceding examples illustrate that the impact on climate of a single volcanic eruption, no matter how great, is relatively small and short lived. The Graph in Figure 10.2B reinforces this point. Therefore, if the process discussed in this section are to have a pronounced impact over an extended period, many great eruptions, closely spaced in time, need to occur. Because no such period of explosive volcanism is known to have occurred in historic times, it is most often mentioned as a possible contributor to prehistoric climatic shifts."

Tambora compared with Pinatubo

In terms of ejected material, or ejecta, Tambora was about 129 times the size of Pinatubo, ejecting about 180 cubic kilometers of material. And again, Tambora's ash doesn't even show up against ice age ash levels.

<image of blue Earth from space>

Perhaps these ash levels were so high that they caused the pink-skies and blood-moon recorded by ancient sources.



<Drawing of two cubes. The left cube shows the solar energy loss from Pinatubo over 3 years. The right cube

shows the energy released by man burning fossil fuels since say 1917. Both cubes are to scale and both have their amounts printed on their front.>

Now when smallish Pinatubo cut solar energy striking our planet by 10%, for 18 months, this was a huge amount of energy in human terms. The drop in solar energy, the decrease in energy reaching our planet's surface was far more energy than has been released by all the fossil fuels ever burned by man. (Some quantified estimates of this would be a useful thing for the world right now.)

Krakatoa got lots of press

The Krakatoa eruption of 1883 is in the Apple dictionary, but the Tambora eruption of 1815 (only 51% earlier) is not. Krakatoa in the Sunda strait ejected 20 cubic kilometers of material, while Tambora on the island of Sumbawa ejected 180 cubic kilometers of material. By volume of ejecta, Tambora was 9 times the size of Krakatoa. However, by estimate energy (see below) Tambora was 84 times the size of Krakatoa. Strange how Krakatoa gets so much attention. It is almost like some group is trying to do some sort of look over here magic trick with our memory of Tambora. Apparently, they want us paying attention to Krakatoa.

Gillen D'Arcy Wood, Tambora, Ch. 2

"Tambora, in its decapitated state, stakes a serious claim as the most destructive volcano in human history. In light of this, the celebrity of Krakatau's more modest eruption of 1883 seems undeserved."

Fred M. Bullard, Volcanoes of the earth, Ch. 5

"The eruptions of Krakatoa in 1883 provided an opportunity to study the distribution of volcanic ash in an eruption. Krakatoa is located on a small island between Java and Sumatra in Indonesia. As it was one of the great volcanic eruptions of historic time-perhaps the greatest of all [Not so. Tambora ejected 9 times material and had 84 times the energy. It caused the]- distribution of its ash was more extensive than is usually the case. It is estimated that in the eruption, one cubic mile of material [4.4 cubic km] was blown to a height of 17 miles [28km] and that the dust was carried completely around the earth several times by air currents. Dust fell in quantity on the decks of vessels 1,600 miles away three days after the eruption. Measurements of the sun's rays reaching the earth's surface for the year following the eruption were only 87% of normal, attesting to the effect of the dust in the atmosphere. [Perhaps 10% shading from coloring the skies light gray is achieved with little ash, but having perhaps 100 times more ash in the atmosphere only results in 25% shading.]

The brilliant glow of the skies before sunrise and after sunset due to the reflection of the sunlight from the dust particles in the upper atmosphere attracted world-wide attention. The phenomenon suddenly appeared in a belt 15° on either side of the equator in the week following the eruption. Then then gradually spread until it covered the entire earth. [Krakatoa is at 6° south latitude]

In England, particularly, this phenomenon was the subject of a heated controversy which was debated in the daily newspapers as well as in the scientific journals. One group [the normal people] held it to be due to the 'volcanic ashes' ejected into the atmosphere by the eruption of Krakatoa. Others [fronting for OPEC absurdly] held it was due to the earth passing through a cosmic cloud, the tail of a comet, or a shower of meteors, or gasses foreign to our atmosphere, possibly derived from the eruption of Krakatoa, or from outer space. In the United States, scientists soon took sides in the controversy and articles on the subject appeared in the leading scientific journals. [Normal common sense was on one side, OPEC propagandists were on the other] The facts, as set forth in one of these articles on the 'sun glows' (Hazen 1884) [A matrix name for volcanic haze expert], as well as the basis for objections to the 'volcanic-ashes' theory, will be of interest...The phenomenon continued, with varying degrees of brilliance, for months. It was noticeably more marked during dry periods....

The advocates of the 'volcanic-ashes' theory, notably Mr. Norman Locker in the December 10 issue of the London Daily Mail, pointed out that ash had fallen in Spain and in Holland and that analysis of this material showed that it was identical with the Krakatoa ash. Yet this was not convincing to the opponents of the theory." [It was obvious to everyone at the time that the cold weather was due to Krakatoa. Yet this did not quiet the opponents of the theory because these people were already angling to eventually obliterate the historical memory of this event.]

Gillen D'Arcy Wood, Tambora, the eruption that changed the world, Quoting Benjamin Franklin

"The eruption of the Iceland volcano Laki in June 1873 brought about abrupt cooling, crop failures, and misery to Europe the following year, and created dangerously ice conditions for Atlantic shipping."

Gillen D'Arcy Wood, Tambora, the eruption that changed the world, Quoting Benjamin Franklin

"There seems to be a region high in the air over all countries where it is always winter", he wrote. But perhaps the "universal fog" and cold that had descended from the atmosphere to blanket all Europe might be attributed to volcanic activity, specifically an eruption in nearby Iceland."

Fred M. Bullard, Volcanoes of the earth, Ch.18,

[This quotes Abbe, who quotes Benjamin Franklin from 1784] "During several of the summer months of the year 1783, when the effects of the sun's rays to heat the earth in these northern regions should have been greatest, there existed a constant fog over all Europe, and parts of North America. This fog was of a permanent nature. It was dry, and the rays of the sun seemed to have little effect in dissipating it as they easily do a moist fog rising from water. They [the sun's rays] were, indeed, rendered so faint in passing through it that, when collected in the focus of a burning glass, they would scarcely kindle brown paper. Of course their.. effect in heating the earth was exceedingly diminished. Hence the surface was nearly frozen. Hence the snow remained on it unmelted, and received continual additions... perhaps the winter of 1784-84 was more severe than any that happened for many years.

The cause of this universal fog is not yet ascertained... whether it was the vast quantity of smoke, long continuing to issue during the summer from Hecla [volcano] in Iceland, and that other volcano [Skaptar Jokul] which rose out of the sea near the island, which smoke might be spread by various winds, is yet uncertain."

[The ash was from the 1783 eruption of the Asama volcano in Japan. Reader: before going on, how much colder would you judge it was?

- A) 1-4°
- B) 3-7°
- C) 5-10°
- D) 8-15°
- E) 12-22°]



A Pyro•helio•metric-chart of various eruptions. Note how all large eruptions cause a measureable drop in solar energy for years.

Fred M. Bullard, Volcanoes of the earth, Ch.18

"for the past century, direct measurements of solar radiation by means of the pyr-helio-meter, an instrument that measures the total heat of sunshine, show marked fluctuations from year to year. Dr. H.H. Kimball of the U.S. Weather Bureau prepared a graph (reproduced by Humphreys 1940, p.601) showing the changes over the period from 1882 to 1913 (Fig.101). The yearly values are given in terms of the average for the entire period; so the percentages of this average do not represent the full [local] effect of the disturbing causes, 'of which volcanic dust certainly is the chief' (Humphreys 1940 p.601) The marked decrease in solar radiation in 1884-1885 coincides with the great eruption of Krakatoa. The low in 1890-1891 corresponds to the eruption of Bandai San in 1888, Vulcano in 1888-1890, and Bogoslof in 1890. The low of 1902-1903 was during the eruption of Mount Pelee and Santa Maria. And the 1912 low was at the time of the eruption of Mount Katamai. As a result of these and other studies, Humphreys concluded: 'There is, then, abundant pyroheliometric evidence that volcanic dust in the upper atmosphere actually does produce the decrease in direct solar radiation... [and] may be regarded as conclusive both of the existence of volcanic dust in the upper atmosphere and its efficiency in intercepting direct radiation from the sun'."

Fred M. Bullard, Volcanoes of the earth, Ch.18

"The role of volcanic dust in temperature on a global scale, firmly advocated by Abbot and Fowle (1913), Humphreys (1940), and others, was re-examined by J. Murray Mitchel, Jr (1961), in an effort to account for the world-wide changes in temperature."

Gillen D'Arcy Wood, Tambora, Ch. 2

"Individually, volcanoes...have the capacity to influence climate for 2 to 3 years, until their <u>aerosol cloud</u> washes from the atmosphere. Volcanoes erupting in clusters, however—as they did in the 13th century and in the Tambora period of the early 19th century—achieve a cumulative chilling power over global climate by virtue of the slow thermal recovery of the world's oceans, which continue to depress temperatures for a decade or more after the volcanic dust of any one eruption has vanished from the atmosphere."

Fred M. Bullard, Volcanoes of the earth, Ch.18

"Such small particles would take, according to Humphrey's calculations, from 1 to 3 years to settle out of the atmosphere from the levels [in the stratosphere] to which they are blown by volcanic eruptions."

Fred M. Bullard, Volcanoes of the earth, Ch.18

"Valuable information on how long the dust remains in the atmosphere (residence time) was provided by studies on the residence time in the stratosphere of radioactive waste debris following nuclear bomb tests. Since the bomb debris and dust from the more violent volcanic eruptions probably reached comparable heights and were comparable in size, the comparison is valid. It was concluded (Stebbins 1960) that dust from such eruptions is removed fro the atmosphere after 5years." [This same author infers that Tambora released 100,000 times as much energy as the Bikini test bomb (see below). Therefore, we see 5-years as a minimum residence time. Also, it should be easy to discern some single eruptions from the ice cores ash level charts.

1) How long does the ash take to clear?

2) How does eruption size relate to ash levels and residence time?

3) What does the clearing curve look like for various eruption sizes?

4) Such things must be widely known.

Fred M. Bullard, Volcanoes of the earth, Ch.18

"It is the dust concentrations in the lower stratosphere (20-27km) that are responsible for the most persistent and densest dust veils. Dust in the troposphere is soon washed out by rain. In the most violent eruptions, such as that of Krakatoa in 1883, dust particles reach the upper atmosphere at heights of 45-50 kilometers. Optical effects produced by intermediate sized particles from the 1883 eruption of Krakatoa were last seen over Europe 2.8 years later and in Colorado 3.1 years later." [Smaller particles apparently remained in the upper atmosphere even longer, providing some degree of solar shading. How long do they remain, and how much shading do they cause?]

Fred M. Bullard, Volcanoes of the earth, Ch.18

In reading the following, consider the pyro-helio-metric chart just above that showed how 4 different eruptions brought solar energy down by 6% to 16%. And these were not even particularly large single eruptions. So it is easy to imagine that there are periods where not only are the little common eruptions more common, but so to are the Tambora-sized eruptions, as well as eruptions over 10 times more powerful than Tambora.] "The total volume of dust necessary to reduce solar radiation by 20%, the figure obtained from measurements in the fall of 1912, following the eruption of Mount Katmai, is surprisingly small. Realizing that in most regions of the earth the sun's rays will pass through the dust layer at such an angle that they must encounter roughly twice as many dust particles as if they came from directly overhead, a reduction of 20% in solar radiation would require only 0.0027 cubic kilometers of solids. [One part in 7,703 seems hard to believe. I might guesstimate it at one part in 770 with small eruptions and one part in 77 with the biggest eruptions. This is equal to 0.027 to 0.27 kilometers of solids. It probably doesn't take much if the particles are small enough and in the upper atmosphere] This is small compared with the 20.8 cubic kilometers contributed by Krakatoa. Even this small amount, if contributed every 2 years, would be sufficient to maintain continuously a reduction of about 5.6°C (10°F) in the average mean temperature and greatly extend the permanent snowfields of the earth...

One might think that this quantity of dust would produce a recognizable layer on the earth's surface. However, calculations show that this quantity of dust yearly over a period of 100,000 years would produce a layer over the earth of 0.0508cm [half a mm] thick!" [How much ash is there per year in the Antarctic ice? How big are the particles? Are these numbers correct? Is it really such a small amount of ash that is doing all the harm? Can we produce some annual ash level charts that are accurate to the year?]

Dusty Ice ages?

We have to call ice ages dusty because as a whole the skies are very dusty. But it is important to realize that there is not much ash fallout. The skies are dusty not because the ash is so terribly thick. It is more a matter of a tiny amount of microscopic ash particles getting up into the dry stratosphere and staying up there for years and decades in long-tail amounts.

Can we wash the stratosphere?

We can run giant geothermal steam pipes for up to 3,000 km. Perhaps we can run them up the side of Mt Everest and artificially generate a volcano's-worth of hot moist air. Perhaps we can generate sufficient super-heated steam that it will rise and punch through, up to the lower stratosphere. Perhaps we can rinse the stratosphere with one giant enough steam pipe convergence. Maybe this will clean the stratosphere. Everest is already 8,800m up. We can certainly get that to 9,000m.

And we might have a giant tube chimney atop Mt. Everest, with giant helium filled cells in the walls, so it stays up in the winds. And we can use suspension bridge tethering cables. And perhaps the tube will have progressively dilated sphinxes at regular intervals so that the flow of super-heated steam will raise the chimney another 5km or 10km into the air. Then again, perhaps simply pouring the ocean into the right hotspot in still winds will produce a large enough steam cloud to simply punch through into the stratosphere.



Over the last 7,000-odd years, over the Holocene geological era, our planet has been at its warmest, wettest and least volcanically active. During this period, volcanic ash has been almost nonexistent in the atmosphere — Except for a few smallish eruptions.

Isn't it plainly obvious that there is an inverse relationship between volcanic ash and temperature? Doesn't volcanic ash and volcanic shading clearly affect planetary temperatures? More ash = lower temperatures.

Given the clear role of volcanic ash in climate, it is remarkable how AI Gore and his supporters in the greenhouse gas lobby simply ignore the role of volcanic ash in climate change. Why didn't Gore mention volcanic ash in his movie? And how come our media never talks about volcanic ash with respect to climate change? Are they looking for the truth, or an excuse to cut our use of coal and oil sands, so we buy more Mideast oil?

It should be noted that all the volcanic ash data comes from exactly the same ice cores that Al Gore and his financial supporters are using as their main record of our planet's temperature and CO2 levels.

The ash data was even included in the climate graphs of the late 1990s and early 2000s. But strangely, this obviously valid, if not obviously valuable information has disappeared from our 'free' press and 'free' media.

<Thomas Dolby's music "blinded me with science" 20-sec>

<Recycling GIF of earth's ice caps cycling between iceage and warm-age.>

We know how warm different latitudes were during recent ice ages by studying fossilized plants and pollen. Temperature did not change much near the equator or the polar regions. Most climate change happened in the middle latitudes that were tipped into building ice.

<sloping sunlight drawing, 90°, 60°, 30°>

This is consistent with the effects ash filtered sunlight. The tropics don't cool much, because the nearly vertical sunlight travels a short distance through ash-laden skies. The polar regions also don't change much, because they get little solar warming even when the skies are clear. It is the middle latitudes that are tipped into a polar climate when the sun's energy must pass diagonally through an ash filtered sky.



Albedo-graph. During ice ages, the part of the planet that gains heat and evaporates water shrinks.

Today, our planet has a wide sub-polar band. But during an ice age, everything is compressed, with the biggest changes happening in the middle latitudes. Again, the tropical regions only get a little bit cooler.

Gillen D'Arcy Wood, Tambora, Ch. 3

"In his previous 9 year of temperature observations, 1807-1815—an already below-average sampling owning to the impact of the 1809 Unknown eruption—the average daily temperature in London had been 50°F. In 1816, <u>the average fell by 12 degrees</u> to <u>38°F</u>. The 'Year without a Summer' appears to mild a description for the meteorological annus horribilis that was 1816. More like the 'Year without a sun'." $[12^{\circ}F = 6.7^{\circ}C$. Apparently the high latitude places covered in ice sheet during a volcanic ice ages are the places that see the greatest decline in sunlight and temperature during an ice age.]

James Lovelock, Gaia, 1972, Ch. 1

"The glacial cold spells—Ice Ages, <u>as they are called</u>, often with <u>exaggeration</u>—affected only those parts of the Earth outside latitude 45° North and 45° South. We are inclined to overlook the fact that 70 per cent of the Earth's surface lies between these latitudes. <u>The so-called Ice Ages</u> only affected the plant and animal life which had colonized the remaining 30 per cent, which is <u>often partially frozen even between glacial periods</u>, as it is now."

[1) Look at how these words completely minimize ice ages. First they are called a misnomer.

- 2) Then they are called an exaggeration
- 3) Then they are called 'so-called ice ages".

4) Then it is said that they are an exaggeration because the poles are covered in ice anyway.

5) The Arabs clearly want the best humans (eu•mans) to live in the jaws of death in tsunami funnels and in Pompeii towns at the foot of a volcano. Here they tell us not to worry about the next Ice Age.

6) What a hard to read and hard to quote passage. I say this passage was carefully crafted to be hard to understand.

7) What a great example of what George Orwell spoke of in Politics and the English language.

8) Some lies tell the true more perfectly than any admission.

<Photo of bad Mexico City smog day that is clear everywhere else>

Is the blueness of Earth's skies only a temporary phase, something that only happens during its now rare warm-ages. Perhaps the legendary END OF DAYS is really about the END OF BRIGHT SUNNY BLUE SKIED DAYS here on Earth. Perhaps it is the beginning of a 110,000-year perpetual overcast and pink twilights under cold dry skies perpetually hazed with volcanic ash.

I imagine the haze in Mexico City, but worldwide and lasting for millennia. And sometimes the sky clears a great deal and temperatures spike until another bunch of volcanos goes off.

And as with storm weather, during an ice age, the equatorial region are still bright enough for plants to thrive, it is the higher latitudes that never see a sunny day grow quite cold and build ice to great thicknesses.

Albedo

This is the share of light (or radiation) reflected by an object. There can be little doubt that the presence of ash pollution in the Atmosphere causes the planet to have a higher albedo. As well during an ice age, there is much more ice and snow and that also contributes to Earth's higher albedo.

<clip of this woman from this show >

Some years ago, there was a National Geographic television documentary that talked about ice core climate data. As I recall, this show featured a researcher that was supposedly the only person alive who could tell individual volcanos apart by microscopically analyzing the ash in the ice cores. I think this show was Arab propaganda, for the following reasons:

- 1) There are not that many types of igneous rock.
- 2) The composition of the ejecta surely varies within eruptions.
- 3) The explosive forces varies within eruptions.
- 4) We are talking about rock mist that has hardened into rock
- dust. these are tiny particles that are probably not representative

samples in any way.

5) The 'uniqueness' of the researcher's talent makes it unverifiable and therefore something that is not science. This does not belong in a show purporting to be based on science.6) The show failed to use either the words 'unscientific', 'unverifiable', or 'not widely accepted', and instead described this

researcher in a way that hides the fact. 7) The show dwelled excessively on something unverifiable that partly blocks the consideration of volcanic ash as a cause of climate change.

8) The show's claim that most volcanic ash pollution subsides in a few years, does not fit with the way ash levels decline in the ice cores with respect to the largest eruptions.

8) Apparently there is a group of people that both knows the threat the world faces and is also seeking to hide that threat by producing scientific fiction, or scientific propaganda.

90% heat leakage, 10% sunlight.

It is notable that even after the eruption of Lake Toba, with Earth's skies maximally filled with volcanic dust, the surface was only about 12° C cooler than today. If we assume that this resulted in the loss of half of solar energy, then total darkness would only lower planetary temperature by say 24°. Thus we are left supposing that Earth's temperature is mostly a function of heat leakage from inside. Thus it seems that Earth goes go from 0°K to 269°K± without any sunlight at all, and then sunlight only accounts for an extra 24°.



8.. MOST VOLCANOS ARE NEAR WATER

The role of water in volcanos is clear

It is clear that in South America from Guayaquil and Cuzco there is a coastal desert and no volcanos. In Chile, the Atacama Desert is one of the driest places on earth with few volcanos. Likewise, in Mexico from Mazatlan to Mexicali, where it is dry, there are practically no volcanos. Also considering how active the Sea floor is adjacent to California, there are few volcanoes.

<Volcanos by distance to a water source graph>

Nearly all of the world's volcanos are near water. Volcanos quickly grow rare as we move away from a water source. It would be informative to chart volcanos by distance to a warmage water source.

<aerial pic of water-filled Libyan desert volcano>

Some volcanos have an aquifer deep underground, like this volcanic oasis in the Libyan desert.

<Dimensioned satellite photo of Crater Lake>

Many volcanos have oversized lakes. And obviously this massive caldera didn't fill with rainwater. The lake's watershed is barely larger than the its surface area.

<Spirit lake Mount St. Helens>

Here is Spirit lake at Mount St. Helens. Only 37 years after the eruption of in 1980, it is almost overflowing.

<Dimensioned satellite photo of Lake Toba>

Here is Lake Toba in Indonesia. It is about 60 x 100km. This giant lake has condensed over a massive volcano. Sea water, and ground water flows through the fractured rock around volcanos, sometimes flowing for great distances, and when it hits hot magma, the result is steam, which often builds into a lake. And judging from the amount of water that re-condensed in Lake Toba, there is some planet-scale cooling going on here.

Fred M. Bullard, Volcanoes of the earth Ch.18

"It has been repeatedly stressed that volcanic vents are located at the intersection of two sets of fractures."

[The volcanos cause the fractures and not the other way around. If you take a strong blow torch to the center of a 30x30cm piece of granite, and heat it rapidly the piece it will fracture. What you are doing is heating a local spot and it is expanding, and then the surrounding rock (which isn't hot or expanded) gets fractured from this expansion. Something similar happens to volcanos.]

<New Orleans flooding photo>

Just as a warmer earth is a wetter earth, a colder earth is a dryer earth. So for the past 7,000 years, during the Holocene era, Earth has been at the warmest and wettest part of the ice age cycle. Today's warm, wet, high sea level climate retards volcanic eruptions in three ways.

1) First and foremost, higher and more importantly wider oceans retard volcanos near the ocean.

2) A warmer Earth sees more ocean evaporation, and more rainfall to retard the volcanos irrigated with rainwater runoff.3) Melting glaciers and ice caps also produce meltwater which may irrigate volcanos downstream.



Note how the eruptions of El Chichon 1982 and Pinatubo 1991 coincide with El Nino years as shown below. In the third graph, we see how both volcanos are in areas that dry out in El Ninos.





El Nino dry spots

A little detective work should tie some other recent eruptions to altered rain patterns or the loss of glacial runoff. Each of these eruptions will stand as evidence that surface water is involved with volcanism. However, many volcanos are simply unquenchable, and many eruptions will happen regardless of stable surface hydrology.

It is all about variable water

Look how volcanos are sparse in the main dry continental areas of the so-called ring of fire. By contrast the wetter areas of the ring of fire generally have volcanoes. Thus it appears that 'surface' water, or more accurately, the variable presence of water plays a critical role in the building-up of explosive gas pressures and volcanos.

What volcanos require to exist

1) There must be a gas leak or gas build up.

2) The place can't be dry all the time.

3) The place can't be wet all the time.

4) The place must be wet for a long time and then regularly dewater.

<Blue earth from space>

Some volcanos are little doubt unquenchable, and there is always some volcanic activity on earth, even when Earth is hottest and wettest. But most volcanos are cooled and delayed a bit by one water source or another during Earth's brief clearskied warm•ages.

The result is an atmosphere so free of volcanic ash that we all assume that our planet normally has clean blue skies. But it won't last. As surely as winter follows summer, the planet will eventually start another 'pink skied' hazy volcanic ice age, another 'climate winter,' when our current 'climate summer' ends.

Water and the end of days

As Earth approaches a full melt of its glaciers, the meltwater will start to disappear. The rare (or perhaps nonexistent) volcanos irrigated with glacial meltwater will then lose their water and start to erupt. However, if the El Nino weather pattern becomes the norm before then, the new rain patterns may cut water to a number of volcanos currently irrigated with rainwater runoff. When their groundwater runs dry, there may be a rapid surge in eruptions that may tip the planet into a full ice age cooling trend. And of course, if a huge volcano or a couple small volcanos randomly erupt together, that may start the next ice age.

Where are the freshwater volcanos?

Theoretically, a prolonged El Nino weather pattern may cause a wave of eruptions. We should therefore know which volcanos have a water source that will dry out in an El Nino.

We should also know which volcanos (if any) are heavily irrigated by meltwater streams. Retreating glaciers are by definition all in marginally frozen places. They produce water now, but if the planet gets only a little bit cooler, they will all stop producing water and the volcanos cooled by their meltwater will tend to erupt. These freshwater volcanos will be our top priorities in our battle to keep our volcanos wet.

Each volcano gets a timeline

We will take numerous core samples from around all the world's recently active volcanos We will estimate ejecta for each eruption in each volcano by ash thickness and distance. We will look at how each ice age unfolds for each volcano. Which volcanos tend to erupt early in each ice age? Are there certain volcanos that tend to lead the world into ice ages?

Let's put the timelines together, what overall patterns do we see? Do volcanos just occur randomly, or do they cluster?

Let's put a realistic tail on each eruption and make inferences about ash levels in the skies. We should have satellites ready to measure albedo gain after the next eruptions. How do ice age eruption cycles typically begin, and how fast do things get bad? How bad do they get?

Why volcanic eruptions are associated with earthquakes

If there is an earthquake, it tends to open the outgassing channels in nearby volcanos. If there isn't enough water to cool the openings, then this may trigger an eruption.

Fred M. Bullard, Volcanoes of the Earth, Ch.5

[I disagree with the following. I think that all volcanic water is surface water. I ask, if volcanos eject water, then: 1) Why don't we find volcanos away from water sources on

Earth?

2) If we remove the water and steam from our samples of volcanic gas, why is it that the dry volcanic gas is 95-96% CO2 just like the atmospheres of our sister planets Venus and Mars.3) Why don't we find water in significant amounts on Venus? solar system?

4) Why does the eruption of a steam cloud precede so many eruptions?]

"It has long been recognized that gas is the primary force in producing volcanic explosions. When water changes its state from a liquid to a solid (i.e. to ice) a slight expansion, equal to about one-ninth of its volume occurs. But when water changes to the gaseous state the volume increases instantly 1,000 times! Here is the force necessary to produce a volcanic eruption. It was early recognized that the chief gas given off in a volcanic eruption was water vapor, or steam. So Scrope, Lyell, and others developed the concept that the arching (folding) of the earth's crust caused a sufficient release of pressure to permit the water in the magma to vaporize and cause an explosive eruption.

Although this is essentially the current [fake Arab consensus] idea, the <u>debate as to the source of the water in the magma is still vigorously pursued</u>. Lyell (1875, 2:226) explained the concentration of volcanoes around the ocean margin on the assumption that the sea was the source of the water. Daubeny (1827, p.368) depended on the percolation of sea water into the deep interior, where reaction with the alkaline metals provided the heat for the "chemical theories" [ridiculous Arab-backed theories that chemical reactions account for the heat in volcanos]. Others relied on meteoric (rain) water as the chief source, pointing out that, while volcanoes are concentrated on the margins of the continents, they are frequently 50-100 miles from the coast, and the percolation of sea water to depths beneath such volcanoes is highly improbably.

In the last century the proponents of seepage water, either sea water, or meteoric water [From meteors], have lost ground, and evidence is accumulating in favor of the theory that the water is an original constituent of the magma, that is, Juvenile water in geologic terminology. It would appear that this problem might be resolved by simply collecting and analyzing gases from an active volcano. However, the collecting of gases from an active volcano involves some serious problems in securing the collector's safety and in protecting the samples from contamination by atmospheric gases." [2nd mention of the difficulty in this book.]

9.. VOLCANIC PLUG FORMATION

<Video of sheet of granite being flame treated so that the surface chips off>

The surface rock around most volcanos is full of fractures due to repeated heating and cooling. This results in repeated expansion and contraction. If there is no water, the volcanic gas will escape and does not build up gas pressure. However, if the area is near a water source, the water normally finds a way into the cracks.

Here we imagine that all of the cracks and fissures around a volcano (all the possible outgassing pathways) are filled with water. These create what are basically percolation tubes/cracks where escaping volcanic air bubbles are forced to bubble up through narrow channels of water. These air bubbles frequently contain lots of ash. So as the bubbling occurs, the dry ash gets caught by water, forming lahar, or ash mud. Over time, the lahar increases in ash content, (and decreases in water content) until it basically becomes a sort of long hard plug made out of compressed ash mud and water. Then high temperatures and pressures tend to turn the ash mud into a bubbly froth before boiling the water off. Then the ash is baked and re-fused into pumice. Here we see the sort of weak, and somewhat porous natural cement (a frothy cement called pumice). And this is what plugs the outgassing pathways of a volcano. And here we note that the bubbles in pumice very often occur along an axis, as we would expect from an outgassing channel.

These plugs block the way and force the volcanic gas to find a new way out into the relative vacuum of our planet's surface. And whenever the high pressure volcanic air finds a new way out, the leveling nature of water and percolation process tends to quickly clog up that route. Thus the presence of surface water makes volcanos sort of self-clogging with respect to outgassing. Thus volcanic gas pressures build up underground.

Volcanos simply don't form where it is dry

Gas probably comes up through all convergent or subduction rifts. It is just that where there is water, it tends to get trapped and build volcanos.

Volcanos require the variable presence of water

If the place is always wet have few volcanos. If the place is always dry havefew volcanos. For volcanos to form, there must be water for only some part of the climate cycle.

<picture of clogged and backed up drain>

Note the way that uncompressed dirt frequently clogs up drain pipes. In fact, a short drain pipe clogged with dirt can easily hold back a pool of water a meter or more deep. The point is that long narrow escape routes are naturally prone to clogging, and clogging with material of little-or-no cohesion. Then these clogs can cause pressure differentials, and sometimes great pressure differentials over great distances.

Now even without ash plugs baked into pumice, we can easily imagine that what is clogging the volcanic vents is the surprisingly powerful combination of a tall column of water standing on a long plug of pressurized and packed ash-mud. The hard-packed ash-mud plug keeps the gas from reaching the water column and bubbling up. The tall column of water maintains significant back pressure on the ash-mud plug. Together the water and compressed ash mud create a highly effective plug for the tall and narrow outgassing channels.

The key ingredient here is water. Take away the tall columns of water on top of the ash-mud plugs and the plugs will first-of-all lose back-pressure. But secondly, the plug material itself becomes porous when it dries out.

How ash plugs work

Here is a simple experiment to demonstrate the difference between wet ash-mud and dry ash mud. Take four pieces of two-ply facial tissue and double them over twice so you have a piece of 16 thick two-ply, or 32 single-plies. Put the tissue over your mouth and blow gently but persistently through the tissue. You will find that air leaks out slowly, but easily through this membrane. Now wet the same pad of tissue and then press it between your palms. Press it firmly to get all the excess water out. Now try to blow through the membrane. Unless you blow much harder, very little air will pass. A similar difference exists between a wet ash plug and a dry ash plug.

The wet ash in the packed plug along with the tall column of water above the plug are a powerful combination, but one that only works well when it is wet. If the water goes away, the plugs simply stop holding back the volcanic gas. In places that stay dry, the ash-plugs are not able to form, and the gas just leaks out into the atmosphere. Here volcanic gas pressure does not build up. And without pressure buildup, there can be no volcanic eruptions. So the presence of water, or rather <u>the variable presence of 'surface' water</u> is the key ingredient in the formation of eruptive volcanos.

Fred M. Bullard, Volcanoes of the earth, Ch. 5

[This is propaganda. Some lies tell the truth with perfect clarity once you realize you are being told a lie.]

"Pumice is a type of pyroclastic [material] produced by acidic lavas in which the gas content is so great as to cause the magma to 'froth' as it rises in the chimney of the volcano and, with approach to the surface, into zones of decreasing pressure. [Not true. Pumice is obviously volcanic ash froth that has been baked.]

When the explosion occurs, the rock froth is expelled as pumice. Much of the material is shattered into dust-sized particles, but pieces varying from the size of marbles up to a foot or more in diameter are abundant. [The small size of pumice chunks speaks of the narrow outgassing tubes it formed in. We really should excavate and 3-D map the pumice tubes in some dead volcanos. We might also use tomography to map bubble and flow patterns. We must know how volcanos clog so we can more effectively deal with breaking up their clogs and bleeding down their back pressure.]

Pumice will float in water because of the many air spaces formed by the expanding gasses. It should be remembered that this material is as truly magma as any lava flow, [No. It is a two-step process. First it becomes ash.] but, because of its high gas content, it is expelled as pumice and ash rather than as a liquid. The debris with buried Pompeii in 79AD was pumice from the eruption of Vesuvius. It was nearly a thousand years later before any liquid lava issued from Vesuvius.

Volcanoes which eject chiefly pumice are the most highly explosive volcanos known. [More accurately: The most highly explosive volcanos tend to eject lots of pumice clogs from countless narrow outgassing tubes.] The volcanoes of Central America, in general eject chiefly pumiceous material, which over the ages, has blanketed most of the country to a thickness of hundreds or even thousands of feet (PI.2) Volcanic eruptions on the floor of the sea often discharge huge quantities of pumice. [something to remember] It was reported that in 1878 masses of floating pumice covered the sea in the vicinity of the Solomon Islands to such an extent that it took ships three days to force their way through them. At other times the pumice may drift with the currents and accumulate in such quantity in favorable bays that one can walk on the floating raft of pumice, unable to tell the exact position of the shoreline. Pieces of pumice can be found on most of the beaches of the world, having drifted throughout all the oceans.

Volcanic ash results when the rapidly expanding gasses (explosions) shatter the rock froth [aerosolize the molten rock]. The fragments consist of sharply angular glass particles, which under the microscope are easily identified by their 'shard' [sponge] structure (Fig.2) Such material is widely used as a scouring powder, just as it is found, as in Old Dutch Cleanser"

[In a chunk of magma blown out of a volcano, it is easy to imagine thousands of tiny bubbles. In a few moments this chunk goes from say 20 or 100 atmospheres to one atmosphere. This sudden depressurization blows the magma to microscopic bits while it is still molten. Then the bits harden into volcanic ash. Volcanic ash is both highly abrasive and FLYABLE=dust that easily suspends in the air.] **Note:** Super-hot volcanos like Hawaii, Sao Tome and Yellowstone — volcanos that are far from a plate margin — appear to be the result of ancient impacts with space objects. These volcanos are different and do not work in the same way as subduction volcanos.

The three parts of a volcano

1. The $\ensuremath{\textbf{CONE}}$ = the parabolic mountain of ash and volcanic rock on the surface.

2. The **WARMHOLE** = the single long path each volcano's gas bubbles use to get through the lithosphere.

3. The **ROOTS** = the sub-lithosphere "root-ball" of **WARMPATHS** that feed a warmhole with gas bubbles from a large gass bubble **FUNNEL AREA** perhaps 100km across underground.



What is left of a volcano when the ash is washed away.

<Black hole art, but upside-down>

Here we realize that all the "science fiction" about worm-holes in space is just more Mideast science propaganda. In this case, WORMHOLE looks like a BLURD (a blocking or blurring word) for WARMHOLE.

And while the science fiction of wormhole space travel is absurd fantasy with no connection to reality — the same construct works very well for understanding volcanos. In fact, it makes perfect sense. Here we imagine a one-dimensional volcanic warmhole, a pathway where the lithosphere rock is not missing, but simply hotter and weaker from all the hot gas and magma escaping through that path. These are perhaps 50-100km tall, with root systems as wide as half the distance to the next volcano down the line.



Only one warm hole per segment of fault line

Volcanic gases come up at both seafloor rift, at the divergent plate zone, and also at the subduction zone, also known as the convergent plate zone. However the way the gas comes up is quite different in these two places. At the divergent plate zone, the gas comes up continuously and steadily and in a linear manner along the linear feature that is the Sea Floor Rift. However, at the convergent plate zone, the gas comes up in periodic hot-spots called volcanos that erupt on rare occasions. Basically, at the subduction zone, the biggest and easiest to reach (or well-established) warmholes in the lithosphere grows fastest, stays hottest and channels all the outgassing from some length of subduction fault-line. All the other nearby warmholes tend to cool and die out.

At the subduction zone, there is normally one hot and soft warmhole for miles around that is the path of least resistance for all the outgassing and heat. All the gas for miles around goes through this one hole and thus this hole stays warmest and acts as the path of least resistance. Under this warmhole is frequently a great amount of trapped volcanic gas, the gas that didn't make it out when the subducting seafloor was formed. In fact, we might view the sea floor as saturated with gas, saturated by nature. As the subducting seafloor subducts and melts, this gas is released. Thus we imagine the sublithosphere at the subduction zone as full of gas that is constantly escaping trying to make it to the surface.



Volcano map of Central America. Note how the dry areas have few volcanos.

The subducting lithosphere is constantly melting and releasing the trapped MELTGAS that didn't make it out when that portion of seafloor was creates millions of years ago. This happens along a subduction path that changes little over time. So along every subduction zone, there is lots of gas that comes back up through the SUBDUCTION RIFT, the pathway the subducting seafloor uses when it converges against a continental plate.

The gas tries to rise straight up if it can. So there is a force driving the gas a bit inland if an outgassing hole exists to carry it that way.

<Plasma cutter video>

Due to the nature of warmholes, the meltgas probably funnels and consolidates and comes up in the biggest, hottest, best established warmhole along a section of subduction rupture. Then over time, we imagine that the high pressure gas in this warmhole works like a plasma cutter on the lithosphere. We also imagine that this cutter will tend to verticalize the flow of meltgas until the warmhole is more-or-less directly over the center of that stretch of subduction zone.

We also imagine that the roots of a volcano as warmholes that grow laterally into the sub-lithosphere for dozens of kilometers.

Fred M. Bullard, Volcanoes of the earth, Ch. 6

"A volcanic cone is the result of the accumulation of ejected material around the vent, and its shape is determined by the proportions of lava and pyroclastic elements in the material composing it. Typically, a cup-shaped depression, the crater occupies the apex of the cone. This is the surface connection of the volcanic conduit through which the ejected material reaches the surface. As the ash, cinders, and other fragmental materials shower down around the vent, a cone is formed, the slopes of which are determined by the angle of repose of the debris. Fine ash and cinders come to rest on slopes of 30°-35°... Hundreds of examples are to be found in the Western United States, and they are readily identified, even from a considerable distance, by the characteristic profile...

Most of the larger volcanoes of the world are composites, cones consisting of layers of ash and cinders alternating irregularly with tongue-like lava flows. ... a volcanic cone of the composite type is known as a stratovolcano.

Where the ejected material consists predominantly of lava, as in the Hawaiian volcanoes, a lava cone is formed... with gentle slopes, rarely more than $5^{\circ}-10^{\circ}$."

Why volcanos are cone rather than mound shaped

The typical volcanic cone speaks of the one-dimensionality and singularity of the typical volcanic warmhole. If there is any place that tends to temporarily dewater despite being in an overall wet area, this is it. Here, directly over the warmhole is where a volcano will tend to leak or blow its way out first— along with lots of aerosolized rock.

How Volcanos are like Nuclear Reactors

Here's a riddle. How is a volcano like a nuclear reactor? Well, if the water/coolant level gets too low in either one, heat dissipated will fall below heat generated. Temperature will then rise, causing the remaining water/coolant levels to evaporate.

The process feeds on itself and accelerates as coolant levels fall. At some point, temperatures cross water's boiling point, and all the remaining coolant evaporates at once.

This dewatering is the cause of the steam clouds that

are frequently a sign of both imminent volcanic eruptions and imminent reactor melt downs. In both cases, the next thing that happens is the unstoppable heat buildup.

In volcanos, what is happening is the columns of water are drying out all at once, and the ash plugs along with them. Thus the volcano then rapidly loses both its coolant and its ability to stop gas from escaping. In effect, the tissue from our tissue experiment is drying out, and gas is suddenly able to escape. Here with explosive eruptions we imagine many little caps coming off a volcano much like a cap coming off a shaken soda bottle. The next thing that happens is the spraying-out of the gas propelled liquid.

The 3 causes of eruptions in gassed liquids

Again, volcanos and soda bottles are both gassed liquids under pressure. The 3 main triggers of explosive eruptions are: 1) If the pressure is too high, and then suddenly there is a big depressurization, this can cause an explosive eruption. 2) If the soda is very cold when the bottle is opened, there will often be no bubbles. But then if it sits in the sun for a time, bubbles will appear. So heat increases CO2 outgassing, at least when the CO2 is dissolved in water.

3) If the soda is dropped, there will be bubbles too. Gas molecules have nestled among liquid molecules, and sudden movement will knock them lose. So agitation increases outgassing too.

The sudden loss of pressure is probably head and shoulders above the rest. However it is probably increased a bit by increased heating and shaking.

<soda bottle overflowing video>

When soda sprays out of a freshly opened bottle, the cause is a sudden change in pressure. The high pressure gas rushes to equalize pressure, and in the process acts as a propellant for the liquid. Thus the escaping gas frequently propels much of the liquid out of the bottle.

Now with soda bottles, there is a single bottle cap keeping the pressure bottled up. With volcanos the pressure is bottled up by millions (or perhaps just hundreds) of tall columns of wet-ash acting together like a single self-repairing bottle cap on a single warmhole. And this bottle cap is based on the presence of surface water. So when the ground dries out, the bottle cap stops working.

Viscous liquids can support huge pressure gradients

It is quite common for water pressure to be noticeably lower at the backs of some buildings. This is because long tubes cause friction and pressure gradients even for water, which is fully liquid.

Now imagine a fissure that is the size of the average pumice chunk, say 12cm across. This fissure might be 100m long, and say 3km deep. So let's imagine ash plugs that are maybe 3km tall. How much of a pressure gradient do these ash plugs support? A big one right?

<Sub-lithosphere volcano tree-root art with pressure gradients, 1X, 3X, 10X 40X, 100x. Also exponent curve for "area to depressurize" Make sure to show how the action is going on mostly under the lithosphere.>

Now when surface water starts to get scarce, volcanos will tend to heat up and boil off the remaining water in a cloud of steam, just like with a nuclear reactor. Then frequently, the volcano's many ash plugs become porous all at once, and the "bottle caps" thus comes off the "soda bottle" more or less all at once — at least on a geological time scale.

Now volcanos are on the order of a quadrillion

(1,000,000,000,000) times larger by volume than a typical soda bottle. When the soda bottle is opened, the distances are tiny and the liquid is completely non-viscous. So it takes an instant to equalizing pressure and spray its contents out.

Volcanos on the other hand are huge and the liquid is quite viscous. So a volcano will take considerably longer than a soda bottle to equalize pressure with the relative vacuum of the planet's surface. As well, more viscous material is probably more prone to being propelled by the sudden onrush of the gas trying to escape. And the volcanic soda bottle also has a very long neck (the volcano's warmhole), a neck that is about as long as the continental lithosphere is thick.

Thus we imagine a great long pressure gradient — as well as delayed reactions. And this is why eruptions take hours and days to unfold. It is also why there is often a series of cascades and hiccups.

Fred M. Bullard, Volcanoes of the earth, Ch. 6

"The 1835 eruption of Conseguina [Nicaragua]... the type of eruption which must have occurred thousands of times throughout the area in recent geological time...

In places, the roar [of the eruption] was practically continuous for seven hours, during which time the ash fell. Increased and complete darkness enveloped an area with a radius of about 50 miles."

[1) This process of releasing pent-up gas repeats itself every so often in countless volcanos.

2) Volcanic gas explosions involve immense volumes of high pressure gas that are certainly best measured in cubic kilometers, at least once they reach the surface and expand in volume by perhaps 10 to 200 fold.

3) Stop and ponder how gas roared out of this small volcano for over 7 hours. Up from this hole came a great flow of gas, that enlarged and maintained this volcano. This was full of rock ash, blown to bits by the sudden depressurization, and carried along by the great gas flows.

A geological instant

when a volcano's soda bottle is opened, it only takes an instant to equalize pressure and spray its contents out. Rather it takes a geological instant to do this, perhaps a human day or a human week.

A narrow warmhole

The warm hole is narrow in comparison to the volume of sublithosphere gas that escapes. It is like a shaken 1-litre bottle of soda water with a 4mm hole. It takes some time to stop spraying.

Surface drying and eruptions

When the surface water dries up, it first involves only a small area at the center of the volcano's "bottle-cap system". This is normally the hottest and most central area, an area surrounded by other hot areas. Here is where the volcano will first start drying-out, leaking gas and loosing back pressure.

Now if there is enough water, and the eruption is small, then water will flow in from all around and this will enable new ash plugs to form.

But if there is too much gas and heat, or the volcano does not have enough irrigation water, the volcano will dry out and lose all pressure. This will happen first at the center, and result in a great increase in the amount of gas coming out and heating of the warmhole and cone. This heating will drive the rapid expansion of the dry area. And simultaneously, the ash plugs or cooked-pumice plugs will start being blown out. This the source of the flying pumice that frequently precedes an explosive eruption.

How massive eruptions unfold

Stage 1) The volcano dries out and there is a cloud of steam.
Stage 2) The warm hole starts coming apart and opening up from the top down. This takes some minutes or days.
Stage 3) After a while there is often a colossal explosion as the remainder of the ash plugs get blown out by the rapidly increasing flow of sub-lithosphere gas. When Mt. St. Helens erupted, the gas pressure from this explosion knocked down all the trees for miles around.

Stage 4) There is a great exhalation through the warmhole that takes some hours or days. And under the warm hole, there are many chunks of rock being blown off and carried to the center of the network and up into the warmhole where they are carried upward by the out-rushing gas. As the chunks ascend out of the warmhole, pressures drop over a matter of seconds for them and most gas-filled magma gets blown into tiny bits from the rapid depressurization.

Stage 5) The volcano runs out of gas and the warmhole fills with hot magma from down deep as earth equalizes surface pressures. After the eruption this material remains hot and soft.

Do bigger eruptions pollute more?

It is easy to imagine that the biggest eruptions with the biggest pressure gradients not only result in smaller ash particles, but that more of these are blown higher into the atmosphere. We should chart the average particle size for various eruptions of the past so we know about this very important property of volcanos. We should also study how long the smallest particles from say Tambora fell on Antarctica.

f this is the case, our first efforts to bleed down volcanos will have the greatest effect on reducing ice age ash levels.

The Toba eruption

Toba's outgassing system is 'officially' supposed to have ejected over 2800 cubic kilometers of material during the last ice age. This figure should be verified by measuring average deposit depths at varying distances. Also, it would not be surprising if Toba has erupted hundreds of times in the last 60 million years.

How volcanos are like self-filling holy grail cups

They explode some cubic kilometers of material, and then some thousands of years later, they do it again. In fact, volcanos erupt over, and over, and over again. And they never run out of material or propellant bubbling out of our planet's center.

Use the 20th century as a baseline.

how much ash is there in the ice? How many times more ash was there in the ice over the previous 7,200 centuries?

Fred M. Bullard, Volcanoes of the earth, Ch. 6

[This is about the eruption of Krakatoa in 1883.] "The noise was also heard 2,250 miles to the south east in central Australia. The intensity of the sound is better appreciated if one assumes that, were Pikes Peak to erupt as Krakatoa did, the noise would be heard all over the [continental] United States. About half an hour after the cataclysmic explosion, a tidal wave which reached a height of 120 feet (36m) in some bays swept the neighboring coasts of Java and Sumatra, wholly or partially destroying 295 towns and killing 36,000 people, mostly by drowning.... [Krakatoa gets talked about much by the Bro•cracy, its death toll and tsunamis get fluffed up. This while Tambora, 9 to 84 times its size is gets talked down, its death toll gets reduced and its tsunamis minimized or ignored.]

The tremendous amount of ash blown into the air plunged the surrounding region into darkness which affected

areas a much as 275 miles away. At a distance of 130 miles the **[total]** darkness lasted for 22 hours, and at a distance of 50 miles for 57 hours. Dust fell in quantity over a wide area (Fig. 9). Ships 1,600 miles away reported that dust began to fall on the decks three days after the eruption. The fine dust in the upper atmosphere traveled around the earth many times and remained in the atmosphere for months, causing sky glows, which were widely observed all over Europe and the Untied States, and which became a controversial issue, particularly in England."

Krakatoa is a vertex volcano, not a subduction volcano

Note how Sumatra and Java look like part of the same mountain range. But also note how there appears to be a vertex at the Sunda (or Unda=wave) Straight. Note how Krakatoa is precisely at the vertex, and appears to be from bending ruptures in the planet's hard skin from the movement of the Australian plate. Perhaps Krakatoa and other vertex volcanos behave differently from "normal" subduction volcanos. Perhaps they are less quenchable. How many other recent eruptions are from vertex volcanos?

Volcano trails

Many volcanos will have prior iterations, long extinct. We should probably map these and figure out how old each volcanic line is. We should quantify and date the ejecta and look for trends. Then we should come up with an average timeline for all volcanos on earth and in each region. This will allow us to see what is happening to volcanism on Earth. Is volcanism getting better or worse? Are there fewer volcano lines than say 30 million years ago? Are more lines starting than are stopping?

Fred M. Bullard, Volcanoes of the earth, Ch.18

"A particularly striking feature of the linear arrangement of volcanoes is the tendency for the interval between members of a group [of volcanos] to be nearly constant. For example, the volcanos of the Galapagos Islands are roughly 20 miles apart ... A similar spacing is indicated in Hawaii, Fiji, and Tahiti. In the Canary Islands, as well as the Lesser Antilles, the distance is roughly doubled..."

[It is not simply a matter of volcano spacing on islands. What about the spacing of all volcanos along a subduction line. Doesn't this tell us about how far gas can explode laterally and periodically blow-out the outgassing channel thus keeping them open?]

Eruptions feeding on each other

The volcanic eruptions in ice ages feed on each other. The ash from one causes lower temperatures, less water evaporation, reduced rainfall, lower sea levels and less water overall to irrigate all the other volcanos of the world. Thus when we chart the VOLCANIC ASH RECORD, we will probably see clumps of eruptions at the times when the planet cools. Then when there is a little warming, the eruptions will be halted for some time.

We may find some volcanos are strata cohorts that tend to erupt together. Perhaps these volcano cohorts stay the same between ice ages.

ACTIVE VOLCANO = A volcano that has erupted at least once in the past 9 ice ages.

130-VOLCANO = A volcano that erupts when sea levels fall to less than 130m over the ACB = the average continental break. **132-VOLCANO** = A volcano that erupts when sea levels fall to less than 132m over the ACB = the average continental break. These designations can be used for many other sea levels.

10.. THE BOTTOMING MECHANISM



We have previously covered the topping mechanism for Earth's climate, namely fully melted ice caps. Let's turn now explore bottoming mechanism, and how Earth's bottom temperature repeatedly occurs when sea levels approach the continental break.

1) Look at this graph. There is a clear inverse relationship between ash levels and temperature. Do small changes in surface temperature and pressure cause a huge changes in volcanism? Or do a huge changes in volcanic ash shade our planet, lowering temperature and pressure?

2) Look at the utterly immense ash levels recorded in the ice core. The 1815 eruption of the Tambora volcano doesn't even make a mark on the chart. But Tambora put so much sunlight-absorbing ash in the sky, that it caused 1815 to be known as "the year without a summer." So, during ice ages, our planet experiences very high ash levels, ash levels that seem to be orders of magnitude greater than what Tambora produced, at least on a long term basis. How high is this? The public really should know.

3) It is worth mentioning that the center of Antarctica is still building ice while the edges of the caps are breaking away. Thus we have ash levels from recent volcanos in the ice cores. This enables us to calibrate our ice core ash levels to recent eruptions.

James S. Monroe, Reed Wicander, Physical Geology textbook

"The outer margin of the continental shelf, or simply the shelfslope break, is at an average depth of 135 m"

Leet and Judson, Physical Geology textbook from 1965

"The seaward edge of the continental shelves has an average depth of about 430 feet, [131m] but it is commonly as deep as 600 feet or as shallow as 300 feet."

Leon E. Long, Geology textbook, Ch. 21

"At a water depth of around 130 meters (also with much variation), the shelf merges into the continental slope"

<43-Continental-shelf-topo-map ITWO> Alan Trujillo and Harold Thurman, Essentials of Oceanography, textbook, Ch. 3.1

"The average depth at which the shelf break occurs is about 135 meters (443 feet). Around the continent of Antarctica, however, the shelf break occurs at 350 meters (2200 feet). The average slope of the continental shelf is only about a tenth of a degree, which is similar to the slope given to a large parking lot for drainage purposes.

Sea level has fluctuated over the history of the Earth, causing the shoreline to migrate back and forth across the continental shelf. When colder climates prevailed during the most recent ice age for example, more of the Earth's water was frozen as glaciers on land, so sea level was lower than it is today. During this time, more of the continental shelf was exposed [to sea erosion from the waves and tides]."

Leet and Judson, Physical Geology Ch. 15, a 1965 textbook

"Wave-cut cliffs are common erosional features along a shore, particularly where it slopes steeply down beneath the sea... Here waves can break directly on the shoreline, and thus expend the greatest part of their energy in eroding the land. Wave erosion pushes the wave-cut cliff steadily back, producing a wave-cut terrace or platform at its foot. Since the surging water of the breaking waves must cross this terrace before reaching the cliff, it loses a certain amount of energy through turbulence and friction. So the farther the cliff retreats, and the wider the terrace becomes, the less effective are the waves in eroding the cliff. If sea levels remain constant, the retreat of the cliffs become slower and slower. [Today, we know that sea levels move up and down a great deal due to climate change, and that this slowing of the erosion process only happens when sea levels peak.]

<depleted groundwater pic>

Patio slopes groundwater depletion and volcanic irrigation Distance matters more than sea levels

The standard slope for paving is 2%. It is possible to use a 1% slope, but a small amount of settling, or uneven finishing tends to cause to puddles. And if there is a torrential rain, the water might not drain properly from a large area.

Also we note that in some places, people do sometimes deplete the ground water in one place while people all around them still have water. So groundwater does need a slope.

Now there are certainly volcanos that rise almost directly from the edge of the continental break. However, most of the planet's volcanoes are in the range of 40-to-270 km from the continental break. And again, the difference between today's seal level and the ice age minimum is 135 meters. So this change in sea levels amounts to a slope of between 0.33% to 0.05% for the world's volcanos. So clearly the fall in sea levels results in a horizontal retreating of ocean irrigation away from the Earth's inland volcanos.

Thus we imagine how during ice age bottoms, seawater cannot seep/travel through subduction zone fractures and reach most of planet's volcanos. In fact, a 1% slope only reaches 13.5km from the continental break.

Once sea levels have fallen beyond the continental break on any particular section of shoreline, the oceans stop retreating in terms of distance from nearby volcanos. Instead the seas declines in elevation alone, and this apparently causes much less dewatering.

A standard ground water slope?

What is the minimum slope for groundwater as it flows through various sorts of fractured rock? Is it 1%, or 2% or what?

Volcanic distance charts

Let's chart Earth's volcanos (especially the volcanos on the continental shelf) by distance to the continental break. Let's have a bar graph with each volcano at each distance a 1x1 square.
 Let's chart volcanos by distance to the shoreline. To the right of zero, they are on the continental side of the shoreline, to the left they are on the ocean side of the shoreline. Let's have bar graphs with each volcano at each distance a 1x1 square.

Once sea levels reach the continental break

Once this happens, far fewer volcanoes dewater for each meter fall in sea level. Thus, Earth starts running out of newly dewatered and hence explosive volcanos. Then, with fewer newly dewatered explosive volcanos, the skies clear, the surface warms, rainfall increases, sea levels rise, and more volcanos are slowed. Such is the bottoming mechanism for Earth's climate.

Eruption size by distance from the continental break

When we do our global ash sediment survey, we should plot the world's volcanos for distance from the continental break. We should also include the halos of the volcanos that are today offshore. What trends do we observe for both subduction volcanos, as well as rupture volcanos like Krakatoa.

The 2 climate mechanism succinctly stated

The upper thermostatic mechanism is that deeper seas cause more and more outgassing and heat leakage along the sea floor rift. When the planet runs out of ice to melt, this stops and reverses.

The lower thermostatic mechanism is that sea levels don't fall below the average continental break because the planet runs out of newly dewatered volcanos and sees an abrupt decline in volcanic eruptions.

The average continental break elevation defined

The definition of the average continental break elevation might be open to some interpretation unless we say that it must be the average depth of the average inflection point.

However, the break should be measured as a zone unto itself. How rounded is the break? What climate variability inferences can we make about this roundedness?

The polar regions don't give relevant info

The extra deep shelf around Antarctica doesn't matter because it has been pushed down below the wave and tide point. The extra shallow shelf near the North Pole is not being subjected to wave erosion like a normal continental shelf.



Ash levels increase throughout an ice age

Let's go back to 19,000 years ago, when Earth was at the coldest part of its ice age cycle — when sea levels were at their lowest. Here we imagine the last coastal volcanos finally losing their sea water coolant after a 110,000-year cycle. These are generally volcanos that have not erupted since the last time sea levels were so low, at the depths of the previous iceage — or perhaps even a couple ice-ages before. So these tend to be larger eruptions. Here is why ash levels tend to increase through an ice age.

By contrast, the volcanos which spend much of the time dry erupt often, and bleed down their eruptive energy, something that seems to result in much less aerosolized rock.

Now the planet may or may not start warming before all the volcanos nearest continental shelf have dewatered and erupted. However, if temperature falls so low that sea levels approach the continental break, then our planet will tend run out of newly dewatered volcanos, and their massive 110,000-year late cycle eruptions. Thus there will be fewer large eruptions for some time and Earth's atmosphere will tend to become clear and blue again.

But at the bottom of an ice-age, Earth is too cold given clear skies — so temperature will tend to leap upwards once the skies clear. This will melt ice, and raise sea levels that will stall the eruption of any remaining late ice-age volcanos. It will also increase seafloor spreading and heat leakage. It will also cause increased leakage of CO2-rich new volcanic air and atmospheric thickening. This will in turn cause more ice to melt and the planet will tend to leap up from its ice age.

Here we see the bottoming mechanism for Earth's climate. Also here we see an explanation for the brief temperature spikes we observe in the ice cores.

Outgassing is Gaia's impetus

Zooming out to the big picture, it is worth noting that most major planetary surface mechanisms are directly or indirectly a result of the simplest thing imaginable: Gas bubbling out of the thinskinned gassy magma ball we call a planet. Increased sea floor outgassing leads to ocean warming, atmospheric thickening, higher surface pressures and temperatures, sea floor spreading, continental drift, and subduction. Then subduction leads to earthquakes, volcanic eruptions, and ash-ladened skies. The largest eruptions put so much volcanic ash in the sky that ice starts building and sea levels start falling. This can cut off a warming trend, or it can also drive a feedback free-fall in heat leakage from the seafloor ridge.

And the gas that comes out replenishes the atmosphere, so Earth does not become another 99% airless,

waterless and geologically inert Mars. So, again, just about every active planetary system on Earth is a function of outgassing — soda bottle bubbling.

11.. THE END OF THE WORLD AS WE KNOW IT THE COMING GLOBAL ICE AGE CATASTROPHE

Patrick Henry, 1775.03.23, Virginia Convention

"It is natural to man to indulge in the illusion of hope. We are apt to shut our eyes against a painful truth—and listen to the song of that siren, till she transforms us into beasts. Is this the part of wise men, engaged in a great and arduous struggle for liberty? Are we disposed to be of the number of those [inclined to be the sort] who having eyes, see not, and having ears, hear not, the things which so nearly concern their temporal salvation? For my part, whatever anguish of spirit it might cost, <u>I am willing to know</u> the whole truth; to know the worst, and to provide for it." [Patrick Henry had the eminent distinction of being the first speaker before the incipient US Congress in 1774. This honor was probably not given lightly by the smart men that existed before the war killing, and <u>purges under cover of war started</u>. Also, Thomas Jefferson said that Patrick Henry was the true leader of the American Revolution.]

<Vostok-ice core>

Regardless of the cause of ice ages, the Antarctic ice cores (and maybe a dozen other sources) clearly tell us three things about ice ages:

1) Climate summers always end on Earth, and they frequently do so abruptly.

2) For the past 7,000 years, Earth's climate has been incredibly and uncharacteristically stable.

3) During the prior 100,000 years, during the most recent iceage, there were about 50 periods where planetary rose and temperatures rose or fell by around 10°C.

<orange sky image from 'Blade Runner 2049' trailer>

I argue that regardless of the cause, the end of the climate summer that started and sustains our human civilization will be the end of the world as we know it. When this happens, our warm, wet, blue skied, high-energy Earth will become a cold, dry, perpetually hazy, pink-skied low-energy Earth once again. Here mankind will face a challenge vastly greater than any experienced since the dawn of history. The environment of the entire world will change immensely, all at once and perhaps within just a couple weeks of a major volcanic eruption. Humanity really is living on the razor's edge.

In the new Blade Runner trailer, there is a scene were a man walks up a short flight of stairs in an orange-skied ash-filled earth. This is a huge exaggeration, but it the ash might be 1/500th of this concentration and still cause a global famine.

Life goes on

Given how there are so many species that are so old, the Blade Runner 2049 world is doubtless a huge exaggeration. Even Mexico City smog is probably an exaggeration. I might put it at the sort of desert dust storm conditions where visibility is lowered to 3km - but worldwide. And it is particularly fine dust too. And it flows to every part of the stratosphere in weeks, then it sometimes takes 3 to 30 years before it settling out completely.

Earth science and the environment 17.1 Textbook by Thompson and Turk

[After a discussion of climbing Mt. Everest] "At 7,000meters, a lungful of air contains only 44% of the oxygen at sea level...Above this level, you enter the 'death zone', where people cannot survive for long periods of time and where even the fittest athletes may perish.

Every multicellular organism needs oxygen to survive. If the oxygen abundance in the atmosphere were to drop below 44% of its current value, life on Earth as we know it would perish."

[Ice age oxygen levels probably don't fall by more than 50% and a fall of more than 40% seems like it might have gone over and wiped out all the animals. So that seems unlikely. So we imagine absolute oxygen levels falling by no more than 1/3. And we also know that CO2 levels fell by about 1/3. Was the atmosphere 1/3 thinner than today?

Let's quantify the ash levels

Can we please see some accurate quantification here? How high did the ash levels get? How much do they vary? How long does it take for the skies to clear?

How much ash do we get today? What does Tambora's ash look like in the ice cores? We should all know how much ash was falling at its worst.

How much solar energy is filtered out by the dust of Mexico city? How much is filtered out in various dust storms. We should make videos where we connect visibility with solar ash levels. This will help everyone to understand the greatest challenge humanity will one day face.

Diminishing returns and volcanic shading

The first bit of volcanic pollution probably does the most in terms of solar shading. Then every time the same amount of volcanic pollution is added to the atmosphere, it results in less shading. The effect of each added cubic kilometer of volcanic ejecta probably follows an LL curve, an exponent curve like the lowerleft quadrant of a circle.

We really should get set up to measure the effects of volcanic ash pollution. So the next time a major eruption occurs, we will be ready to quantify the ash volume at various distances and tie it to a degree of solar shading.

Shading by latitude

It would be useful to know how solar shading varies by latitude in the next volcanic eruption. We should have solar energy monitoring stations at 0°, 15°N, 15°S, 30°N, 30°S, 45°N, 45°S, 60°N, 60°S, and 75°N, 75°S. We should chart the average monthly solar energy level in each station at each latitude.

<Mexico City midday smog images> What to expect

Try to imagine a world with a heavy haze everywhere for many decades. In the tropics, the sun will still remain warm through the haze, and it will mostly cast a strong shadow through the perpetual haze, but a large part of the sun's energy will be reflected to space. Things will still grow just fine in the tropics, it is just that rainfall that will become much more scarce and unpredictable.

It is a good thing that in the modern world we have machines that will enable us to plant many times more fields that we do today. It is also a good thing that we have mechanisms to move water from here to there. This way, if say 9 out of 10 regions fail to produce food, we can still remain food positive on the output from the one region that made it that year.

But the thing is, at the dawn of the crisis, we will probably need 3x more farm automation equipment and fast, so we need to run our farm equipment 24/7 for a while; never mind the cost of overtime. We afford to be left scrambling to do this to in the chaos and fear that will grip the world, once the battle with the great demon Gaia starts — at the dawn of the next ice age.

The health effects of volcanic ash

What are the long term health effects of breathing volcanic ash of various sizes? How much ice age ash is unhealthful? How will we filter this stuff out when we go outside? How will we filter it from our homes and cities? How will our vehicles get around?

Earth is your enemy, not your mother

And by the way, as with pretty much all ideology created by humanity's great parasitic spirit from the land of no resources — everything is inverted or backwards. GAIA IS NOT A GOD — IT IS A DEMON. Gaia is something to be hated and conquered, not something to be loved and nurtured.

What happened is that oil profits have funded heaps of pseudo-environmentalist propaganda because ecoism (environmentalism) significantly increases oil demand. Then some of the increased oil profits were reinvested in more environmental propaganda all in feedback fashion. This gives most people the mistaken impression that the environment is in desperate need of strict protections from humans. In truth, the situation is inverted, and it is mankind that need protection from an environment that threatens the future of our species over the long run.

Genesis 1:28

"Be fruitful and multiply. <u>Replenish the Earth [with humans]</u> and subdue it, and have dominion over the fish of the sea and over the birds of the air, and over every living thing that moves upon the Earth."

<110,000 climate graph, with arrows at one end for the beginning of agriculture, the first large scale irrigation projects, discovered 6,000BC, the start of Sumer, The Egyptian pyramids, the Roman colosseum.>

Everyone should consider how civilization and the agriculture that supports it began right after climate stabilized, at the beginning of the current 7,000-year climate summer. Obviously, clear blue skies, and predictable weather patterns played an important role in the advent of non-mechanized agriculture. And note how coming out of the last ice age, all the great civilizations started in river valleys; places with a more predictable averaged water supply — the average runoff from a great river's giant watershed. Here it seems that agriculture might not have been so much a revolution, as a sensible response to warm, wet and predictable weather patterns. What will we do when that predictability stops?



Hydro cycle ITOR

Inland rainfall and ice ages

The way rain is drawn inland is such a hugely important and basic thing to understand. It is something that every child should be taught. So it is nothing short of remarkable that this process is almost universally misrepresented in the science textbooks. Here is a better explanation:

When sunlight strikes the oceans, it doesn't warm the air much because water is fluid and circulates instead of getting hot. On the other hand, when sunlight strike something hard, the surface tends to get much hotter, and then this warms the air. Thus sunlight makes the air hotter over land masses than over oceans. As a consequence, inland air rises and creates low pressure that draws in moist air from the oceans. During ice ages, inland areas warm much less and there is much less low pressure to pull the moist ocean air inland. On top of this, the colder air of an ice age bottom can only contain about half as much water as today.

We can see the ice age rain penetration

We have to find some runoff spots that accumulate sediments when it rains. Then we excavate them and measure the relative

soil deposit rate (and rainfall) in many parts of the planet for each millennium. This will enable us to see which areas tend to dry out the most and which areas tend to stay wet.

Gillen D'Arcy Wood, Tambora, Ch. 3

"Crossing into landlocked Switzerland, where grain prices rose two to three times higher than in the coastal regions, the Raffles brothers found the food shortage even more dire."



Figure 4-6 The graph shows the amount of water vapor required for saturation of 1 kilogram of dry air at various temperatures.

Water-saturation-graph TALT

Ice ages are much drier

If temperatures fall by 12° as they apparently do (more or less) worldwide at the bottom of an ice age, the air is only capable of holding about half as much water. On top of this, there is less wind to carry that moist air inland, so the air is probably not saturating and desaturating (raining) as much during a warm age. So maybe during the bottom of an ice age, there is something like 45% as much rainfall for coastal areas, and 10% to 25% as much for areas deep inland. The rain simply does not penetrate as far inland.

Hammond World Atlas 2003 ISBN 0-7607-5361-X

"The polar regions are not only cold, they are among the most arid areas on Earth. The capacity of air to retain water vapor diminishes as it grows colder. Thus the high [altitude] Antarctic Plateau is drier than the Sahara [desert]." [The entire world gets this way during ice ages to some extent.]

Rain is a problem today in a warm wet ages

It will be a much bigger problem during a dry ice age, especially the rainfall variability due to continental penetration.

Today, clear skies distribute rain better by warming inland zones more than the oceans. The warm inland air rises, causing low pressure. The moist ocean air then moves in to the low pressure zones leading to the rainfall that waters the world's inland crops. But after a major eruption, the sun will not warm the inland areas as much, and moisture will not penetrate as far inland.

Today the rain reaches thousands of kilometers into the middle of many continents, to grain breadbaskets like Kansas and Ukraine. But after major a volcanic eruption, there will not only be less rain overall, but what rain we do get will tend to fall closer to the coast.

Rain matches topsoil today

Today, rain falls in the same place as the best topsoil, because over the past 7,000 years, the relatively constant rains caused that topsoil to develop. But after a major eruption, shifting rain patters will cause some rain to fall over areas with little topsoil. And some areas with good soil will get no rain. So here it is pretty easy to imagine the worldwide crop failures that a string of eruptions will eventually cause.

The Coriolis effect

Equatorial air and sea currents flow westerly at the equator. This is due to Earth's rotation under solar warming, and not the Coriolis effect. Think of the way the sun tends to heat up inland areas causing the air to rise. This creates surface low pressure that draws ocean air inland.

Let's apply the same line of thinking to the sun's giant bright spot on earth. The sun is constantly warming the air in this spot. And this air is constantly rising and creating low pressure which draws in air from the surrounding areas. And this bright spot is constantly moving from east to west with the sunlight, just like the prevailing winds. The air in front of the spot simply rises, while the air behind it must rush to catch up.

Now during an ice age, the solar heat driving the planet's westerly winds shrinks a great deal. Therefore, the planet's westerly equatorial flow shrinks. In fact, it may stop altogether.

Warm age South America

The westerly flow striking South America starts on the coast of Africa in the tropics, and crosses the Atlantic ocean. The long time the air spends over tropical ocean causes it to pick up great amounts of evaporated moisture. This moisture gets dumped on South America and then the air keeps heading west and causes the West coast of South America to be in a great rain shadow.

Ice age South America

The westerly winds are less powerful and as a result, there is less rain on the east side of the Andes, in the Amazon basin. And although there is much less moisture being evaporated in the Pacific, more of this air is driven onto South America due to a breakdown of the westerly flow. Thus during an ice age, the ultra-dry west coast of South America probably gets more rain that today.

A global soil sedimentation history

We should document how much soil is laid down in each century in a great many locations worldwide. Then we should graph the number of mm of soil being deposited in each location in each millennium.

How much less soil is laid down at each location during a typical ice age than today? The soil lay-down rate should tell us about the relative amount of bio energy available at each location over time. And if we combine the graphs, we may have a proxy for the loss in planetary bio-energy worldwide.

Does the global soil lay-down rate correlate by some formula to the temperatures shown in the ice cores? If it does, we will have a way to measure planetary temperatures and ice age duration that goes back millions of years.

Also *very important* which areas typically build soil early in ice ages? And how far do the rains penetrate inland?

It will be about water not light

Out food needs will probably not be a matter of light. They will probably be a matter of water.

We waste so much water

There are so many parts of the world where huge rivers of water go wasted, pouring into the ocean. We need to get proactive and build freshwater catchment, transport and reservoir systems today while the sun actually shines. We will have to do some soil studies, but the following places look like they would be good places to start:

1) Queensland Australia

- 2) The south slope of the Himalayas
- 3) The west coast of the Andes
- 4) Lake Michigan
- 5) The lower Mississippi river
- 5) The lakes of Switzerland
- 6) California's mountain lakes

A water pipeline system

Maybe we will eventually have these regional water pipeline systems, so we can better distribute water from the Himalaya to say the rest of India in the event of a drought, And from one part of most regions to others. If we have a little redundancy and over-capacity, maybe then we will not have to worry so much about ice age droughts.

And If we can build this interstate highway and road system in America, how come we can't have water pipes to shift scarce water around and perhaps supplement rainfall.

Perhaps we will have many pipes, tunnels, or aqueducts pre-drilled to the other side of certain mountain ranges. We should do this as international action before the ice age begins.

Perhaps if we have a water pipeline backbone system already in place and 4-years of food stores then we will have time to install irrigation systems on enough farmland.

Once again the Arabs pointed us in the wrong direction

Basically, the real threat to humanity is the opposite of global warming. It is the opposite of today's wet, windy, storm filled, flooded, high-energy world. The real threat is a world with less solar energy — a dry, windless, storm-less, low-energy world with much less sunlight, much less water evaporation, much less rainfall, and much lower crop yields.

Gillen D'Arcy Wood, Tambora, Ch. 1

"For years after 1815, ships encountered vast islands of pumice stone as far away as the Indian Ocean, thousands of kilometers to the west. These great pumice pontoons were littered with burnt slivers of trees, the carbonized residue of Sumbawa's once dense and valuable forests."

Aelius Aristides, (c.150AD) To Rome

"Let all the gods and the children of the gods be invoked to grant that this [Roman] empire and this city flourish forever and never cease <u>until [pumice] stones [float] upon the sea and trees cease</u> to put forth shoots in spring, and that the great governor [Gr. kubern = to rule or steer] and his sons be preserved and saved."

Horace (d. 8BC), odes, Altera iam teritur

"As soon as rocks are raised from the depths that float"

Horace (d. 8BC), odes, Tu ne quaesieris

"Whether Jupiter allots more winters or this the last one which exhausts the Tuscan sea with pumice rocks opposed." [The translations of this tract are so garbled that it seems like something is being hidden. Maybe it is: which fills the Tuscan sea with pontoons of pumice rocks.]

Seneca, Thyestes, 845-65

"This is the fear, the fear that knocks at the heart

That the world will soon fall into the ruin Fate foretells That Chaos will return to bury the world of gods and men That Nature will once again wipe out all the lands That cover the Earth and the seas that lie around them And all the stars that scatter their light across the universe That never again will the Lord of the Stars Lift his immortal fire to quide the march of time And give his signals to the world for winter and summer Never again will the Moon catch the Sun's fire in her face And take night's terrors from us, as she runs... ...That belt of constellations marking the passage of years That [milky] way of holy stars lying across the zones Will fade away, and all the other stars with it ... No matter who you are, a long winter's icy harbinger Will fall and break your urn The last of the twelve zodiac signs, the Aquarius Will disappear into the universal deluge,

And the whole wagon will fall

Which never touched the sea before"

[The 12 signs take 2000 to 2152 years to complete a cycle. This is the "constellations marking the passage of years". Apparently the Arabs know about both risks, that of epochal•lyse=epochal•washing-away as well as that of volcanos and climate change.]

SIRIUS = CERES goddess of grain

The ancient food-abundance goddess of the Mideast is known by many names like: Ishtar, Astarte, Aphrodite, Demeter, Isis, Cybele/Sybil, and <u>Ceres</u> (goddess of cereals and grains). There are many versions and variations of this mythology, but in some versions, Isis was married or otherwise related to OSIRIS/SIRIUS. When Sirius was present, then Ceres would bring abundant cereals. But if Sirius was not present, then Ceres would forsake the Mideast. And of course, judging from their names (Sirius and Ceres), these two were originally the same god, and then they were split-up to hide the connection. This is similar to how the great Roman scholar and general that

SEIZED dictatorial control of Rome was divided into Julius CAESAR (100-44BC) and Tullius CICERO (106-43BC).

What is going on is that Sirius is the brightest star in the southern hemisphere. In 'ancient' Greek the star is called SEIRIOS ASTER, (Gr. seirios=searing/ burning + aster=star). Sirius is also known as the dog star. If Seirios Aster was not visible (because it was obscured by volcanic ash) the sun would not get searing hot and the entire planet would be colder — and the abundance goddess would not come that year, and there will be a great famines worldwide.

The world's greatest famine

People say that the world is environmentally challenged today. But what would happen after a string of Tambora eruptions? What would we eat? We would eat everything. We would eat everything and its eggs, seeds and roots. And that is just the way things work. Whenever it is human starvation pitted against a non-human food supply, the other rules break down and the nonhuman gets eaten. It will be the pets and zoos and the game reserves and then dead people and then hell for the survivors. The Mideast, the land of no resources, the land of Canaan•Baal has experienced this scenario numerous times — and this is a big reason why they are the way they are.

Imagine a world of 7 billion machine enabled humans, and plenty of fuel, but one without enough food to eat worldwide. We will eat everything, just like desperate famine victims hunting on nature reserves to feed their families. And after the initial shock is over, how many tropical habitats will we clear-cut in a desperate attempt to find farmland with rain.

My fear is that as we enter the next ice age, our starving humanity together with our machines might cause the greatest of all mass extinctions; and still only a tiny part of humanity might make it through the initial shock. All because we didn't prepare for our planet's volcanic cycle.

At the start of past ice ages, Earth's predators were stuck in one place. They had no grain stores to live on while they combed all the other ecosystems for still more food. They had no fossil fuels. They had no cars to comb the countryside, or fishing boats to clean out the oceans. If predators did not find food for a couple weeks, they hibernated or died.

How can we ignore our most basic animal need, that of food? How can we restrict farm output? How can we squander fresh grain by turning it into the energy-wasting folly of ethanol? How can we do these things when we are only one big volcano away from global famine? We in the West have moved on to the higher needs of prestigious vehicles, vacation homes, job satisfaction and food quality. But these things will mean absolutely nothing if we can't grow enough food because the sky stops working.

Ralph Glaber, monk of Cluny c.1033AD, 7.10

"When they had eaten the wild beasts and birds, the people started, under the sway of a devouring hunger, to collect all sorts of carrion and other things which are horrible to mention to eat. Some in order to escape death had recourse to forest roots and water weeds. Finally, horror takes hold of us listening to the perversions which then reigned among the human race. Alas! O woe! Something rarely heard of throughout the ages: Rabid hunger made men devour human flesh. Travelers were kidnapped by people stronger than they were, their limbs were cut off, cooked on the fire and eaten. Many people who moved from one place to another to flee the famine, and who had found hospitality on the way, were murdered in the night, and served as food for those who had welcomed them. Many showed an egg or some farm produce to children, enticing them into out of the way spots, killing them, and eating them. Bodies of the dead were in many places dug out of the ground and equally served to appease hunger."

<Grain silos photo>

Today Grain carryover stocks are at about 60-70 days worldwide. Now who could be responsible for that?

We must raise world food output now. But how much food should we stockpile so we can adapt to an ice age climate? Given the inconsequential cost and the priceless payback, we should probably stockpile a lot more than a couple months of food for the world, as is the current practice. We should probably stockpile as much food as we possibly can — As much as will not spoil. And we should do this as soon as possible. Then we will use the food that expires to feed animals or make ethanol.

Don't worry

Mankind can easily triple food output and have 20 years stocks in 10 years. And we can already store food for decades.

Food preservatives are a good thing

In order to increase oil use, OPEC ran a great deal of organic food propaganda. This has convinced many people that food preserving chemicals are unhealthy or at least unnecessary. But all this is predicated on there being no sudden ice age food shock. When the ice age comes, we must have the most advanced food preservative techniques and chemicals possible.

The horribly painful effects of ergotism and other

spoiled-grain diseases are well known and amply documented in the historical record. It is time to resume active research into food preservation. We should also be using (and testing) preservatives while we can still afford to waste food, as the Chinese say.

We should also figure out which animals are least sensitive to the toxins in spoiled food and try to understand why this is so. Perhaps our digestive systems can be helped so we can eat older foodstuffs if necessary.

We might also build giant food warehouses in the arctic, underground, well below the permafrost. And perhaps we will be able to produce synthetic foodstuffs, the way we produce plastics today. Or perhaps we will figure out a way to use food preservatives on blender food, so it can be stabilized and remains edible indefinitely.

Perhaps we will be able to engineer electro-sythetic, as opposed to photo-synthetic microorganisms. Or perhaps we can supplement world food supplies by growing prokaryotic bacteria using a volcanic energy source. Or perhaps we will plant all of the world's continental shelf with drought-tolerant kelp to great depths. Then we will feed the kelp to insect larva and then to reptiles, fish or hogs. Perhaps we will engineer new energyefficient food chains. But whatever we do, we really should get the research done and the technology going before the next ice age starts.

I walk a fine line here

I am trying to scare the hell out of everyone. I must scare the entire world into action — and scare everyone into killing the devil's agenda of less and worse instantly. But please don't think that the future is hopeless by any means. We are talking about time on a geological scale here, and for all we know, it may be many centuries (or even millennia) before Earth's ice caps fully melt and the next ice age begins. Although the next ice age could begin tomorrow. So we must make hay while the sun shines, because the worst could happen tomorrow.

Its not the end of life on earth

It will however be a huge challenge for agriculture

Don't imagine the ice age world as something like the perpetual surface darkness of the matrix films. And the orange skies of the Blade Runner 2049 film are a huge exaggeration — the sedimentary record does not indicate this. And the planet is full of plant and animal species that would have died out under these conditions. No, the truth is that plants will continue to grow under perpetually hazy skies. The poles will grow, and rainfall will become scarce, but life will go on.

Nobody knows when

Nobody can say when the end of days will be

The next ice age could start tomorrow, or it could be another 3,000 years. This really seems like one of those knowable things. On one hand it seems like we might be overdue considering the 7,000 year Holocene era. On the other hand, there seems to be at least a few centuries of ice to melt. Then again, there could be a huge volcano.

To my mind, it is unknowable, and anyone who claims to know is a liar. They are like one of those priests who claim to have the word of god straight from the mouth of his prophet from 2,000 years ago — from before the Arab-induced dark ages.

My guesstimate

If I had to give the Holocene era a half-life, i'd say a 900 years — although it might end any minute.

Gaia willing, we will have centuries

Hopefully we will have many centuries before the end of bright sunny blue skied days on earth. Hopefully, we will have centuries to prepare for the pink-skied volcanic twilight of the next ice age.

The end of days will eventually come And the world as we know it will end

It is over 7,000 years since our planet entered its beautiful clearskied and abundant blue phase. And all human history has taken place on a particularly long and stable interglacial period. Surely a climate cliff will eventually come, and the world as we know it will end. After this, there will be no more bright sunny days — only a perpetually dusty Mexico City haze that is cold and dry. This is an event the ancients called the end of days.

This could start next week with the eruption of a huge volcano — Or it could go on for thousands of years more as the planet approaches the temperatures it reached in recent interglacials: But the end of days will eventually come just as surely as night follows day.

As the planet warms, the increased temperature and wetness should save us from eruptions. Perhaps we will even make it thought a couple more Tambora sized eruptions thanks to the added heat and wetness. So please people, don't be so sure that the next volcanic eruption will cause the end of the world. And Some small Pinatubo scale eruptions will actually slow the warming trend for some years, if not decades.

Don't listen to any self-serving doom and gloom predictions. Whether or not an eruption will tip us into another ice age is completely unknowable and unpredictable. Nobody can predict this.

Infinite compression - we are almost limitless

Time is already moving with almost infinite speed for mankind. We are going so fast that in 15 to 20 years, we can put away enough food to last everyone while we breed down the human population

Let's all unite against our common enemy

Mankind will now cease its struggles and become one race with one agenda, under a new incorruptible form of world democracy. Mankind will now come together to battle the true and eternal enemy of mankind, the environment.

If you are really into species protection

Go ahead, save the earthly genome that has flowered over the last 7,000 years in great variety. Sure, it is a valuable thing to save. But you are just wasting your time if the world doesn't have enough to eat.

The cold war as a dry run

Thanks mostly to the parasite's matrix propaganda, people have thought they were living on the edge of disaster since the dawn of the cold war. This has been a good dry run for the real problem facing mankind, the end of bright sunny days on Earth and the dawn of the next ice age.

Let's listen to the Chinese

Let's ask the people who survived front-man Mao's great leap backwards, where the Arabs totally impoverished China so it was cheap to buy up. How much emergency food should we store?

Many times more farm equipment than we need

Today, industrialized nations only use 3% of their economy growing food. So it would not be inconceivable for us to increase our food output by 5 fold. This way, if 9 out of 10 regions fail, we

can still get by with less than 30% of our economy used for producing food. Today, it is luckily a matter of robotic tractors and GPS, not men guiding draught animals through a muddy field. But we should have a whole lot of surplus farm equipment and irrigation equipment already made and standing by. In fact, we should probably double or triple our farming equipment. Thus if we use our equipment 24/7, we will have 8 or 12 times as much equipment.

Luckily we have machines

Luckily we have machines to multiply our efforts today. And luckily we have more than 5 times as much potential farmland as we actually need to feed ourselves today: <u>even without changing</u> to a vegetarian diet. Also, tropical farming should be relatively unaffected by the ice age, especially when it is irrigated. But we must get ahead of the crisis and prepare for the shifting rain patterns. We must be proactive instead of reactive.

Sooner or later, our beautiful blue skied Holocene era world will come to an end, and it may happen as suddenly as the eruption of a volcano.

Everything that we have done as a species will be tested by that event. All those dire warnings about the perils of global warming, they are nothing, just nothing in comparison to problems we will face when Earth eventually suffers a string of Tambora-like eruptions.

Fact: The volume of a typical single person bed can store enough grain to feed one person for 6 months.

Fact: If the rich people of the world panic now and protect their food stocks before we raise output, the poor people of the world, and the people of the Mideast may experience the most horrific famine ever — a famine caused entirely by people hoarding food. Instead, we must put measures in place that protect and ration the world's grain supplies until we can boost harvests.

A war economy without the war

The entire world will now mobilize for war. We will all now prepare for war with the great and eternal enemy of all mankind: the environment. Soon the world will have a war economy without the war.

Exploit constantly renewing rivers Protect stable water tanks

In a world of unpredictable rainfall, stable water sources, particularly those underground will be an important factor in the continued viability of agriculture. Today, however, people all over the world are depleting wells and draining the world's precious naturally occurring water tanks. The depletion of the world's stable underground water supplies is probably the greatest manmade environmental tragedy of our time. Especially in low latitude places like the southern California and Arizona desert.

We should be doing the opposite. We should be replenishing the world's stable underground aquifers while there still exists rainwater to fill them. Instead, we should be using the world's abundant interglacial rainfall and unstable aquifers to grow food. And there should be very little fresh water at all making it to the ocean in many parts of the world.

Protection of our swamps (sorry precious wetland habitats) is an artificial idea, a matrix manipulation that our Mideast parasite gave us. Don't waste the nation's energy independence or its water supply on something so inconsequential as river habitat. The fresh water belongs to man. If mankind needs water, don't waste any of it on the ocean or preserve habitat for tsunami-vulnerable swamp-creatures. They just don't matter. The river water is garbage because it will, within days be poured into the salty ocean where pretty much everything in it will die.

Consistent warm age climates

The way volcanos match up with current wet areas suggests relatively consistent warmage and iceage climate patterns. It is probably not that hard to predict rain patterns if we know ash opacity.

More ice cores

We must have a crystal clear year-scale picture of climate in each of the last recent ice ages. Let's average lots of samples for accuracy.

Ice ages and machines

Recall how air traffic was halted by the recent eruption of a volcano in Iceland. Sooner or later, there will be a huge eruption and there will be so much volcanic ash (rock dust) in the air that all our turbine jet engines will become unusable worldwide. Shouldn't we have another way to get around?

Why isn't Europe connected with Asia and Africa with a normal 300kph steel-on-steel railway? And no, I don't mean the oil wasting boondoggle of maglev, a worthless idea because trains on ordinary steel tracks (6 meters apart) using inertiamonitors and a positioning system fed to track adjusting robots can go even faster than narrow-gauge maglevs running on tracks that settle a bit here and there.

Why isn't there a route across the Bearing straight – linking old and new worlds?

Volcanic dust is not like ordinary dust, it is rock-hard dust. It is by nature very hard and abrasive to the machinery that makes our modern world work. All vehicles and all machinery must be able to function in dusty environments. And air breathing turbine engines may no longer be feasible, even with filtration. Even piston engines may be challenged in terms of clean air intake. As well, the road and windshield based system we use today seem like they may have issues with dust. It seems easier to imagine trains on raised and perhaps covered or mostly enclosed viaducts.

It is also easy to imagine that centralized air intake and filtration will work better for our communities. Perhaps our communities will use tall covered "smokestacks" for air intake. Also, in the next ice age, we may not move underground to live, but inside — inside townships, inside trains and inside agricultural machinery.

Gillen D'Arcy Wood, Tambora, Ch. 5

"the cultivation of rice, which is after all a tropical plant, does have its Achilles' heel: cold snaps in summer. A recent study nominated 14°C as the 'critical threshold of damage for rice'. But sustained temperatures below 20°C, combined with a deficit of sunlight, are enough to spawn the uncontrolled proliferation of reproduction organs within the plant... Instead of ripening into its hardy oval shape, the cold-afflicted rice grain will fail to seal itself and assume the hideous, sterilized form of a tiny spiky claw or twisted stump."

Volcanic ash and agriculture

1) We should practice trying to grow crops in high ash conditions near recent eruptions. We should hone our skills while the sun actually shines.

- 2) We should develop iceage grain varieties in advance.
- 3) What amounts of volcanic ash is harmful to various crops?
- 4) Which crops are more resistant to ash?
- 5) How can we make our crops more resistant to ash?
6) What can we do to make our fields grow better in moderate ash conditions.

7) Crops in many places will face the twin problem of lower light striking the earth and a covering of ash. Perhaps half the battle is as simple as spraying them with the fresh water in the right way to wash the ash dust off. We should have equipment and equipment to do this.

Kelpi-culture

The oceans are actually a very fertile place for kelp. The oceans, particularly near river mouths, contain much nutrition, oxygen, and CO2. The only limiting factor seems to be having rock to attach to. So here we imagine taking sections of waste concrete, and germinating kelp on them. We grow the vines long. Then we then pick up the squares and put them on barges and drop them, one every say 30m. Then the kelp spreads and covers. And best of all, this crop grows without any fresh water input at all. All it needs is washing water, and this can be done at great intervals when the rains come and the stuff is harvested.

Advantages of kelp in an ice age

1) The kelp crop will not fail due to a change in ice age rain patterns.

2) Kelp can be kept alive and harvested as needed.

3) It probably takes less fresh water to wash kelp than to grow plants.

4) The washing water can come at extremely irregular intervals.5) In ice ages, land plants will have more of a problem with dust.

ARBORICULTURE = growing trees for their fruit. **THERACULTURE** = raising wild self-sustaining animals for food **GRANICULTURE** = growing grasses for their seeds.

Arboriculture

There are many tropical hillsides that are too steep to be plowed. These can be used for tree crops.

Theraculture

To advance theraculture efficiency and build the food supply, government should start leasing large tracts of land for dear, wild boars, and other meat animals, particularly the most water and energy efficient animals.

Here we imagine wells and pipes providing artificial watering-hole oasis's for meat animals that forage on wildlife. These are at a certain interval to optimize food output.

Around the water trough donut is a fence with one-way gates, half go in, half go out. The latter can be controlled remotely. Then when the animals come for a drink, they get trapped in the pen and can be easily given a health screening, parasite treatment, given a RFID tag, or culled in the 'fall' season. The livestock door will not open for predators. Instead they get trapped when they try to enter through an apparent opening.

Desert theraculture

We should experiment with raising camels for meat.

Alternative agriculture

This is anything but grani•culture. It includes kelpi•culture, arbori•culture, and Thera•culture. As more of the planet becomes marginal we will have to become more reliant on alternative agriculture.

Skippable

Fred M. Bullard, Volcanoes of the earth, Ch.18 "It has long been known that in [tropical] regions where there are periodic falls of volcanic ash the soil maintains its fertility. Although this is common knowledge, there are few studies which document this fact... [I don't know if this real or not.]

Most tropical soils are impoverished and of low fertility Idue to heavy tropical rains that wash the nutrients away]. In a study of the relation of climate and soil in Indonesia, E.C. J. Mohr [Ex.Ak.J. Moor] (1945) was able to assess the contribution of volcanic eruptions. In an eruption the surrounding region is buried under a blanket of volcanic ash and cinders which present a picture of complete desolation. However, in a few years (Mohr suggests 25 or so) the new surface becomes covered with a mantle of vegetation. The new soil remains extraordinarily fertile for centuries, but in the end, it will finally become impoverished as the soluble products are leached by tropical rains, unless further eruptions provide new layers of volcanic ash to rejuvenate the soil. Mohr comments that, before the 1883 eruption of Krakatoa, the Lampong District of southeastern Sumatra was a poor country with little development; after the eruption, it showed remarkable signs of new life in regard to both native and European agriculture, and many new inhabitants [immigrants] moved into the region [many from Arabia] to share in the prosperity. In a continuation of his study, Mohr (1946) was able to show a direct relationship between the density of population in Indonesia and the location of active volcanos. [This may however be due to people being steered into the jaws of death like what happened in New York, Beijing, and London.]

In an interesting study based on the 1930 census, he found the population density of Java to be 316.5 per square kilometer, while the average for the whole region was only 31.89. [Java had 10x the population density on average] Although various factors are obviously involved in population density, Mohr [Moor, More, Moore] was able to show that basically it was determined by the fertility of the soil. The most fertile soils in Indonesia are in Java, which also has nearly all the currently active volcanos. The contrast between the soils of Java and those of the other islands of Indonesia is quite marked, because in the absence of periodic eruptions of volcanic ash the [tropical] soils are impoverished by leaching. Only by the application of generous amounts of fertilizers, as is the practice in many of the more developed countries, can the fertility of these soils be restored. Mohr concludes: 'But these are dreams [i.e., the extensive use of fertilizers] that can only be realized in the far distant future-perhaps they are not realizable at all. For the present, then, and for many a long years to come, the fact remains that in the Netherlands Indies, the population density is a function of the nature of the soil, and this is function of the presence of active volcanos' "

Plutarch, Life of Cimon 16

"An earthquake of unprecedented severity shook Sparta [in 464BC], breaking off mountain peaks and destroying all but five houses in Sparta. King Archi•damus [ancient•lady] understood the danger that was yet to come. He saw the citizens trying to salvage their valuables and had the trumpet give the signal for an enemy attack, to make them all rally to him immediately with their weapons. That and that alone saved Sparta in this crisis, for the hel-ots came rushing from all over the countryside to kill all the Spartan survivors." [Helots were the farm-slaves of the Spartan military police state fronting for Arabs Inc. Hel·ot=sun·ears, and these hear the sun, the logical system of everyone outside the Mideast. A lunette is a lun•ot=moon•ear, someone who hears the moon, the logical system of everyone inside the Mideast's way of life. We must be aware that in a great crisis the Arabs frequently attack while the host is weakest.]

New rules for an old world

Many people find firearms an affront to their ideas of a peaceful and stable society. And they are arguably correct given today's economic reality of abundance. However, in times of crisis, political or natural, such as at the start of the next ice age, our group efforts will work vastly better if a large number of us are armed. Widespread firearm ownership will certainly kill thousands of people each year in times of peace, but history shows that it saves lives by the millions in times of war and severe crisis. Nay, it will even prevent many a war, so that we do not even sense the immense benefit of firearm ownership.

We must all be prepared for situations when people are afraid they will not have enough food. What if people are constantly in fear of starving to death and many start breaking into other people's homes and stealing their food? What if men are somewhat afraid to leave their families at home and go to work for fear of a home invasion and food theft? How will our economy function? Under these wild-west conditions, widespread firearm ownership will make our people safer in their homes and help keep the economy and society working smoothly. So, from the standpoint of a civil society in life or death crisis, an armed people is actually a very good thing.

Also, the laws of a society in crisis should be more like the harsh laws of earlier days, when the theft of property was frequently a matter of survival (i.e. life and death) for one party. We must prepare and pre-formulate new crisis laws and customs for our society beforehand. We will have 3 levels of crisis, each with a different set of rules. And please, we must not leave this hugely important and hugely time consuming distraction until we actually have a crisis. We need to have realistic and most importantly widely-accepted laws and social norms in place beforehand. And we must teach it to all the children, so they know in advance what the crisis rules are.

Do not underestimate the secondary enemy

The primary enemy of all mankind as we approach the end of bright sunny days is certainly our planet and its climate systems. However, we will also be threatened by the inverted agenda of Arabs Inc., an agenda that seeks to reduce the population of our planet so their harem spawn are more likely to go forth and multiply.

How many people should there be on Earth?

For the warm, wet interglacial climate of today, the world is nowhere near being overpopulated. I mean, a fraction of the United States could produce enough food by itself to feed the entire world using today's normal agricultural techniques. Unfortunately, however, we now have no way of knowing how much food we will be able to grow at the dawn of the next ice age. Perhaps we will soon have estimates, but now we do not.

Propaganda

Hammond World Atlas 2003 ISBN 0-7607-5361-X Printed and bound in China by <u>Midas</u> Printing Ltd.

"Some 20,000 years ago, at the peak [nadir] of the last ice age, substantial portions of North America and northern Europe were covered by sheets of ice several thousand meters thick. This ice extended deep into the North American continent to the region now covered by the Great Lakes. The land south of the ice was arctic steppe, much like today's tundra regions. On the basis of bore samples taken from deposits thousands and even millions of years old, from layers of sediment on the ocean floor, or from continental ice in Antarctica and Greenland, for example, it has been possible to reconstruct temperature patterns and many other characteristics of past climate. For at least two million years, the Earth's Climate has been governed by relatively regular cycles. Ice ages lasting roughly 100,000 years have alternated with [much shorter] warm periods usually about 10,000 years long.

[So far so true. Now here comes OPEC's propaganda] These cycles are caused by subtle shifts in the Earth's orbit around the sun and in the inclination of the Earth's axis. These changes know as Milankovitch variations, affect the seasonal and geographical distribution of solar radiation - although the total amount of radiation that reaches the Earth remains constant. It is not entirely clear why the Earth's climate reacts so dramatically to these changing radiation patterns. One crucial factor is apparently the intensity of summer sunlight over the continents of the northern hemisphere, for when the snows of the past winter do not melt completely, large sheets of ice begin to form. They reflect solar radiation and thus lead to further cooling. Our understanding of Milankovitch variations suggests that the Holocene is an unusually long warm phase, which would mean that a new ice age is not to be expected for several tens of thousands of years." [Clearly the Arabs want the world blindsided by the coming ice age. And again, some lies speak the truth with perfect clarity.]

12.. SEAFLOOR SPREADING

Essentials of Oceanography textbook, Ch. 3.5, Alan Trujillo and Harold Thurman,

"The mid-ocean ridge is a topographically high feature, extending an average of 2.5 kilometers <u>above</u> the surrounding sea floor."

Earth science and the environment textbook, Ch. 6.4 Textbook by Thompson and Turk

"the Mid-Ocean Ridge rises 2 to 3 kilometers <u>above</u> the surrounding sea floor and comes within 2 kilometers of the sea surface, but the average depth of the sea floor away from the Mid-Ocean Ridge is about 5 kilometers. [Got that? Is this book trying to hide the elevation of the seafloor rift? Why is it so hard to find clear information on the depth of the sea floor rift without doing a web search for it?]

Magma only flows from gas

Today, the generally accepted theory about sea floor spreading is a black box. Magma somehow upwells at the sea floor ridge/rift and slowly hardens and accretes into new sea floor. But why should we suppose this happens? Except for outgassing, we have no explanation at all for why magma would up-well, or rise up from inside our planet.

<bubbling soda bottle video>

By contrast, the force that causes trapped gas to rise in liquids is basic science. In fact, it is useful to imagine our planet as a giant bottle of soda water (soda magma actually) that has been inexorably bubbling gas out for billions of years. These bubbles are the driver of the "magma upwelling" that accretes seafloor at the seafloor rift. And at the same time, these bubbles also replenish the gas constantly lost by the atmosphere.

<image of this with arrows indicating force vectors>

Now the seafloor rift propels thousands of kilometers of sea floor across the oceans, and then it drives the sea floor under the continental plates. By definition, this system is clamped shut and under immense pressures. So the magma upwelling, and those magma currents would have to involve immense pressure differentials for them to extrude magma into the ridge. How can it be? What is driving that process?

<flat tire image>

By contrast, everyone knows how even the tiniest leaks behave when compressed gasses are involved. And here we are talking about volcanic gas pressures far beyond the

submarine/submersible crushing pressures at the bottom of the ocean. It is not hard to imagine this super-high pressure and super-hot volcanic-hot gas can melt or break a way out through the soft rock at the seafloor ridge.



Columnar-basalt-at-sea set with image

The process of vent formation at the seafloor ridge seems to be frozen in a type of volcanic rock formation called Columnar basalt.



Rift-columnar-basalt ITWO

In this image we see a new column of magma in red. An air bubble has already escaped and the hole has refilled with lava. This column freezes and hardens to the other older columns like a wet tongue attached to a frozen steel pole in winter — but on a geological time scale. And the magma seems to remain somewhat soft for a while.

Thus we imagine this sort of rock extending downward for great distances. We should probably take some cores, so we can see how deep these formations go. Also, maybe they change with depth and we will be able to make some inferences about the way the seafloor ridge works.

We imagine the outgassing rift as ancient and deep. Below the columnar part of the rift, we imagine well-established lateral pathways that gas uses to bubble out from the depths of our planet. These diagonal pathways are probably many hundreds of miles deep. And these pathways are not vacuums or even gas filled. They are more accurately visualized as 1dimensional warmholes where the magma is hotter than the surrounding area due to all the hot bubble traffic.

The rifts are actually planes made up of a series of vertical warm holes forming 2-dimensional vertical planes where the rock is hotter and softer. This is thanks to all the hot high pressure gas and magma bubbling out. Here I imagine bubbles

of super-hot, super high pressure gas forcing and melting their way through the hottest channels. These are the hottest and softest parts of the rift, the path of least resistance in this two dimensional vertical plane, this soft edge to our seafloor plates.

<clip of bubbles coming up in soda glass 'warmholes'>

Look carefully at the way bubbles come up in a glass of soda. Notice how the bubbles come up in the same places.

Try to imagine a divergent seafloor rift as a line of columnar basalt columns that are 1 to 20 columns thick. These are the newest, the hottest, and the softest columns on the sea floor.

basalt hexagons gray background with red/orange/yellow forming a rift. As new hexagons form here and there, the rift diverges.>

When gas escaping at the seafloor ridge pushes its way through the coldest and most viscous magma at the seafloor, the barely flexible solid magma here takes time to close behind the bubble of hot gas. During this time, before the path can re-close, a column of fully liquid magma (much hotter magma and from greater depths) follows the escaping bubble up and fills the channel behind the gas.

Then this liquid magma cools, hardens, and accrete to the sea floor plates. And as it does this, it drives the sea floor ever outward. After this, the next gas bubble that comes along in another nearby place and repeats the process, accreting more rock to the DIVERGENCE PLANE of the seafloor rift.

A combination of hot compressed gas and hot fluid magma flowing into the DIVERGENCE PLANE of the seafloor rift keeps the rift hotter and softer than the surrounding magma. Then the next pocket of gas tends to repeats the process in the same hot and weak plane — usually the hottest and weakest location in the middle of the divergence plane. This process tends to keep the center of the rift hot and soft. The periphery, near the slightly cooler surrounding magma is always cooling, hardening and accreting to the surrounding sea floor.

Thus, each gas bubble takes a tiny bit of the hot liquid magma from inside of our planet and accretes it to the solid outside of the planet. Thus new sea floor builds up, one skinny basalt column at a time, as a result of outgassing.

Questions about columnar basalt

1) Is above water columnar basalt porous to water? If it is, then it is probably porous to gas from the other direction, as well as lateral flows of water.

2) Is there ash trapped between the basalt columns. How much ash?

3) We should tomograph some columnar basalt formations so we can see learn how the seafloor ridge actually works

4) What percentage of sea floor is columnar basalt?

5) What patterns do we observe in size, side concavity and ordering of columns?

6) What patterns do we observe in the top surface elevation of the formation? Are there any places where the surface elevation seems to modulate depending on the distance from the apparent rift?

7) Has the size of the columns changed over the eons? Can we chart the average column area over time as our planet has cooled?

Let's quantify heat and CO2 levels at the ridge

Let's put flow meters and thermometers and take CO2 samples across a number of seafloor ridge sections so we can estimate how much heat and CO2 is coming out along the entire seafloor ridge. How much gas comes up per kilometer of ridge? How much comes up per kilometer of subduction zone? How much comes out in volcanic eruptions of various sizes?

Oceanic CO2

Clearly compressed water can hold lots of CO2. How much CO2 can the oceans hold today? How much could they contain when earth was 5°C colder? How much CO2 is consumed by plankton and sea plants? Is there any way to find historical oceanic CO2 levels?

Earth science and the environment 8.6 Textbook by Thompson and Turk

"Hot lava shrinks as it cools and solidifies. The shrinkage pulls the rock apart, forming cracks that grow as the rock continues to cool. In Hawaii, geologists have observed this phenomenon while watching fresh lava cool: When a solid crust measuring only <u>0.5 centimeter[s] thick</u> had formed on the surface of the glowing liquid, five- or six-sided cracks developed. As the lava continued to cool and solidify, the cracks grew downward through the flow. Such cracks called columnar joints, are regularly spaced and intersect to form five- or six-sided columns."

[This is propaganda.]

Earth science and the environment 6.4 Textbook by Thompson and Turk

"At a spreading center, the rising asthenosphere is hot, weak, and plastic. Only the upper 10 to 15 kilometers cools enough to gain the strength and hardness of lithosphere rock. As a result, the lithosphere, including the crust and the upper few kilometers of the mantle rock, can be as little as 10 or 15 kilometers thick at a spreading center. But as the lithosphere spreads, it cools from the top downward...

the lithosphere continues to thicken until it reaches a steady-state thickness of about 75kilometers beneath an ocean basin, and as much as 125 kilometers beneath a continent." [I thought the seafloor was 30-40km thick on average]

Geology, Leon E. Long, textbook, Ch. 21

"If continents are situated on two plates that are separated by a mid-ocean ridge, how rapidly are they drifting [being driven] apart? We must double the calculated rate for seafloor spreading because both plates are engaged in the process. Rates of separation differ by more than an order of magnitude from ocean to ocean, from as little as 1.2 centimeters per year across the ridge in the Arctic Ocean, to 16 cm/year between the Pacific and Nazca plates in the southeastern Pacific Ocean. The most common rate is 4cm/year"

[Another way to see the rate of seafloor spreading is by the century. Here we see the range as between 1.2-meters and 16-meters per century.]

<split screen gas caught under ice vs. lithosphere>

Now again, magma is a lot like soda water — both are gassed liquids that contain gas under pressure. However, gassed magma is different from water in a significant way. Water changes from solid to total liquid at a precise temperature. This makes for a clear boundary between liquid water and solid water (ice). Any gas caught under a barrier of solid ice accumulates across a plane.

By contrast, magma changes from solid to total liquid over some 900° C. So the underside of the magma ice (namely the lithosphere) is therefore a three dimensional space of volcanic gas bubbles caught in soft magma of slightly decreasing temperatures and softness. Here we imagine the upper mantle as a sort of froth gradient — a semi-liquid that is loaded with pockets of highly pressurized volcanic gas bubbles. These became trapped and built-up over the eons, and are waiting for any opportunity to escape and become new volcanic air.

<Video of air rising in bubbles through milkshake thickness material.>

First the gas bubbles up through material as viscous as a thick milkshake. Then it bubbles through material as soft as fresh pottery clay. As the gas rises, it encounters material that resembles ever dryer and harder pottery clay. In this environment, pressures are of course greater than those at the bottom of the ocean. The gas rises fast at first, through the more liquid magma. Then the gas rises through progressively cooler and more viscous magma, until eventually it is stopped completely.



Pumice-and-scoria

Thus we imagine the sub-lithosphere as a zone of air-filled magma. This material is frequently seen on Earth's surface. It is called scoria, and often this material has many fewer bubbles that depicted here. These are chunks of the sub-lithosphere, blown out by a volcanic eruption.

When new sea floor is produced at the seafloor rift, it is easy to imagine that there are lots of gas pockets that do not make it out through the ridge. Instead they get stuck under the sea floor as it is pushed away from the ridge. Therefore try to imagine all sea floor as being created with lots of high pressure volcanic gas bubbles trapped under it.

A hundred million years later (or so), when the sea floor lithosphere subducts and then melts, it releases this trapped gas. Here is why so many volcanos occur just inland from the convergent plate boundaries. This is where the subducting sea floor is melting and releasing its trapped gas.

The Pacific plate for example is subducting under South America at an average rate of 6 cm a year. That comes to about 6.6 kilometers of sea floor subducting and melting in each $110,000 \pm$ year ice age.

The exact depth and epicenter of subduction earthquakes tells us about the course of the subducting sea floor as it heads underground.

Why are there no bubbles at the seafloor ridge?

This super high-pressure, high-volume water heater also picks up volcanic gases (which are about 96.8% CO2) as it circulates. There are few observable bubbles, however, because the immense flow of high pressure water readily absorbs the gas. Then, the hot water disperses the gas in the surrounding sea water as it rises, cools and depressurizes.

PROXIMAL VOLCANISM = seafloor rift volcanism **DISTAL VOLCANISM** = subduction zone volcanism

Proximal and distal volcanism

So now let's compare the way outgassing occurs at the sea floor

ridge with the way it occurs with volcanos. Let's compare proximal volcanism with distal volcanism.

Proximal volcanism

With the sea floor, the gas comes from vast, ancient outgassing systems, a root-like system that carries gas from deep within our planet. Due to the nature of this system, it is always working away in slow motion. One column comes up here and then maybe 143-meters down the rift, another column comes up. Then another somewhere else maybe 71-meters away. And of course this process of sea floor spreading slows during ice ages. But in general, sea floor outgassing is probably always occurring to some extent.

By contrast, volcanos are outgassing systems that are normally off, or 'dormant.' With volcanos, we see a large part of the outgassing concentrated in something like one millionth of the time, in full-blown eruption for maybe 5 weeks per 100,000 years.

How Earth's plates move

They accrete (reverse melt) at their sea floor rift edge and they melt away at the subducting edge.

Seafloor spreading and subduction is convection

It takes hundreds of millions of years to occur, but it is convection in two important ways. 1) It is conveyor-belt convection of sea floor that forms and is subducted. and 2) It is thermal convection of hot material to the surface that cools and falls back inside. It is not hard to imagine that this process was going on at a much faster rate before the planet had cooled.

Let's quantify lithosphere "convection"

How much sea floor lithosphere is there that is cooling and how much does it cool before it subducts again? What is the yearly average?

Lithosphere age graphs

One graph should show the percent of seafloor by age. Another should do the same thing for the continental crust. From this chart we can say that 90% of the sea floor is younger than X million years, and 90% of the continents are less than X million years. We also might do the same thing for the continental lithosphere based on latitude. Is there a puzzling early bump and a big gap? Does this occur in only one landmass? Perhaps this super-old rock is non-terrestrial in origin.

Sea floor ridge depth graph

Let's have a depth graph for the sea floor ridge, so we can know what percent of the ridge is at what depth. And let's do the same thing for the vent bottoms. Are these deeper here vs. there? Why are they deeper?

Just to be clear

With volcanos, there is clearly some process causing the outgassing to be trapped underground and then to suddenly explode out. And judging from the ash levels in the ice cores, these explosions put thousands of times more ash into the atmosphere during cold dry ice-ages than during warm and wet eruption-slowing interglacial periods.

13.. FORESTALLING ERUPTIONS

The battle against volcanos is on 2 fronts

1) We must keep our volcanos wet.

2) We should try to bleed them down, to open the soda can slowly and leak the gas pressure out slowly, so less of the other

stuff sprays out.

Keeping the volcanos wet

We will use sea-water to irrigate most of the world's early-risk volcanos. We will do this by making channels in the coastline and continental shelf, so that when sea levels fall a few meters, the amount of sea irrigation does not decline.

We also might use enormous prefabricated bolttogether pipes made of reinforced concrete to carry coolant sea water to irrigate our volcanos. And we might build geothermal plants near the volcanos to produce the power to move the water. Thus the system is powered by the same volcano its is irrigating. However, it is easy to imagine an earthquake damaging this infrastructure and causing a global eruption disaster.

As well, a more powerful approach (and we definitely need to maximize our power here) might be to use explosives. Either conventional explosives, or modern, computer-engineered ultra-clean-reacting, ultra-low-yield under-ground nuclear devices. We can put these down drill shafts to break up the bedrock and create artificial underground aquifers for coolant sea water to travel through on its way to many a volcano's rupture zone.

Chances are that we will have centuries to figure out how to do this.

Shallow canals

Theoretically the early ice age canals only need to be a few meters below sea level and near the coast. Remember, distance to the coastline matters more than depth. Also, a canal the size of an 8-lane freeway cut might be that is needed. Then again, maybe we will need to do these 2 or 10 times as wide.

Gated canals and artificial salt lakes

We might have Dutch-style canal gates, only operating in reverse, capturing high tide water. If we only open the gates during high tide we can amplify our irrigation capacity.

Bleeding down volcanos

We can open the soda bottle later

There is no rush to getting on with bleeding down volcanic gas pressures. Once we are able to Irrigate the world's volcanos, we can take centuries or even millennia to start getting serious about the bleed down process. But whatever we do, we must proceed gradually in small steps, leaving time for the underground froth to equalize pressure.

<clip of shaken soda can being opened slowly and the gas hissing out, but not over-flowing>

Another approach might be to drill into volcanos and use explosives, while the volcanos are still wet and well irrigated with an ocean of coolant. We will start small with small explosives and work in increments. We will dislodge a few plugs at first. Then we wait and then we dislodge a few more. This way, we can release a little pressure but the volcanos will clog back up again thanks to all the water. And in the beginning at least, we will need to make sure that there is a huge amount of water all around the volcano as coolant in case the now leaky volcano needs a lot more coolant.

Thus we might be able to gently bleed down the propellant gas pressures in many of the planet's volcanos over some centuries and millennia.

Drilling drones

The heat and gasses near volcanos are deadly. Therefore,

volcano drilling and explosive placement will probably be done with remotely operated machinery. Perhaps we will use numerous tiny explosions every day to gently and repeatedly loosen the ash-plugs in volcanos while they are still wet and selfhealing. Here we imagine that over the course of millennia, that many a volcano's gas levels can be slowly bled down significantly.

Maybe we need 7 billion people

Here we are with 7 billion people and we are left wondering if we can achieve such a huge undertaking as irrigating the world's volcanos. Perhaps having 7 billion people might actually improve the lot of everyone.

Upscaling human abilities

We have made such immense progress with scaling our microabilities. It is now time to do the same thing with our macroabilities. To do this, we must end the Mideast's artificial energy and commodity monopolies.

What a vast amount of gas we must deal with

Our volcano bombing task is daunting. However, we will have some advantages.

1) It may be 2,000 years before our warm age ends.

2) We will grow our macroscopic abilities in coming decades and centuries.

3) We only need to break up rock, not create anything.

4) We can probably rule out over 95% of volcanos as early ice age threats.

5) The flip side of exponentially bigger eruptions is simply that our first efforts to bleed down volcanic gas pressures will have the greatest impact on ice age ash levels.

6) Fundamentally, the pressure gradients are caused by surface water and this exists at depths and temperatures that we can generally reach today.

Bleeding down eruptions will cause ash

When we open our volcanic soda bottles slowly and bleed down the pressures, it will probably release some ash: like opening a soda bottle slowly still releases some moisture. But this might be a thousandth of what is released when we open the soda bottle rapidly. Anyway, this will also reverse what appears to be the gentle-but-slightly-excessive warming effects of an earthly atmosphere that is too clean.

CO2 sensors

We will have CO2 sensors at each volcano. These will tell us how much gas our bombing activities caused to be released.

Volcano size and gas release

We should expect that the volcanos we bomb will grow in size as a result of our bombing. This is because whenever volcanic gas comes out through a volcano, it aerosolizes some rock and produces some ash. So topographic changes to bombed volcanos are another way to measure how our degassing efforts are working. These changes can be easily measured using today's surveying aircraft. We should do this regularly and chart the changes over time, comparing the results of the different approaches to bombing volcanos. Thus we will carefully study and adjust our efforts to 'open the soda bottles slowly'.

It may take centuries or even millennia to slow-open Earth's volcanic soda bottles, to bleed-down gas pressures and thus neutralize Earth's volcanos. After all, magma is pretty viscous stuff and the distances involved are truly geological. Start with the volcanos that lose their coolant in El Nino climate system and those (if any) cooled with meltwater.

Be conservative

We should also keep in mind that the penalty for "opening the soda bottle too fast" is a major eruption that might just tip us over the edge. So the best approach is probably to start bleeding down small volcanos irrigated with sea water, because no matter how hot it gets there will always be enough water to cool the fire. There is no rush with this activity. Once we irrigate our volcanos, we will probably have many millennia to figure out how we are going to bleed down the volcanos. There are other things that we must get to first, like storing up food.

Eruptions and increased atmospheric pressure

1) The outgassing is almost 97% CO2 and this is rapidly consumed by life forms.

2) Even in minor eruptions, the ash shading is probably more powerful than the increased heat and atmospheric pressure.3) It is easy to imagine that seafloor rift outgassing is much greater than volcanic outgassing.

4) The matter needs study. Do volcanic eruptions increase average atmospheric pressures on 1,000 barometers scattered around the world? How much gas is coming up at the seafloor ridge/rift?

Undersea volcanos erode very quickly

The surface "ant hill" of a volcano is mostly ash and loose volcanic rocks. On land these features remain in place, but undersea, the ocean tend to quickly erode all but the lava flows, which are only the smallest part of most volcanos by volume. Let's keep this in mind if we are going to look for volcanos on the continental shelf.

14.. CYMOLOGY

CYMOLOGY = Using tsunami debris fields to generate a longtrem earthquake history

Sendai Tsunami video from YouTube

"Water culminated at the height of 20m (66ft)"

Propaganda: Hammond World Atlas 2003 "<u>Earthquakes</u> — Danger from the Depths When the ground begins to shake beneath our feet

Well into the Middle Ages, earthquakes were regarded as the work of mythical, supernatural beings or signs of the wrath of God. The quake that destroyed Lisbon in cataclysmic waves of fire and flooding on November 1, 1775 caused many people to wonder about the prevailing philosophical systems. Could anyone still look upon our world as the "best of all possible worlds", as a planet governed by reliable natural laws? And why had Lisbon, of all places, a city of churches and monasteries devoted to piety, been singled out by God for such terrible punishment? That earthquake marked the beginning of the science of seismology. The Portuguese minister Pombal had reports compiled by observers all over the country. The British engineer John Michell computed the speed of the shock waves. Questions were raised about the origin and the cause of the [earth]quake." [Here the Lisbon seismic event is characterized 8 times as an earthquake and once, in a confusing way as a tsunami. Some lies tell the truth more accurately than any confession. Clearly someone is trying to minimize the danger of tsunami. Who could that be?]

Plato, Timaeus, 22e

[Here we see exactly what the Arabs are and what they have been doing.]

"Our records [in the Mideast] are the oldest. ...Since ancient times, we have preserved a written record of any great achievement or notable event which came to our attention. This whether they occurred in your part of the world, or anywhere else. By contrast, almost everyone else has barely developed writing and the other basics of civilization, when the periodic flood strikes, sparing nobody but the illiterate and uncultured. The result is that your people have to begin again like children, in complete ignorance of what happened in our part of the world or in yours in early times. So these genealogies [and histories] of your own people which you were just recounting; they are little more than children's stories. You remember only one deluge, though there have been many, and you do not know that the finest and best race of men that ever existed lived in your country. You and your fellow citizens are descended from the few [bumpkin] survivors that remained. But you know nothing about it because so many succeeding generations left no record in writing."

Some recent tsunamis run-up heights

1896	Sanriku Japan	100-ft. (30m)
1877	lquique, Chile	80 ft. (24m)
1755	Lisbon	60 ft. (18m)
1737	Kamchatka	210 ft. (63m)
1724	Lima, Peru	80 ft. (24m)

Earthquake intervals

It is known that there were Chilean subductions and tsunamis in 1575, 1737, and 1837 — so the intervals are 162, 100, and 123 years respectively. Also, subductions have been well studied in Washington state. Apparently there have been 41 subductions in the past 10,000 years, averaging 244 years apart, and the last wave seems to have been in the year 1699-1700.

Seashells over 30m (100ft) up

On the dry cliffs of Portugal's Algarve there are many unfossilized clam shell fragments. In some places there are seashells as much as 10-stories up. Here we see how dangerous it is to live on the Atlantic seaboard.

Seashells can be found in many other coastal places around the world, just make sure doesn't rain too much. Too much rain tends to dissolve the shells.

How come we find un-fossilized sea shells up to 100 feet up on coastal areas (and not much more) if not from a tsunami?

Gr.Cym = wave, Cymology = the study of waves

Considering all the people that live in the jaws of death less than 20 meters above sea level, the dating and mapping of the world's tsunami debris fields is one of the most important tasks facing humanity today.

Here we will certainly look for alluvial deposits left by tsunamis. However, the most useful information may come from the carbon dating of non-fossilized sea shell fragments, particularly the thick and durable fragments of clam-shell we find in high places near the ocean. These high-water fragments are rather common on the surface along dry coastlines.

Carbon dating the fragments will tell us their age, and their maximum elevation and location will tell us the extent of that particular tsunami along a coastline. We will then combine locations to get an accurate picture of each tsunami's wash area on all affected coastlines.

Then we will match the wash zone to well-known faults

and infer an earthquake size necessary to cause the run-ups we observe in the seashell data.

We will use data from recent subduction tsunamis in Bandah Ache, Sendai, and south America to calibrate our readings. Thus we will create a worldwide history of ocean earthquakes and tsunamis for at least the Holocene era, for the past 7,000 years when sea levels were roughly at their present level.

I survived the 2004 Indian ocean tsunami

I was on a wooden long-tail boat in Krabi Thailand, out on the water when the tsunami struck. And let me tell from personal experience and observation that the shape of the coastline has a profound effect on which areas suffer the most from tsunamis. The places that trap the water get many times more flow.

<Tsunami timeline.jpg>

My attempt at carbon dating clamshell fragments to date tsunamis

I collected 139 clam shell fragments from around San Diego and Los Angeles. I didn't have the time or ability to dig up large areas looking for buried shells — which are somewhat rare. Nearly all of my samples were taken from the surface where they were heavily contaminated with modern carbon. This caused my samples to be variably skewed a bit towards reading as younger than they actually were.

But even though my data was a bit contaminated, it clearly shows that there were tsunamis in the past 7,000 years. I say this because of the 139 shells sent for carbon dating, 13 shells were less than 200 years old, 7 shells were between 7,000 and 46,000 years old and 2 were from before 46,000 years ago. Most notably, 117 were older than 200 and younger than 7,000 years old. This breaks down as:

9.4% of shells under 200-years old

84.2% of shells between 200 and 7,000 years old 5.0% of shells between 7,000 and 46,000 years old 1.4% of 2 shells older than 46,000 years or older

Whether you acknowledge the date clusters or not, the simple fact is that 84% of the samples were not ancient and also were not modern either. So clearly there have been one or more great tsunamis striking southern California in the past 7,000 years. The only thing now to discuss is how many tsunamis and when.

My seashells came from Presidio park, Washington and India St., Tecolote Canyon, Rose Canyon, the cliffs between Cave St. and Torrey Pines Rd. east of La Jolla Shores Blvd., Del Mar, 3 miles inland from where the Del Mar fair is held (Carmel Creek and Tang) All of the foregoing are in San Diego. Samples also came from Los Angeles from a bank near the corner of Slauson and Sepulveda, Arizona Circle, as well as from Long Beach near the refinery. Some shells came from places that are up to perhaps 30 meters above sea level, although most are from places under 15 meters above sea level

In general, the carbon dating process has an accuracy of ± 40 years per sample, until the sample is over about 2,000 years old. Then for samples under about 7,000 years the accuracy goes to ± 50 years per sample. And if the sample is contaminated with more recent carbon, as it would be the case in a seasonal rain trickle-way, then the sample will read as newer than it is. My samples were mostly floating around on the surface and many were in trickle-ways. So my data is quite dirty and there are many samples read younger than they are. However, some samples seem to have come to the surface recently, and these form date lumps. The key to understanding my timeline is that the date tails are exaggerated and overrepresented. If shells are excavated properly, the date clusters should be much more pronounced.

How to accurately see tsunami dates from clam shells

- 1) Don't use surface samples, dig up samples up from below where water penetrates.
- 2) Test many samples to get accurate date clusters.
- 3) Look for a date cluster followed by a tail that appears younger.



For earlier dates, we will drill cores in valleys on the continental shelf. Of course we will find oil deposits in a high percentage of places that we look for tsunami debris — this is because oil deposits are a subset of tsunami debris field.

An earthquake history

Soon we will have a million-year history of earthquakes on our planet. I expect that earthquakes are quite predictable on a geological time scale measured in decades rather than minutes. For this reason, our undalogical may be able to create decadescale probability curves for earthquakes of various sizes on most sections of subduction fault.

It is worth pointing out that these subduction earthquakes are the giant quakes that really matter. The other earthquakes really don't even matter. In fact, we should probably just call subductions as that and use the term earthquakes for the little movements. And we should not lump the two in together really except as "SEISMIC ACTIVITY".

A seismic trend line

Cymology will also give us an overall trend line for seismic activity on our planet. This will tell us if seismic activity is stable, or if it has been accelerating as the planet warms.

<3 maps showing the portions of Beijing, Shanghai and New Seoul that are less than 20m above sea levels>

If we know the tsunami's source, we will know how long we have for evacuation. For a remarkably large number of cities and tsunami sources, there doesn't seem to be any practical way to evacuate them in time. As well, the greatest cities seem to be the most vulnerable — great cities like Amsterdam and New Amsterdam (New York), London, Shanghai, Beijing, Tokyo, Seoul, Hamburg, Bangkok, Copenhagen, and many more. For these cities, there is no way to evacuate in case of a nearby subduction tsunami.

Soon we will have to make some immensely costly decisions about building new cities as foretold in the prophecies of wise men before me. And while we are on the topic of prophecy. Isn't there also something about bridging the oceans and moving all the people?

"In the 1870s and 1880s, the city meant New York, and New York meant Manhattan Island. Immigrants tumbled in by the thousands, descending as if by gravity to the lower half of the 9-by-2.5-mile <u>slab</u> in the estuary of the Hudson River. That was where the boats docked and the trains stopped; <u>that was where the money flowed</u>, <u>where opportunity knocked</u>." [Funny how American opportunity knocked at the mouth of a tsunami funnel. Funny how all over the world today, opportunity knocks for the best and brightest of mankind at the mouth of a tsunami funnel.]

<New York funnel map>

Look at the shape of the coastline around New York. Look at how New York sits at the throat of a great tsunami funnel. Look at how Wall Street, "the financial capital of the world" is right up in front of all the domino rows. The Arabs seem to know all about creating deadly cascades in high rise buildings. Here we see how the way the world trade center failed is sort of a microcosm for the way New York City, the capital city of the land of the free is designed to fail in a great tsunami.

<"Pompeii" book cover with multiple corpse casts>

The Arabs have a long history of steering their enemies into living in cities located in the jaws of death. Apparently, they never stopped doing this.

Why didn't the Hudson silt up?

All rivers silt up. Why didn't the Hudson? And why is there a giant chunk of exposed bedrock called Manhattan in the middle of where we would expect a river delta? Perhaps the reason why the Hudson didn't silt up as we would expect of a river is that all the silt was washed away by the funneled tsunami flow. This repeatedly washes the Hudson's silt away.

What do Dover and New Jersey have in common?

1) Both have tsunami funnel cliffs.

2) Both channel water towards a tsunami-vulnerable Amsterdam.

Japan Sendai tsunami damage.jpg

The Koreans think that the hills are where poor people live. Now what could have caused that 180° backwards idea in your people? And you in Japan, you apparently believe the same thing, judging from how the tsunami affected only your cities and not the wilderness on the hill. It certainly seems that you have a parasite infection in your group mind like everyone else. Rio is the same. And what is more expensive and exclusive than ocean-front property nowadays. What a matrix interpretation the Arabs got you all believing in.



During the Sendai Japan tsunami



Banda Ache after the tsunami. All oceans experience tsunamis.

Atlantic tsunamis

1) The coastline of Argentina and brazil just get slammed with the tsunami and that is why the continental shelf is so big at the tip of South America.

2) In the pacific, the waves dissipate. However, in the Atlantic/Atlantis ocean, the waves actually get compressed almost 2:1 when they pass between narrowest part between south America Africa.

3) The wave gets trapped in the Barents straight and west of Greenland and then it flows back.

Atlantic tsunamis don't really diffuse

Now the recent Japan tsunami of 2011 diffused as it crossed the Pacific Ocean. And the Indian Ocean tsunami of 2004 also diffused as it crossed the Indian Ocean. But Antarctic tsunamis in the Atlantic Ocean do not diffuse in the same way. These wash up an Atlantic channel of roughly equal width until they are "stopped" by the arctic ice cap.

The English Channel funnels twice

Most of the Atlantic gets hit by tsunami twice when Antarctica leaps towards the Atlantic. Tsunamis arrives in the English Channel from the south get multiplied about 5 fold at the Dover sphinx. Thus we see the Netherlands and Belgium as the tsunami debris fields. The debris is also manifests as a number of submerged banks in the North Sea.

A couple hours after the northbound wave passes the English Channel, the trapped water from the Barents sea arrives, coming in the opposite direction. And while the North Sea is not exactly in the way, it still gets a good sized flow of water. Then this flow gets compressed about 15 fold at the straights of Dover. And of course the water is trapped and much of it winds up funneling into the Thames and flooding London. And of course this also happens with Belgium and the Nether-lands — just like with New Amsterdam.

Funny how the most expensive city in Germany is the only city located in the Jaws of death. Funny how so many of the world's special cities are located in tsunami funnels. Why are most great cities located in tsunami funnels or scoops? Why are the highest paying jobs located in these places? Is it from the Arab struggle to draw the smartest and most dynamic of their human flock into the jaws of death?

Marco Polo, Ch1, p.54

"It is a fact that all the Saracens [the Arabs] of the world are united in wishing harm to all the Christians in the world."

Marco Polo, Ch1, p.57

"The Saracens of Iran [Arabia] are wicked and treacherous. The law which their prophet Mohammed gave them says that harming [even killing] and steeling goods from those who do not accept their law is no sin at all.

How can reality be so inverted?

How come the cities with the most expensive housing are all located in the Jaws of death? How come everyone wants to live in the jaws of death? How come people wanted to live in Pompeii under that volcano?

The reason is actually very simple. After a disaster nobody wants to live in these places that would otherwise be valuable due to their location. So the Arabs send some settlers and they get free land in the middle of things. After some generations people forget and the Arab investment - which cost nothing and was a useful place to send the always present human overflow, now becomes worth something. But those memories of the past tsunami/eruption become a problem, so all the Arab immigrants go around looking for records which they quietly adulterate or erase, or steal a page from. And when people talk too much about the new settlements in the danger zone, they tend to get whacked (on the head). So eventually people forget and the investment which cost nothing eventually becomes Manhattan real estate worth a zillion dollars a lot. That is how things got so inverted. This is what happens when we let the Arabs run the world for their own benefit.

Map of Thai funnel

The people of Thailand remember the 2004 tsunami all right. Well, one day another tsunami will be funneled perhaps 15:1 by the shape of the coastline around the Gulf of Thailand. And it will head straight towards Bangkok, as if the city were located in the jaws of death by design. Funny how one of your most revered kings decided to move your capital from Chiang Mai, right into the jaws of death, only a couple meters above sea level. You think this dictator-king might have been fronting for the Arabs?

The 1755 Lisbon tsunami

It is worth noting that most of the 60,000 deaths in the 1755 Lisbon "earthquake" came from a tsunami that had a 60 foot vertical run-up, right through central Lisbon. For the incredulous, the area that was washed away is still visible in the architecture of Lisbon today. Apparently Lisbon's 'Golden Gate' increased the height of the wave.

Another remarkable thing about the Lisbon disaster is that it was and still is known to the people of Portugal as a tsunami. It is just that the outside world thinks of the Lisbon disaster as an earthquake. Mostly, I suppose this is due to Voltaire's Candide play, the reality bending Forest Gump propaganda of its day. It is also worth noting that we used to call tsunami as "tidal waves", a term that completely masks what these waves are.

A 30-meter event horizon

In coastal areas of Southern California, there are fresh, unfossilized shell fragments up to about 20 or 30m. I argue that the consistency of elevation stands as proof that these shells were generally were not moved to their locations by humans. For why wouldn't people also move them to 40m and 50m above sea levels?

La Jolla = the grave

In Spanish la hoyo = the grave. And strangely La Jolla has the highest costal hill in San Diego, so it is the place is the least

likely to suffer a tsunami. This is just the sort of doublespeak diametrical lie the Arab Ministry of Truth tells. My take is that the San Diego Indians called all of the low lying coastal areas as graveyard, not just the area today known as La Hoyo.

Los Angeles

Everyone knows Los Angeles means the Angels. This was the Indian name for the place, which was said to be haunted with the spirits of the people who had died in the last tsunami. This is the true meaning of your city's name. It means "Los Muertes" or "the dead people". It is the same meaning as EI Hoyo but translated differently

<La Cienega Blvd on map> La Cienega Blvd

Cien·Agua = hundred·water = century·water

In Los Angeles, a few miles inland parallel to the coast is La Cienega Blvd. This is apparently how far the last tsunami went. And west of La CienAgua Blvd. we find lots of un-fossilized shells from recent tsunamis. This is a place where nobody should live. This is the zone that gets tsunamied just like in Sendai Japan and Bandah Ache Sumatra.

Did La Cienega change its name all by itself? Or did someone hide an idea by muddling a name? Clearly somebody has "struggled" or "jihaded" to hide this fact from us. They did it to hide how oil forms, and to hide our oil fields.

<San Diego on map>

San Diego seems to be perhaps from de•golo = of-the•throat. For most tsunamis arriving from the south, the Point Loma peninsula forms a scoop that catches a great many miles of tsunami wave front. For optimally oriented tsunamis arriving from the west-south-west (such as an Australian leap would produce) the wave front would be 20 to 40 km long and compressed several times in the Sports Arena/Old Town area. Here is why there are un-fossilized seashells 20-30m above sea level at at the intersection of Washington and India Streets — as well as at the point of Presidio park.

<26-Ache-obliterated>

Rest assured, one day a great tsunami will come and downtown San Diego will look just like Banda Ache after the 2004 tsunami.

San Diego is a tsunami funnel

It would appear that every few centuries there is a great tsunami. And clearly Point Loma acts as a scoop and funnel for San Diego harbor. And clearly much of the sand gets washed into Mission Bay.

Mission Bay Clothing line

This is not real. This "brand" is the Arabs struggling to make Mission Bay into an important tourist destination so we will not realize that it is a giant oil field. In fact there is oil just below the surface in Mission Valley, Mission bay, Rose Canyon, San Clemente canyon. And the refinery in Long Beach may stand as the world's greatest ever monument to follow the leader stupidity. For it is sitting directly upon a massive oil field.

California falling into the ocean

Think of the way the low-lying parts of Sendai-Japan and Banda-Ache-Indonesia fell into the ocean. In fact, they <u>flowed</u> to the bottom of the sea in the tsunami wash. They were <u>washed</u> to the bottom of the sea. That is what people used to say.

Sooner or later, this will happen in California again. Please wake up. Please abandon the coastal areas. And you living in the Beijing funnel, you in Seoul, Hanoi, and Bangkok, You living in the tsunami funnels of Japan, and England and the low countries, please wake up.



The two types of spreading and tectonic movement

1) **LATERAL SPREADING** = The east-west sea floor spreading in the three great oceans (Pacific, Atlantic, Indian).

2) **VERTICAL SPREADING** = the Antarctic ring spreading that pushes Antarctica south and pushes the rest of the continents north.

With lateral spreading, the contents tend to remain in one place while it is the sea floor that tends to move more and subduct under the continent. This is seen in the technicolor map of seafloor age. Here the Old World and New world have remained more or less fixed in place while it is the seafloor of the fast spreading Pacific that moves and subducts under the continent. So with vertical spreading, it is 80% or 90% seafloor motion and 10% or 20% continental motion.

However, with vertical spreading, we clearly see the Australian and Antarctic continents on the move if we just look at the technicolor seafloor age map. Here 80% or 90% of the movement is continental motion and 10% or 20% is seafloor motion.

The Australian wave machine

It is not only obvious from the seafloor age map, but it is the scientific consensus that Australia is on the move. But in the last 250 years, there have not been enough earthquake movements along this vector.

So the movements must be big and far apart.

So here we are left imagining the Australian continent leaping or perhaps pivoting every so many centuries, be it 3 or 30 centuries I surmise. Here the rest of the world stays mostly put and it is the Australian plate (and land mass) that does the moving. Thus we have a continent that periodically leaps 20 to 200 meters at 400kph, acting like a giant wave machine. (300yrs at 6.66cm/year = 20 meters) Then again, maybe I am wrong. However a global cymology survey will tell us for sure about these epochal-lyses. I sure hope I am wrong.

Australia = Ost·aglia = Eastern·pain

The movement of Antarctica is obvious

Look at the technicolor sea-floor-age map with the south pole centered (lower left image). Look how most of the spreading happens along a straight line between Antarctica and Australia. Look how Australia and Antarctica are both moving apart along an axis of roughly 50°W for Antarctica and 130°E for Australia.

Now look at the seafloor between Antarctica and South America. Note how there is compression right where we would expect to see compression from Antarctica's movement. Note how the sea is all new and red on the technicolor map of seafloor age. In fact, the seafloor here is red from coast to coast, because the older sea floor has all been subducted as we would expect. Thus we come to the simple and easy to believe conclusion that the spreading between Australia and Antarctic is driving both land masses apart from each other at the same time.

A giant paddle

The seafloor runs about 4.7km deep and the continent of Antarctica is about 3,500km across. What a giant wave paddle. And this paddle simultaneously pulls and pushes water smack in the center of all three of Earth's great oceans. Epochal lyse, no?

Inundation maps

We really should make a technicolor map of the world's cities for inundation.

Areas below 10m in red, Areas below 20m in orange, Areas below 30m in yellow, Areas below 40m in light green, Areas below 50m in dark green, Areas below 60m in aquamarine, Areas below 70m in light blue, Areas below 80m in dark blue,

Areas below 90m in violet,

Areas below 100m in magenta,

As well, these colors on a technicolor maps should universally mean numbers, so everyone can understand technicolor maps rapidly whenever they see one.

<Plate-motion.jpg>

The movements of Australia and the rest of the continents are widely recognized. The movement of Antarctica are not.

Letho, the "Greek" god of forgetting

The Arabs have this god of forgetting, societal forgetting that is at least 2,500 years old. They remember everything because knowledge is power. And at the same time we in the host part of the world forget everything because knowledge is power. This way, one day in the future, our lines will die out and theirs will prosper greatly.

<29-California-rift.JPG>

Look at the places where the "Mid-Pacific Ridge" is either at the coastline of North America, or within the land mass. Funny how this entire coast (and not much more) is called California (California USA or Baja California). Was the Oregon territory cut off to enlarge the Cali•for•nia territory? Was cali•for•nia originally the good•for•nothing territory?

"Magnetic anomalies extend <u>throughout the world ocean</u>, the most complete record being the large Pacific plate where the age of the crust varies from zero at the East Pacific Rise to mid Mesozoic <u>offshore of Japan</u>. But notice that the pattern is not fully repeated to the east of the Rise, only a little being preserved adjacent to South America, and none at all beyond the intersection of the Rise with North America. A minimum of 13,000 kilometers of Pacific Ocean floor must have been 'gobbled up'!"

California is the most populous state

If there is one place that the Arabs are going to steer the best outies, it is into the jaws of death. Here is why California real estate has the most expensive in the nation. Look how aside from the New York tsunami funnel, the 3 most expensive US cities are located on the Pacific plate west of the "Mid-Pacific Ridge".

Sold for a \$24 box of beads

Manhattan was Los Angeles land, just the 2nd biggest city in the land of the free. There was no sale. This was the Arab cover story. This was the Arabs steering the rebels into living in the jaws of death.

Resolution not rage

Resolution is far more powerful than rage

Please allow me to focus your anger where it will kill the parasitic group spirit and its enslavement religions, once and forever.

Please feel <u>resolution, not rage</u>. Please resolve to end the parasitism in every single form you can identify, no matter the cost, the personal inconvenience, or the hell you bring to the unrepentant. Make it your main duty to mankind, to goodness, and to yourself to end Ishtar and Islam wherever you can find them. And please everyone muster-up into the broad and incorruptible democratic design I explain herein so that your group efforts can no longer be hijacked by the totally unified and centralized parasitic agenda of Mideast Inc.

Check the Salt river in Phoenix

The Gulf of California has a mouth that is about 350 miles wide for a tsunami arriving from the southwest. This is on top of the tsunami flow washing up the coast before the mouth of the funnel. This seems to happen when Australia lurches to the northeast, the direction we know it is moving in by dating the seafloor. The Gulf of California tends to funnel the resulting tsunamis into Grand-Canyon scale floods.

We really should carbon date the thick alluvial salty layers we find in Phoenix near the SALT river, and in Yuma, near the SALTon Sea. This way we will know how often Yuma, El Centro, and perhaps Phoenix and perhaps Las Vegas get inundated.

15.. EARTHQUAKES

Earth science and the environment textbook, 6.4, Thompson and Turk

"A subduction zone is a long, narrow belt where a lithospheric plate [the seafloor] is sinking [being forced down] into the mantle. On a [long-term and] worldwide scale, the rate at which old lithosphere sinks into the mantle at subduction zones is equal to the rate at which new lithosphere forms at spreading centers. In this way, Earth maintains a global balance between the creation of new lithosphere and the destruction of old lithosphere."



How the continents move

Most of us briefly learn about continental drift as children, while we are still too young to consider the implications. Thus the idea is nothing new when we encounter it later in life. Thus we don't give the idea much consideration if we encounter it later. In most people, this effectively hides some rather obvious implications about the process of continental drift.

Many people know that Australia is drifting to the north. Not so many people know that this is happening at a rate of about 6cm per year, or 600cm per century, or 30-meters per 500-year period. How exactly does Australia move? After all, it is not creeping along in steady gentle movements. Clearly the continent of Australia leaps between 10 and 100 meters every so often.

Clearly entire continents occasionally leap, or pivot between 10 and 100 meters with utterly devastating results for the earthlings on that continent and across the ocean from that continent. Here our global cymology survey will speak conclusively about all the seismic events of recent millennia.

Cymology of continental leaps

If our cymology survey shows that all parts of the Australian plate show a great tsunami at the same time, then it appears that the entire continent leapt at that time. We might also look for cymology data from our mid-continent seas, such as America's Great Salt Lake, and the Caspian Sea in Asia. Here we will find out how frequently our continents have leapt, and how forceful they leapt.

Fred M. Bullard, Volcanoes of the earth, Ch.17

"The largest magnitude assigned to an earthquake to date is 8.6." [Do the older books tell of smaller earthquake sizes for the same earthquakes? Has the Arab ministry of truth been working to increase the reported size of earthquakes? We should chart the reported size of all major earthquakes over time. Are there any consistent problems with the accuracy of the system?]

Earthquake activity is probably not increasing on a decade timescale

The rise in sea levels in the past 2,000 years has only been a few meters. And the rise over the past few centuries is barely worth mentioning. And earthquake activity would not suddenly jump into hyper-speed due to the way that the seafloor ridge puts pressure on the seafloor. So how is it then that we are starting to see all these huge earthquakes? Has the formula for the Richter scale been changed in recent decades?

If we look at the Richter size of recent earthquakes, it definitely seems that earthquake activity has been accelerating. Yet it seems so unlikely given our new understanding of seafloor spreading. And when we consider how surprisingly nondestructive these quakes were, we start to grow suspicious. And when we note how the recent New Zealand quake was resized from 7.3 to 7.8 on 2016.11.23, we grow even more suspicious.

It seems as if the formula has been changed in a way that increases the size of large earthquakes. Either that or the only company making "official" seismographs changed the calibration of their devices. I don't know what it is, but someone apparently has the fix in.

I also want to say that we used a gravity scale, earthquake size would not even be subject to re-definition.

The Richter scale is one of many awful measuring systems bestowed on the world by the Arabs

1) It is a quantification that brings no real understanding of quantity.

2) It has no connection to the physical reality of our lives.3) Each whole number represents 32x more force. Thus it is hard to grasp how powerful earthquakes are relative to each other.Why isn't the Richter scale base-10?

4) Why use a decimal? Why not rate earthquakes 1-to-100? Decimal numbers are confusing and hard to remember.5) It is hard to for structure designers to interpret in a practical way.

6) It is an overly-simplified single measurement of an entire earthquake along a long fault. The lateral force in each populated area is what people need to know, the total energy of the earthquake is irrelevant to everyone except the seismologists.

7) Because the Richter scale is not tied to anything, it is easier to modify the equations without anyone knowing. A gravity scale can't be tampered with.

8) If we use a scale related to lateral gravity, then it is real easy to understand the maximum lateral load a structure needs to be designed for. Here we imagine government analyzing the entire nation with respect to seismic and storm loads and establishing zone maps. Then everyone will know that if they are in a 0.8GLA zone, then they will need to build structure to withstand 0.8-gravities of lateral acceleration. That is how much sheering strength a structure needs if it is tied to the ground.

9) C.F Rich-terra is a matrix name.

10) the Richter scale is so hard to understand in so many ways, that it must be designed to limit our understanding of earthquake risk.

Flawed assumptions about maximum earthquake energy?

Do the tsunamis we find in our cymology survey fit within the energy assumptions of the Richter Scale?

The GRAVITY SCALE

Let's adopt a new open-ended earthquake scale. Here we will express earthquake shaking in GLA's or Gravities of Lateral Acceleration. This is so much easier for people to grasp in human terms. The power of an earthquake will be the maximum GLA reading experienced at the location reported on. And there might also be a second number, the duration of the shaking. And there might also be a third number, a total energy released by the earthquake in MTTS = megatons of TNT pronounced as "Mitts". Also, all past seismograph readings and charts should all be converted to GLAs and MTTS.

Subduction earthquakes and tsunamis

The lithosphere is elastic

To understand the forces released by a subduction, try visualizing the subducting sea floor and continental plate as giant

thick rubber sheets like we see in some gyms — but several miles thick. Imagine that they compress as they are forced against each other — and this compression is exponentially greater right where the plates converge.

So when the two sheets inevitably slip past each other, these distal edges, or CONTINENTAL EDGES will jump exponentially farther and faster and experience exponentially greater earthquake force.

Oceanic tsunamis vs. continental tsunamis

The continental lithosphere is 2-3 time thicker than the sea floor lithosphere. So if it is ocean plate slipping under land (as in Sendai Japan) then 80% or 90% of the movement is experienced by the ocean plate. This produces a relatively weak ocean tsunami.

With continental tsunamis (such as Australia and Antarctica experience) The continent moves and acts a a wave paddle. This produces a relatively powerful ocean tsunami, a tsunami much more powerful than an ocean tsunami. It should be noted that the Pacific plate in California moves almost exactly northwest. Thus even west facing California beaches experience continental tsunamis.

<Clip of this sort of spring being pulled and released>

With slide faults, there is material ahead and alongside of the slide zone. This material slows and dissipates the earthquake's energy. With subductions, this does not happen.

Here we can imagine a slide fault behaving like a soft spring that is held between two points. If we pull the middle towards one end and then let go, the spring oscillates back and fort for some time. What is happening is that each sides of the spring, compresses or stretches in turn, reflecting say, 2/3 of the energy released. The "earthquake's" energy is thus dissipated through oscillation.

<Clip of a one ended spring being released from compression>

With subductions, the plates are not bound on the other end. There is no opposing plate to capture and reflect the released energy. The result is a larger, faster, more powerful initial movement, especially at the end of the continental plate. And notably, in the recent Japan subduction, there were videos of ground being pulled apart in a 'stretch mark' manner, as the plate hit the end of its leash.





Why the San Andreas fault is so dangerous for California Note how all three of the big California cities are located on the Pacific plate. So the next time the San Andreas fault moves, the North American plate will stay put and the Pacific plate will do all the moving. It will fly to the northwest at an incredible speed and then oscillate between the Northwest/Southeast.

Don't live on a Continental edge

Given that the edge of the continental plate jumps exponentially farther, faster and harder, we should reassess the earthquake risk of living right at the edge of a continental plate (or anywhere on an oceanic plate). The critical thing is the distance to the subduction zone, which is normally right at the bottom of the continental slope. How far are you living from the subduction zone? And here we not how thin the continental shelf is in California.

The Arabs want you to forget and to ignore the past

Note how our openly-corrupt paid commercial media endlessly glamorizes life in the jaws of death for the richest and smartest people of the world. Note how most TV shows are set in the jaws of death, for example: is Sex in the City, Two and a half men, Baywatch, CSI Maimi, Cali-fornicaiton. Why does our media never mention how numerous traditional cultures around the world are afraid to live near the ocean due to vague culturalmemories that are obviously about past tsunamis?

The Aztecs used the same word for both jaguars and tsunamis

There are many mentions of tsunamis in Aztec mythology. Just keep your eyes open for mentions of Jaguars. They are the symbol of TepeyollotI the Aztec earthquake and tsunami god. In the recent propaganda film Apocalypto, the main character's name was Jaguar Paw, and there were at least 30 ferocious jaguar scenes, including a number of memorable scenes where a jaguar bit a man's face and killed him.

Here we understand the meaning of the Aztec mythology when it says that there were five ages, <u>and each</u> <u>ended in a cataclysmic destruction caused by huge and</u> <u>ferocious 'jaguars' that killed everyone</u>. The Aztec ages incidentally lasted on average 2028 heavenly cycles (years) each composed of 52 time periods (weeks).

Do you live on a sand bar?

Today, millions of people live on what are essentially sand bars, or well washed islands with exposed bedrock. How can you all ignore the obvious risks? You are living in the jaws of death even more surely that if you lived on the slope of an active volcano. In fact, comparing the frequency of volcanic eruptions to the rate of tsunamis, the tsunamis are 50 to 500 times more frequent. Every so many centuries most low-lying shoreline communities experiences a tsunami like Ache Sumatra or Sendai Japan.

Do you live within 100km of a subduction zone?

If you do, are you aware that the next subduction tsunami might strike the shore even before the shaking stops. In other words, there will be no time to evacuate.

<Pie chart showing top 5 earthquakes by percentage of total seismic energy released. Name/year each quake and have a slice for 'all others'>

A different more powerful type of earthquake

The four largest earthquakes ever recorded were subductions, so it is not unreasonable to say that we are looking at a different class of earthquake. The Valdivia quake of 1960, was the most powerful earthquake ever recorded. This 9.5 magnitude earthquake accounts for half the force released since people started keeping track of earthquakes. The epicenter was 160km offshore and the quake produced an 8-story (25m) tsunami.

An unreliable source said that most trees near the epicenter of the Valdivia quake were broken off or uprooted. This sounds like an exaggeration, but maybe it isn't. And maybe this reveals a dangerous flaw in our understanding of earthquake forces; something that may eventually be responsible for millions of deaths.

San Francisco Bay and the big one

Driving around the San Francisco bay, the giant flat areas near sea level are quite obvious. These are obviously from a combination of the Sacramento River and from tsunamis.

And while there is a 70 mile wide funnel at the Golden Gate, the bay is a bit wider than this. So the real risk doesn't seem not from the water arriving from outside the bay, but from the water inside the bay. Imagine what would happen if the Pacific Plate, basically the San Francisco peninsula and the southwest parts of the bay lurched northward by 60-feet at 400mph — as this plate doesfrom time to time

I think that there is a reason why the tech capitol of the land of the free is has been steered into preciselythe portion of the bay that seems to be the most vulnerable to tsunamis and earthquakes.

You see, there is a reason why both Google and Apple and so many other leading US companies are headquartered right smack in the middle of the Jaws of death.

THE MECHANISM OF SUBDUCTION

Fred M. Bullard, Volcanoes of the earth, Ch. 5

[Even without entrapped air spaces, thick rock is a good insulator.]

"Lava, like all rock, is a poor conductor of heat, and it cools very slowly. The scoriaceous [frothy] nature of the surface layer, with its many cavities and entrapped air spaces, <u>provides a splendid insulation</u> to prevent the heat of the lava from escaping. [foreigner English alert] It is possible to walk over a lava stream in which only a few inches below the surface the rock is still redhot. In my experience the gases rising from the cooling lava, particularly from fissures, are more of a hazard than the heat of the lava surface.

How long will a lava flow remain hot? Naturally, this will depend on the size of the flow, for it will take a large mass longer to cool than a small one. The hot springs and geysers of Yellowstone National Park <u>attest the fact [more foreigner English]</u> that an acidic <u>lava buried only a short distance below</u> the surface will remain hot for thousands, even hundreds of thousands, of years. Here the material failed to reach the surface but did come close enough to heat the ground water issuing as hot springs and geysers. Old Faithful Geyser was active during the lce Age, as is indicated by geyser deposits interbedded with glacial deposits..."



Subduction goes straight down

To understand the mechanisms of earthquakes, we should start with some premises:

1) Rock that is 40 kilometers thick takes a very long time to melt. If earthquakes are happening every 200 years, then only the surface is melting.

2) As much as the surface of the subducting lithosphere is being melted by the surrounding rock, the surrounding rock is also being cooled and hardening the subducting lithosphere. Without some means of convection, the subduction zone will eventually cool and harden from all the cold seafloor being subducted.3) Maybe there is hot high-pressure volcanic gas bubbling up along a convergent plate boundary, and this is helping to keep the subduction-path moving.

Surface water probably increases subduction size

Each time there is a subduction, it probably refreshes a great deep fissure extending well into the subduction zone. And into this fissure flows high pressure water which cools the subduction zone. This causes a great cooling of the subduction zone which takes centuries to reheat. And in the meantime, earthquake pressures build up more than they otherwise would. Thus the presence of water causes bigger earthquakes.

The two dynamic forces of earthquakes

On one hand there is obviously plate movement. But on the other hand there must be convection of some sort, otherwise the subduction zone would cool and freeze and stop working.

Earthquake melting is powered by outgassing

There can be little doubt that the only dynamic processes at a subduction zone are stored up tectonic forces and gas leakage. So any theory of earthquakes must involve both of these forces and no other forces.

Earthquake timing is probably determined by melting

Subductions are from both falling <u>resistance</u> and increasing <u>force</u>. However, the Force-curve is probably flattish, while the Resistance-curve is shaped like the UR curve, the upper right quadrant of a circle.

There must be convection

Subductions happen too frequently for heat conduction in rock to equalize temperatures. And this is especially so when we consider the cumulative effect of multiple subduction. There must be a heat convection mechanism at work, and the most reasonable seems to be outgassing.

The melting is entirely superficial

Let's imagine the freshly subducted lithosphere. Each new segment of subducting sea floor is much colder and harder than the subduction zone. And over the centuries, there is some superficial balancing of temperatures between the subducting sea floor and the subduction zone. However, the subducting sea floor is about 40 km thick. So the temperature balancing near the surface is entirely superficial.

The subduction cycle

1) There is a subduction and the subduction rift fills with water and suddenly cools.

2) Outgassing bubbles through the water and just like in volcanos, it eventually seals/fills the subduction rift with ash or pumice.

 One the subduction rift is sealed, gas pressures build up throughout the rift. These then heat the rift and lubricate it
 Once the rift is sufficiently heated and softened, there is another subduction and all the ash plugs are broken. Then the process repeats.

I bet we find pumice

If we drill some subduction zones, I bet we find a layer of pumice/or lahar right where the subduction path should be.

Resistance is more important than Force

Again, falling resistance is more critical to earthquake timing than rising tectonic forces.

Any deep rift will work for the soda bubbles

Once again we recall how our planet is like a giant pressurized soda bottle. And we imagine that any rupture in our planet's hard skin will allow gas to escape — especially an ancient rupture that descends deep into the molten part of the planet. Therefore, we should expect that the path of the subducting plate acts as a conduit for outgassing from deep inside our planet. And thanks to the heat carried along by this outgassing, the subduction zone rapidly (on a geological time scale) melts and "lubricates" the surfaces of the subducting plate, until the next section of cold subducting plate temporarily "freezes" the tongue zone shut again.

The paradox of subduction

Note how the ocean with the most active seafloor ridge gets all the subduction. Apparently the fast subducting sea floor creates a deeper and longer pathway into Earth's center for more gas to escape through.

Do CO2 levels predict earthquakes?

Perhaps many subductions are preceded by a period of elevated CO2 outgassing at the rift. Perhaps we can use upside-down bowls/funnels at and near the subduction zone to measure this. Perhaps these will be mated with large plastic tarps and measure outgassing from a wide area. Perhaps we will have three sensors at every position along the fault, left-center-right. Then we compare the temperatures on each stitch. Are the middle sensors heating more than their stitch mates? Does this predict earthquakes?

We might drill 1m holes for our CO2 gathering cones. These go maybe 1m down and get filled over wet cement slurry. A bit of air is pumped in every so often and a few seconds later the CO2 levels checked. And perhaps we will also have similar devices for the oceans. I don't know if this will work or not, but I think that it is certainly word testing the idea considering the inconsequential cost and the huge potential payback.

Are earthquakes more or less violent in the dry areas of South America?

Pre/post subduction monitoring

It would be a good idea to station a couple hundred remote seafloor sensors along the various offshore subduction zones of the world so the next time there is a major subduction, we can measure the change in temperature, CO2 levels, turbidity, and inertial movement.

Aristotle Meteorologica 367a.33

[In a discussion of the conditions that precede an earthquake we read:]

"Winds are not usually supposed to be warm...So the warm element disappears into [from?] the earth, and wherever this happens, this vaporous exhalation... The cause of <u>a sign which</u> <u>often heralds earthquakes</u> is the same. In clear weather, either by day or a little after sunset, a fine long streak of cloud [volcanic ash?] appears, like a long straight line carefully drawn, the reason being that the wind is running away. Something like it happens along the coast too...

The cause of the severity [of the earthquake] is the amount of the wind [outgassing] and the shape of the passages through which it has to flow. When it meets with resistance and cannot easily get out, the shocks are the severest and the air is bound to be left in narrow places, [trapped] like water than cannot get out of a vessel...

Wind [outgassing] is also the cause of the noises beneath the Earth, among them the noises that precede earthquakes...

Water has sometimes burst out of the Earth when there has been an earthquake. But this does not mean that the water was the cause of the shock. It is the wind which is the cause, whether it exerts its force on the surface, or from beneath....

Whenever this type of earthquake does occur, large quantities of stones come to the surface, like the chaff in a winnowing sieve. This kind of earthquake it was that devastated the... districts of Liguria.

Earthquakes are rarer on islands that are far out to sea than those close by the mainland. The abundance of seawater cools the exhalations [out-gassings] and its weight [pressure] crushes them and prevents them from forming

[Here we reflect on a recent Dwayne Jonson film with a great California earthquake and tsunami. The film was full of ridiculous, over-the-top geological violence. In fact, it seemed to be that way by design. Funny how there was a heatwave before the earthquake. Was this supposed to look absurd too?

Look at the 10 biggest earthquakes on record. Were there anomalous hot zones beforehand? Was there a strange haze from volcanic ash?]

Did the gas composition change?

How old is the sea floor that is melting? Does the gas composition consistently vary depending on how old the subducting sea floor is? If so, then we can extrapolate and produce a curve for how Earth's outgassing mix has changed over the eons.

California really will fall into the ocean one day

People sometimes say that California will one day fall into the ocean. They also say that Atlantis sank or fell into the ocean. In truth, the land doesn't fall into the ocean. More accurately, a subduction earthquake causes a tsunami that will wash-away whole cities. And this is something the whole world recently saw in Bandah Ache and Sendai Japan.

Make no mistake about it, the big California earthquake will probably be as big if not bigger than the Japan quake. And California is actually on the ocean plate, so the North American plate will be staying put while the Pacific plate lurches northward

Also, thanks to all the "clean burning" natural gas pipes and dry wood houses, you can bet on firestorms in homes set just close enough together to be subject to firestorm.

Subductions and mountain building

If subductions occur say once every 300 years on a stretch of convergence zone, this comes to 200,000 subductions in the past 60 million years. Each time this occurs, the subducting plate rams itself under the continental plate. When this happens, we see:

 material constantly being rammed under the continent's edge, thus raising the continent and causing continental uplift, and
 as the continental plate is hammered over and again, this causes the buckling we call mountain ranges.

Most of the world's mountain ranges, notably run

parallel to a neighboring subduction zone. The more active the sea floor ridge, the greater the hammering and the greater the mountain ranges. Here we note how the Himalayas, Andes Rockies and Sierra Nevada mountains are all indications of great subduction zones.

Pine trees and earthquakes

Let's pondering the ecosystems of North America. There is rain and forest near the coasts. In the center there is not much forest. There are slow growing "hardwood" canopy trees in the east and "softwood" pines in the western part of North America. Why don't the hardwood trees take over in the west? Why don't the pines take over like in the east? There must be a reason.

Look at the growth pattern of most trees. They all try to get tall fast and spread out at the top, at the canopy. Even Birch trees are somewhat canopied at the top. Even cedars are canopied at the top — but pines are not.

Why is it that the opposite of a canopy tree dominates in the west? And pines are broad at the base and thin at the top. They also have needles instead of leaves. And they are adapted for being fast growing. I mean. look at how some like hemlock fir produce wood so week, it is not allowed as a structural member by the US building code. Indeed, all pine wood is weak and fast growing in comparison to the many hardwood trees.

What strange trees the pines are. They are fast growing to the point of suicide, but they have not adapted to dominate the canopy. Clearly the bottom-heavy pine tree is a species that has adapted to live in earthquake country. And clearly, the canopy trees don't supplant them in the forest because they can't prosper in an earthquake the way a pine tree can.

Dendro-seismology

Once we have an undalogical earthquake record we might leverage this into a dendro-seismology record of earthquakes. I mean, one would think that a massive earthquake would stress the wood of a tree more than in any storm. And it should be totally directional. So perhaps a tomographic study of old coastal trees will show a certain sort of stress pattern.

If we can read the stress patterns in trees, then we can use the major recent subductions as a key. Then we can use the rings from older trees to date older earthquakes precisely to the year. They might also help us fill in the blanks with regard to the lesser earthquakes. Maybe we can estimate from the extent of the damage, how big the shake was. Maybe we can tell from the direction of the damage the direction of the quake and then triangulate.

16.. SEAFLOOR SPREADING PART 2

The seafloor spreading Itself

Let's return to sea floor outgassing and seafloor spreading. But now, let's look at the new sea floor itself. Fundamentally, we see new sea floor accreting at the seafloor ridge due to outgassing. And this new sea floor accretion process is so powerful that it pushes the rest of the sea floor across the ocean and then forces it under the continental plates.

Earth's surface is always under lateral pressure

Imagine one of those high quality 100% rubber garden hoses, but without any metal fittings on it. This hose has an outside diameter of say 3cm. Now imagine you are feeding this hose into a 30-meter-long straight metal sleeve pipe with an inside diameter of say 3.5cm. The rubber hose both stretches and compresses, but the sleeve is perfectly straight and anchored to wall.

Also imagine that the distal end of the sleeve pipe has one of those 90° electric conduit sweeps at the end, but a rather sharp one that takes 5 kilos of force to push past. Here are some observations we can make about this conduit and the seafloor:

1) Earth is constantly generating too much hard shell or lithosphere, leading to a constant state of horizontal pressure, and the entire system is under constant pressure.

2) Compression is highest at the proximal end where the forces are being delivered to the hose/seafloor.

3) Compression is lowest at the distal end where the forces are being diverted through the sweep.

4) Compression is many times higher at the proximal end than the distal end, perhaps one or two orders of magnitude higher.

5) When the distal end subducts, it slips by say 0.5% into the 90° sweep. This however only affect the distal end of the seafloor and there is still much pressure on over 90% of the seafloor.

Fred M. Bullard, Volcanoes of the earth, Ch.16

"the area of the earth's surface must be conserved... the rate at which new crust is being formed at oceanic ridges must be balanced by the rate at which it is being absorbed at the plate margins."

[The implication of always producing too much seafloor is that any more new sea floor produced must roughly balance, sooner or later, with the old surface reabsorbed by subduction. Either that or a continent must move, or compress/buckle or form mountains — things which obviously don't happen much judging from all the sea floor created and subducted worldwide.]

95% of spreading becomes subduction

To understand how little continental compression and movement there has been on Earth, just consider how at say 20° south, the Pacific and Atlantic sea floor rifts spread at a combined rate of over 20cm per year. This is 200km per million years, and 40,000km in the past 200 million years. Now obviously the mountain ranges of the world if stretched out and flattened would not add even 2,000km. So clearly, around 95% of seafloor spreading becomes subduction.

Spreading equals subduction

More accurately spreading equals subduction minus around 5% for orogenic (mountain building) and uplift compression. Nonetheless, this is true enough to be a mantra.

In fact, this mantra is much more accurate than the primary mantra of macroeconomics which says that savings equals investment. In truth, savings equals lending, rather than investment. And obviously today, in much of the world, most lending is for home consumption and vehicle consumption, rather than genuine investment in capital equipment.

How distal is subduction?

Let's put some seismometers on some of the more active sections of the seafloor. Let's put these at 5km, 50km, 100km, 200km, 300km, 500km from the subduction zones and wait. The next time there is a subduction, this will tell us how distal the subduction process is.

Many people will recall how there was no tsunami warning system in the Indian Ocean and this was a big reason why over 220,000 people died in the 2004 tsunami. Absurd as it sounds, at the time, tsunamis were said to only occur in the 'peaceful' or Pacific Ocean. But given the high levels of sea floor spreading in the Indian Ocean, we should have known. All the new sea floor has to go somewhere. And when it does go, there is a subduction and a great subduction tsunami.

The Atlantic is not tsunami free

The so-called Pacific Ocean is the least pacific with regard to earthquakes and tsunamis. In fact the Pacific is where most of the planet's earthquakes and tsunamis occur. But clearly the 2004 tsunami shows that the Indian Ocean experiences tsunamis. And clearly Australia and Antarctica both move. And clearly the Atlantic is widening. And clearly the Atlantic seafloor is occasionally subducting under various parts of the Americas, Africa, and Europe.

<New York on map showing coastline shape and subduction zone>

Funny how they called New York as New Am•ster•dam at first. And funny how both of these great trading and commercial cities, these magnetic cities of culture, freedom, wealth, and smart people are just so vulnerable to the next major Atlantis/Atlantic tsunami.

Below sea-level Amsterdam will see its levees overwhelmed just like Japan did recently. And both Amsterdam and New Amsterdam will suffer from a focused and magnified tsunami due to the funnel shape of the nearby coastline. Here is why Manhattan's bedrock is so remarkably close to the surface. Here is why there are seashell fragments and beach sand in so many elevated places around New York. Here is why the New Jersey side of the Hudson River has eroded into high cliffs.

Here is why Manhattan's blocks are set up in 90° perpendicular defiance of the water flow in the mouth of the funnel like giant rows of dominos, perfectly aligned against the flow of water. What a trick it was to divert many of the world's greatest minds here into the jaws of death. What a trick to put the world's leading stock exchange, the world's united government, and the "world trade center" here. But it is no trick — It was really simple actually. The Arab harem/harm Brothers simply do not struggle against our economic activity that occurs in the jaws of death, in New Amsterdam, old Amsterdam, London, Hamburg, Bombay, Shanghai, and Tokyo, etc. These places they sort of leave alone, and they prosper.

Remember how tsunamis were not supposed to happen in the Indian Ocean? Well, spreading obviously equal to subduction, and one day there will be another immense tsunami in the Atlantic. How much easier will it be for the desperate land of no resources to re-enslave humanity under Dark Ages 5.0, once we have lost most of our greatest minds living in New York, London, Hamburg, Amsterdam, etc. or perhaps the subduction will happen in Asia and wipe out Beijing, Tianjin, Shanghai, Seoul, Tokyo, Hanoi, Bangkok, etc.

The 2 main types of seafloor spreading

Sea floor spreading occurs on two 'axes'. On one axis is the LAT SPREADING which occurs in the Pacific, Atlantic and norther part of the Indian ocean. On the other axis is LONG SPREADING which occurs at the Antarctic rift ring. The lateral spreading mostly causes LAT TSUNAMIS, and the longitudinal spreading mostly causes LONG TSUNAMIS from the movement of Antarctica or Australasia, Africa, or South America.

San Diego 1769 — 248 years ago

The first Spanish mission was in San Diego California. And although flags were planted in 1669, no settlement was made until a century later. So aside from the oral legends of the illiterate native Americans, history only goes back 248 years in California.

It means nothing that California has not had a San Andreas earthquake in the past 248 years, since Western people settled in California and started keeping records. It just means that when the quake finally strikes, the Pacific Ocean will leap by at least 248 years times 7-cm/year or at least 17.36m (57.3-ft).

Australia as wave machine

It is widely held that Australia broke off from Antarctica some 70 million years ago and traveled northward by some 4,200 km during this time. This comes to 6 cm/year. Yet Australia has had only the smallest earthquakes that we know of. It would therefore appear that we are once again looking at large but infrequent subductions where the Australian continent (which includes New Guinea) seems to lurch northward like the paddle on a giant wave machine. Here we imagine a tsunami that is devastating for all south-facing coastal areas between Bangladesh and Baja California.

<Map of Korean gulf/funnel>

East Asia lies straight ahead of the direction that Australia is moving. So we should expect the tsunami to wash down China's coastline, getting trapped and funneled by the Korean peninsula. Here we understand the reason for the shape and location of Beijing/ Tianjin provinces. They are like that of the nation of Bangladesh and Djibouti. They are an ancient tsunami wash zone at the end of a great tsunami funnel.

Nobody wanted to live in these places, just like nobody wanted to live under Mount Vesuvius. So the ancient land of no resources came in and laid claim to the dangerous wasteland that nobody wanted. And it paid nothing for this wasteland. It did this knowing that it would have another valuable Pompeii one day. So the parasite set to work obliterating and dulling the memory of the danger for little more than the cost of some words and ink. Then, after some centuries it had a very valuable asset, land in the heart of Beijing, Manhattan, Amsterdam, London, Hamburg, Seoul, Bangkok, wherever. And as usual, the parasite always struggled to make these places prosper, and struggled against the safer places.

Against impossible odds

Look at all the attention that "our" openly corrupt paid commercial media throws at glamorizing tsunami funnels as a great place to live. What percentage of place specific media happens in a tsunami funnel or earthquake city? What are the odds?

The old world stays put

Given that the old World is considerably bigger than the rest of the land masses, this makes the Old World seem like something of a continental anchor point, and the rest of the land masses are more mobile.

The compression seam for the world

Look at how the Atlantic has spread evenly on both sides. So there seems to be little subduction in the Atlantic, except for Antarctica. Look at how the Pacific Ocean is where all the spreading happens.

But the real question is, how exactly does the continents move? Do they slowly drift a little here and a little there? Or are their sudden CONTINENTAL LEAPS where the entire continent jumps or pivots with devastating results to the entire continent? We must know the answer to this question.

17.. ANTARCTICA AND AUSTRALIA



Note how about half of the world's sea floor spreading happens on the ridge around Antarctica. But remarkably, Antarctica has had only the smallest earthquakes since we started keeping seismic records. It would therefore appear that Antarctica experiences large but infrequent subductions.

<profile of South American superimposed over profile of Antarctica>

Now it is fairly common knowledge that the high activity of the South Pacific sea floor ridge is responsible for raising the Andes Mountains. Little realized, however, is how Antarctica is also a high altitude continent for exactly the same reason. In fact, Antarctica is by far the highest altitude continent with an average land elevation of about 2,500m. This is about 3 times the average elevation of the other continents (840m). And on top of this elevation, there is another 2,000m (or so) of ice, making a surface elevation of Antarctica about 4,500m, or just under 15,000-ft. What is happening is that subduction is going on all around Antarctica, raising the entire continent.

The definition of Isostasy

According to the Apple dictionary "the equilibrium that exists between parts of the earth's crust, which behaves as if it consists of blocks floating on the underlying mantle, rising if material (such as an ice cap) is removed and sinking if material is deposited."

Antarctica's deep continental shelf

Antarctica has by far the deepest continental shelf. All over the world except Antarctica, the continental break generally runs about 135m deep, and generally does not exceed 200 meters in depth. However, the Antarctic Shelf has an average depth of

over 500m with a maximum depth of over 1000m. It is hard to tell the true average depth of the Antarctic continental shelf because this information is scarce, oddly scarce — although not quite as scarce as information about the many volcanos on the continental shelf.

It seems that the deep continental shelf is evidence that the entire Antarctic continent is being suppressed or pressed down by the weight of the ice caps. And that when enough ice melts, a large part of the Antarctic continent (or perhaps the entire continent) may 'pop up' as large section of seafloor simultaneously subducts under it. Then, due to the earthquake, we might see another part of the Antarctic ice sheet coming loose and the process repeating itself over hours or centuries.

As well, if this results in a big enough tsunami, it may also do great damage to the northern ice cap as well. Under this awful scenario, the end of the sea level increases may come as a near instantaneous event.

Sea levels in a full melt

The calculations I have seen say that a full melt of Earth's ice would raise sea levels by 58m. So here we are in the year 2017 and sea levels are 135m up the bottom of the ice age. And sea levels might rise up to another 58m in a full melt of the sort that seems to have occurred 7 ice ages ago. This is why we can't find older ice.

Here we see an elevation band for our planet's sea levels. They never fall more than 135m lower or rise more than 58m higher than today's sea levels. This is a difference of 193m (637') top to bottom. This is a 60 story building, a 7.7% change in sea levels at the sea floor ridge.

Today's sea levels and temperatures are at 70% of maximum and slowly climbing. They probably will not reach a full melt, although they might.

The Antarctic ridge ring

It is generally accepted that during the last ice age, the ice sheets over the northern hemisphere were so thick that they pushed the continental plate down into the molten magma it floated on, lowering ground elevations. Then as the ice caps melted, the areas previously covered in ice sheet rose in elevation.

Here is why we see unusually shallow continental shelf depths and rounded continental break profiles near Greenland, Norway, and the Siberian Sea. When the thick and heavy ice cap melted the continent rose. As well, here is why there is an unusually deep continental shelf around Antarctica. The ice cap did not melt here.

Now clearly Earth has been warming for the past 18,000 years under exceptionally clear skies. Clearly the polar ice caps have be melting. Have they been melting incrementally and in little chunks, or do great sections of ice sheet periodically come loose?

Clearly glacial meltwater flows down and through glaciers until a chunk of glacier comes loose. And we read about evidence of the same thing happening with Antarctica in places. Thus sections of ice cap seem to periodically break off and slide into the sea.

So one day in the future, we should expect a large area of Antarctic ice sheet to slide into the ocean. The worry is that the reduced weight will cause the Antarctic continent to rise. Then it is not hard to imagine that this rise will be likely to precipitate an Antarctic subduction. Regardless, the risk of an Antarctic subduction event will be highest during and right after the loss of a big ice sheet. And therefore any big changes to the Antarctic ice sheet, should be top international news.

In fact, we might save 50 or 100 million lives if we knew

that a large chunk of either ice sheet was in the process of breaking off. So we need to mount some motion sensors and have a satellite-based alert system.

Here we imagine ice melts as causing many or perhaps most Antarctic tsunamis. And it might take a couple decades for the loss of an ice sheet to precipitate an Antarctic subduction although it might be immediate. Perhaps an undalogical survey mated with a precise sea level survey will tell us what normally happens.

Questions

1) What is the elevation of the underside of the world's over-sea ice sheets?

2) Is this elevation rise at higher latitudes?

3) Do changes in this elevation cause rising interglacial seas to lift and break off tracts of ice sheet?

4) Does the top elevation of the Antarctic ice shelf vary in any consistent way relative to the land underneath?

5) Does ice tend to break off in a predictable way when sea levels create a differential with the underside of the ice sheet?

The continental shelf of Australia

Australia broke off from Antarctica comparatively recently. But look at the heavy erosion of the continental shelf. This is exactly what we would expect of a continent that suffers lots of tsunamis.

The Sunda or Unda Islands

We should change the name back to Unda, so the name can warn people of the danger from a big unda or wave. Sumatra, Java, and Borneo are the large wave islands—the Greater Unda islands. The small wave islands—the Lesser Unda islands are nearby. These islands, and Australia not only sit between the two most seismically active parts of the seafloor, but the entire landmass is on the move.

1) If Australia leaps, there is a huge tsunami.

2) If Antarctica leaps towards the Indian Ocean, there is a huge tsunami.

3) If Antarctica leaps, towards Australia, there is a huge tsunami.

4) If Antarctica leaps towards the Pacific, there is a huge tsunami.

5) If the Sunda islands move or the sea floor subducts as happened in 2004, there is a huge tsunami.

6) If the pacific subducts near Japan, there is often a huge tsunami.7) Here is why continental shelfs in this part of the world are so big despite the continent being so young.

New subject: Alfred Wegener

Alfred Wegener publicly introduced the idea of continental drift in 1912, asking: "If the continents [of lightweight sial rock] float on the [heavier rock of the] sima crust like cakes of ice in water, why can't they drift like cakes of ice?" [It took decades for this obvious theory to gain acceptance due to opposition from Arabs Inc. in its many guises. It was only the discovery of irrefutable seafloor spreading evidence that forced the Mideast 'conthralled' (controlled) geological and geographical establishment to accept continental drift.

Tangent: It took Portugal 200 years

Search Portugual200 to see how it took the Portuguese national effort 200 years to sail around the Arabs. Perhaps we all underestimate Arab power in our government.

Note how around 80% percent of worldwide sea floor spreading occurs in the Southern hemisphere. As a point of reference, Singapore at 2° north is at the tip of the Malay peninsula.

And about 50% of worldwide spreading occurs on the

sea floor ridge surrounding Antarctica. Note how the ridge forms a ring around Antarctica and then there are 3 more or less equally spaced ridges running up each of the planets 3 great oceans. Also note how there is less spreading the farther north we go on the 3 north-south ridges. The Indian Ocean ridge for example barely makes it past the equator.

<Thin shell Thai white coconut with "Antarctic circle" removed so the meat can be spooned out. Then 3 splits radiate from the hole>

Schematically, our planet's seafloor rifts look like this, almost as if Earth is being spread open from the Antarctic circle. Here we see why Earth's surface is sort-of divided into thirds by three sea floor ridges, even though one of these ridges (in the Indian Ocean) has partially failed in the northern hemisphere, and the two continents it once separated have combined into one large "Old World" land mass.

<both superimposed with different colors on map>

Note how the Antarctic ridge roughly aligns with the Antarctic circle in many places. The ridge has crept a little to the north in some places, but it remains close to the Antarctic circle overall.

<A showing the "Plane of the Ecliptic" and perpendicular arrow for secondary gravity.>

And the 23.5 degree Antarctic Circle describe a point on our planet's sphere that remains roughly tangential to the plane of the solar system as the Earth spins on its axis of 23.5 degrees.

And the plane of the solar system also (by definition) happens to be perpendicular to the direction of average secondary gravity for our solar system. Secondary gravity is explained later in the Astro-genesis section. This secondary gravity source may no longer be close enough to effect the planet.

A tangent on secondary gravity

Now it is the current prevailing theory that the planets follow Jupiter's lead in its orbit around the sun, creating the plane of the ecliptic, otherwise known as the plane of the solar system. But why should Jupiter's orbit be aligned with the Antarctic ridge rift?

What is really going on is that secondary gravity eventually destabilizes all non-perpendicular orbits. In other words, orbital discs all start out as orbital spheres buzzing with orbital objects heading in all orbital orientations. But secondary gravity draws all the non-perpendicular bodies into orbits every more aligned with the secondary gravity source, and then into orbits ever more elongated. Finally, the long elliptical orbits become so long they become parabolas. Thus the nonperpendicular objects are sucked out of orbit by the secondary gravity source.

So, primary gravity produces an orbit around the primary gravity source. Secondary gravity of say a nearby star or a far-away galaxy produces an orbital plane perpendicular to the secondary gravity source. And tertiary gravity produces ellipses with a aphelion pointing towards the tertiary gravity source.

And what is an ellipse but a circle around two points? Clearly there is a primary gravity source and also a secondary one too. Clearly an ellipse always involves a secondary gravity source.

Secondary gravity and the Antarctic ridge ring

Returning to Earth, the Antarctic continent and to a certain extent, the sea floor ridge ring surrounding Antarctica is roughly aligned with our planet's secondary gravity source as the planet spins on its axis. Thus the same gravity that caused the solar disc (the plane of the ecliptic) also gently flexes (or once flexed) the lithosphere at the Antarctic circle - or at least, that is where its effects are strongest. This light flexing happened day-in and day-out for perhaps billions of years after Earth developed a hard shell. This spreading as a result of secondary gravity is why:

The Antarctic ridge formed where it is.
 All the plates have been pushed northward.

2) All the plates have been pushed northward.

3) The northern hemisphere is full of land and the southern hemisphere is full of water. The only exceptions to this being Australia which is on its way north and high altitude Antarctica which is stuck in the middle of the ridge ring.

4) The oldest rocks on Earth are in the far north.

5) All three ridges spread faster in the south than the north.6) Earth is split into three roughly equal land masses and three oceans.

Now let's imagine a young Earth, a planet that was certainly gassier. But young Earth also experienced more secondary gravity. So not only was the Antarctic ridge rift flexing more, but there was also more gas leaking out. Here we imagine the Antarctic ridge flexing more, constantly flexing, and constantly leaking gas out from the inside of the planet. And this gave a long term focus for gas leakage which caused deep outgassing roots in the planet.

As well, all this gas leakage was constantly forming new sea floor, island arcs, and land masses that would be pushed away from the Antarctic ridge ring. Half of these surface irregularities (such as the Kerguelen Islands) are generally pushed towards Antarctica where they are glommed onto the continent. The other half are pushed towards the north where they are glommed onto the other continents, creating the geological patchwork of so many continents like Alaska. Here the Aleutian Islands are a good example of an island arc in the process of being glommed onto the geological patchwork of Alaska.

Now the area of the Antarctic circle is quite small, perhaps 2% of the of the planet's surface. So the southbound surface irregularities make a big difference and thus Antarctica tends to grow faster than the other continents. But where does all this land go?

Well, the other 98% of the planet due to its size is much more compressible with respect to tectonic forces. This causes the Antarctic ridge ring to drift to the north, away from the Arctic circle. And today, this misalignment of the Antarctic ridge ring has been progressing for more than 100-million years. So this is a very long-term sort of geological function. But 100-million years ago (or thereabouts) we did see secondary gravity (probably due to stellar orbits) work its way flexing the Antarctic ridge ring, causing a new rift. This realigned the Antarctic ridge ring with the Arctic circle, and the plane of the ecliptic. When this happened, the part of the Antarctic continent that was caught on the north side of the new ridge location, broke off and was pushed northward. And this is apparently what happened with Australia and India. Indeed, we see the arc of the Antarctic circle in the south coast of Australia today.

Can't find the gravity source?

The gravity sources that produced the plane of the ecliptic and the elliptical orbits of the planets might not be there any more. They might have moved on after modifying our solar system.

Other related thoughts

If there is ever a time when a large piece of Antarctic ice sheet is most likely to break off, it is of during an Antarctic earthquake. Here we imagine a second tsunami, along with a "permanent" rise is worldwide sea levels. Pangaea may have never existed as one single continent. It seems more likely that continents or parts of continents formed and then peeled-off, or budded off one after another.

The sea floor spreading process probably work with much less water on our planet. Given that the average ocean depth is almost twice the depth of the average seafloor ridge, oceans of half their current depth seem perfectly reasonable. And if we imagine narrower young oceans and broader land masses, then an Earth with 70%, 80%, or even perhaps 90% less water does not seem that hard to believe either. All that is necessary is a deep rift to collect water.

Therefore, once a ridges (probably the Antarctic ridge) reached the critical depth, adding more water extended the length of the ridge and also increased the width of the oceans. Thus the depth of the ridge probably remained constant as the oceans grew. In other words, most of the processes described herein might have been working while our planet built up a supply of water. Here we imagine our planet with early oceans, narrow oceans, 2.5km deep, configured like a 3-legged ring.

Apparently, the people who cornered the world oil supply, did not want us to understand how oil is formed. They did everything they could to prevent us from gaining knowledge about earthquakes and tsunamis. We should all devote extra attention to these critically important subjects now.

The right way to do earthquake alerts

Japan has one of the world's best alert system for earthquakes, however, the system is still tremendously sub-optimal. Whatever the cost of developing this system, it is inconsequential. 100% of the known fault risks near major cities worldwide must have remote monitors every few kilometers, mounted directly to the fault line, even if it is undersea.

In the Case of the recent Sendai Japan tsunami, such sensors would have added critical seconds to the warning. And of vital importance, these are high-value seconds that are before the shaking starts.

These sensors need to be monitored by a computer system that automatically responds in pre-programmed ways to certain levels of movement. Movement above a threshold level instantly shuts down the gas, rail and road system (except for evacuation routes). They also bleed-down and burn-off the high pressure gas system. There is also an earthquake/ tsunami alert on the Tsunami sirens, cell phones, broadcasts and web-page downloads.

The siren should vary depending on the earthquake. We want people to know exactly how much time they have by the sound of the siren. A steady tone indicates a tsunami warning has been issued. A low pitched tone indicates the biggest tsunamis, a high pitched tone indicates the smallest. If the siren sounds for 10 seconds before going off for a second, it means the tsunami is estimated to arrive in 10 minutes. If the siren sounds for two seconds and then goes off for one second, it means the tsunami is estimated to arrive in 2 minutes or less. A continuous sound means a tsunami that will take hours to hit.

Also, while tsunami warnings are sounding for a tsunami that will hit in less than one hour, both sides of all tsunami exit routes should convert to the emergency traffic pattern. Anyone attempting drive into a tsunami zone during this type of alert should be pushed off the road by the other drivers. Appropriate emergency signals should be placed. Tsunami alert systems in tsunami zones worldwide should be tested every year on Boxing day for a 10-minute test starting at noon. This should also stand a memorial for the 220,000 people who died. Everyone in every tsunami zone should try each year to evacuate so that we can understand what is involved with a mass rapid evacuation. Also, raised pedestrian evacuation bridges may be a solution for some places that are close to hillsides. They are certainly cheaper than dikes — and they actually work.

Oblique tsunamis are particularly deadly

Let's imagine that we are looking into a building during sunny day. The reflectivity of glass suggests a good way to understand how a tsunami's energy is absorbed or reflected depending on the orientation of the coastline. At 90°, glass absorbs most of the light, but at less than 30%, the glass will reflect most of the light. Tsunamis do something similar when they impact coastlines.

But light waves can cross unlike a reflected water waves. So a tsunami striking a coastline at an oblique angle tends to build in height as it goes down the coastline, washing most of the plant life and soil away. Anyway, this is what happens with Antarctic tsunamis washing down the coastline of India and Sumatra, and especially the long coast of Africa. Most of the wave's energy is deflected down the coastline, building as it goes. In fact, tsunamis are the reason why the Persian Gulf is filled with so much sandy, salty soil and oil.

<Bangladesh on topo map>

Now the shape that Bangladesh cuts from India looks just like the flood zone of a massive tsunami. It is easy to imagine that the Hindu Indians living near the flood zone were all afraid to go in and farm this fertile land after it had suffered a tsunami way back when. And this fear must have remained for generations thanks to legends about how dangerous the place was. Nevertheless, this great "rice bowl" was too valuable for the land of no resources to ignore. So the chronically overpopulated land of no resources seized the opportunity to get rid of their excess unchosen people, thus making space for a new batch of harem brats and by extension more chosen people to feed the poor people back home. Here is how Bangladesh became a Muslim enclave in Hindu India. Here is how the Arab empire's religion called "submission" took over the land of Bangladesh.

<on map>

Islam also seems to have conquered Indonesia thanks to a tsunami, perhaps the same tsunami. Just look at how the southerly parts of Indonesia in Sumatra and Java are more Islamic than the northern ones. Here we also note how the S•unda = no•wave islands north of Java and east of Sumatra are not nearly so Islamic.

<on map>

The shape and position of Djibouti also looks quite like a tsunami wash zone. And so does the shape of Brunei.

The Yellow Sea funnel

Imagine a tsunami striking Asia from the southeast. All the waver between the southern tip of Taiwan and Tokyo gets funneled into the Yellow Sea. And look where we should expect the waters to run-up. It is right where the provinces of Beijing and Tianjin are. From here, doesn't Beijing province look like it had the same source as Bangladesh, Djibouti, and Brunei.



Japan tsunami

Anyway, it is just a matter of time before another huge tsunami wipes out Beijing, Tianjin, Ache, Rangoon, Chittagong, Bangkok, Calcutta, Ahmadabad, Karachi, Dubai, Bahrain, New York, London, the entire Persian Gulf along with Hanoi, Shanghai, Seoul and many other low-lying cities.

<Ur on Persian gulf topo map, showing Baghdad, Dubai, and Bahrain>

Another way to see these epochal-lyse tsunami "floods" is the two alluvial layers that archeologist Leonard Woolley found in Iraq. One layer was eight feet thick dating to 3500 BC. The other, thinner layer dates to c.1640BC and the reign of king Ammisaduqa. We also have two cuneiform tablets from the reign of King Ammisaduqa that refer to a great flood in Mesopotamia. These thick salty, sandy soil layers indicate tsunami dates. Thick Alluvial layers of the same date (but not so thick) should exist in bays all around the north Indian Ocean. It is hard to say which of these floods was covered up by the legend of Noah's flood, but the idea that 40 days and 40 nights of rain flooding the entire Earth is absurd.

Now a great tsunami that wiped out all life in ancient Mesopotamia certainly would have been the stuff of legend. And it was: The epic of Gilgamesh (who ruled c.2700 BC) and other Sumerian literature dating from before 2000 BC talk about a distant age before a great flood. And Gilgamesh was apparently a longtime favorite in ancient Mesopotamia; for we have several different ancient copies of the epic on clay tablets from before 2000 BC.

On top of this, the Hebrew calendar records the current year as being in the 58th century. The survivors perhaps pieced events together for 300 years before the devastating tsunami of 3500BC. The date range for Noah of the Hebrew bible curiously overlaps with the date range of the 1640BC flood. It is also worth mentioning that Gilgamesh built a large boat that brought many animals to safety. However, Gilgamesh landed on Mt. Nimush, not Mt. Ararat. Ni•mush=no•mouth

Why the southern hemisphere rotates

Australia and Indonesia act as continental blocks sort of backed up by the heavy Old world land mass. Thus the sea floor spreading in the south Pacific can't readily go north west. And it can't readily push past Australia (which is under great pressure). So the path of least resistance is to push east. Thus we see: 1) The tip of South America is bent eastward

2) The sea floor is pushed eastward to the Falkland islands.

3) The Antarctic peninsula is bent eastward.

4) There is a similar bending of the Mid-Atlantic ridge, although it is not as pronounced as with South America.



Plate motion

Comments on the plate motion map

1) One of earth's main convergence/ subduction zone is the SUBDUCTION TRIANGLE between New Zealand, the Kamchatka peninsula, and Sumatra/Malaya.

2) Another convergence/ subduction zone exists where the hyperactive sea floor adjacent to the Americas subducts under the Americas. However, it should be pointed out that in contrast to the subduction triangle, the South American plate in not moving towards the Pacific Ocean, but slowly away from it.
3) Note how long-spreading is exponentially higher in the southern hemisphere. In the northern hemisphere, lat-spreading rules in the absence of long-spreading.

18.. PETROLEUM

Re-merge gia oil with other oil scripts zebra

How does petroleum form? And isn't it strange how you lack a clear understanding? I mean, if oil is so important to the world, how come we don't all know exactly how it forms?

Here are some better questions:

Why is the plant energy in oil preserved for us to use? Why didn't bacteria already consume the plant energy? What is the #1 naturally occurring preservative? Did you know that most oil is saltier than sea water? Could it be anything else but salt that keeps the bio-energy from decaying?



Japan tsunami

Oil is kelp and other floating tsunami debris

Oil mostly comes from heaps of floating tsunami debris, just like we witnessed in Japan recently. In Sendai Japan, we saw floating wooden houses, and uprooted plants. But there were also lots of floating organic soil particles and the all important floating kelp with its little air bladders.

Basically the gulfs and inlets tend to fill with heaps of wet and salty plant matter. Then the heaps dry out and salt concentrations rise up to 20-fold for some types of kelp/ seaweed that dry out completely. Thus salt — the #1 natural preservative —keeps bacteria from using the plant-energy. Then over some decades and centuries (but not really millennia) the organic bonds break down into a fluid, but the bio-energy is not consumed by bacteria due to the high salt concentrations.

Anyway, now that you know how oil forms, it should be clear how most oil is or was coastal in nature and is not very far underground. In fact, the first oil well drilled in Los Angeles struck oil at only 200 feet down (60m). And there do exist photos of people drilling for oil right on the sandy beaches of California. And in Arabia, we read of oil fields right under the surface.

In fact, we know these 'brand new' surface oil fields by a special name. We call them quicksand. And when they eventually dry out, we call them tar pits, like the La-Brea tar pits in Los Angeles. See, animals (and men) float in water, but sink in oil that is lightly dusted or covered in sand — hence the name QUICK•SAND. Once you break through the surface of the dry sand, you sink into the soft quick.

QUICKSILVER = a liquid metal

QUICK = a drink with an animated pink rabbit that was heavily advertised to young children for many years.

Have you ever heard another logical explanation for quicksand? I mean, why would people sink to their deaths in a pool of water and sand when they are lighter than both substances? By contrast people are both heavier than oil and unable to move and swim in the viscous and slippery stuff.

Now think of all the many quicksand scenes in kid's media starting in the 1930s. Think of how these stupid scenes have been repeated hundreds of times — over and over again like a Nestle's Quick commercial. Think of how the victims were <u>always</u> pulled from the quick-sand and never depicted as soaked in oil. Clearly the Mideast, the desperate land of no resources was producing media in the 1930's, working to hide the twin ideas of shallow oil and coastal oil. And clearly it was attacking our minds while we were still young and impressionable (viz: the Nestle's quick commercials and all the many quicksand scenes in kids media.)

Indiana Jones, Crystal skull film

"Jones: "Stop, don't move. Movement makes space, and space will make you sink.

Marion: I think I can get out. If I can just.

Jones: Stop it! You're pulling against a vacuum. It's like trying to lift a car. Just stay calm.

Marion: Ok I'm calm.

Kid: What is it, quicksand?...

Marion: I'm calm.

Jones: No its a dry sand pit.

Marion: I'm sinking, but I'm calm.

Jones: Quicksand is a mix of sand, mud and water and

depending on the viscosity, is not as dangerous as people might think... [many gurgling sounds]

Marion: Mud can be a little impetuous."

[I bet half the boys in the world saw this film. After this dialogue, first one, then the other character comes out dry and not covered in oil. Thus we see media that not only shows but explains to the world how quicksand has nothing to do with oil.]

Paul Lucier, Scientists and Swindlers, Ch. 1

"According to Gesner, asphaltum occurred in 'abundance' along 'the whole coast' of South America, Mexico and Texas, not to mention Cuba, with a vein of no less than 144 feet thick in perpendicular thickness', or Trinidad's 'Pitch Lake' "

Paul Lucier, Scientists and Swindlers, Ch. 8

"exposure to air of petroleum resulted in the formation of asphaltum"

Paul Lucier, Scientists and Swindlers, Ch. 10

"Once California petroleum reached the surface, it thickened from evaporation; the hot sun literally baked it."

Paul Lucier, Scientists and Swindlers, Ch. 8

" 'Whence [from where], then, comes the oil[?]' Lesley considered Hunt's in situ theory the best. 'Gelatinous sea organisms, both animal and vegetable [like kelp], seem to have constituted the principal, if not the sole apparatus for generating petroleum'."

World's Oceans textbook, Duxbury and Sverdrup, 3.3

"Sometimes large, brown <u>seaweeds</u> known as kelp, which grow attached to rocks in coastal areas, are dislodged by storm waves. The kelp may have enough buoyancy to float away, carrying with it the rock to which it is attached. When the plant dies or sinks, the rock is deposited on the ocean floor at some distance from its origin." [Note the underlined foreigner English. Note how the rocks are supposedly deposited by storms on the seafloor. Isn't it more likely that the kelp breaks off and thanks to its buoyancy is deposited in great heaps on the shoreline? Don't we frequently see this after big storms? Clearly this is a lie and clearly this lie tells the truth as clearly as any admission of guilt.]

Imagining the epochal·lyse

Imagine a massive "2000-year" tsunami, a real epochal-lyse washing down some tropical or near tropical, high energy, and life-rich coastline, sweeping up thousands of square miles of kelp forest and mangrove forest. And remember that kelp has little gas bladders so the vines float up to the strong sunlight of the sea's surface. And remember that thanks to salt osmosis, this kelp is just as salty as the sea water in occurs in. And not only that, but the kelp is dumped on the land in giant wet heaps with extra salt water on the outside. So these are great heaps of organic material thoroughly infused with sea salt as a preservative. These are thus hug piles of salt-soaked organics that become huge oil fields.

Kelp is 93-95% water

Here is a simple kitchen science experiment. Get a package dried eating seaweed. weigh it. Then boil it for a few minutes. Drain it in a colander for a moment, then put it in a plastic bag. The weight of my seaweed increased by as much as 18 fold.

If you take unwashed seaweed, its salt concentration (due to osmosis) is that of the sea water it lives in. Then if you dry out the seaweed, its salt concentration will increase by up to 18 fold. Yet, even if salt concentrations rise by only a fraction of that, the salt will still act as a preservative and keep bacteria from consuming the energy in the floating debris. That is, so long as there is not too much rainfall to wash the salt out.

<Japan valley full of tsunami debris>

Basically, every X thousand years, the biggest tsunami in X thousand years will wash down the coastlines of an ocean. These waves sometimes wash up hundreds of square miles of habitat. And remember that kelp has little gas bladders so the vines float up to the rich sunlight of the sea's surface. These little gas bladders and the stringy nature of kelp help it stay tangled in a giant mass, and help the tsunami to pick up and

carry huge amounts of kelp and other material. These then get deposited in countless inlets along the coast—gulfs, bays, valleys, or anywhere a headland causes floating plant matter to build up in large heaps. Countless oil fields, large and small, are thus formed by most big tsunamis.

Oil is coastal and shallow

The Arabs want us to think that oil is something that forms deep underground and is hard to reach. But how could there be oil miles underground, far from the organic material that exists on the planet's surface? If oil comes from living matter why look for it miles underground?



Persian Gulf oil fields, GRRC



Look for the seaweed traps

To find the richest coastal oil fields, just figure out which coastal features trap floating tsunami wash and don't get too much rain.

<Red hypothetical "soap ring" in the San Joaquin Valley.>

Think in terms of ancient shorelines. The central valley of California is a prime example of an ancient shoreline. The oil will be deeper down than in coastal areas, but not by that much. And the land is all but worthless desert with no possibility of the oil getting into either the ocean or water table if there should be a spill.

Anyway, the southerly most end of this ancient coastline is or was already a 'functioning' oil field (or at least it looked like a functioning oilfield). Interstate 5 passes through this oilfield as it begins its southbound climb over the Mountains north of Los Angeles. Many tsunamis that washed southeast down the ancient coast of California were trapped in this area. Therefore, we should expect much more oil, relatively shallow oil, in and around this location.

Leet and Judson, Physical Geology, a 1965 textbook

"Oil and gas are the remains of living matter that has been reduced by decay to a state in which carbon and hydrogen are the principal elements."

Deepwater Horizon film trailer

"Like the mean <u>old dinosaurs</u> all that oil used to be. So [for] 300 million years, these <u>old dinosaurs</u> have been squeezed tighter and tighter... and these mean <u>old dinosaurs</u> ... dad you need to get me a <u>fossil</u>"

[Some lies speak the truth with perfect clarity. Here an extralong movie trailer holds the propaganda. Clearly somebody wants the world to think of oil as an ancient "fossil fuel" that is 300 million years old. They want us to think that it is hard to reach and therefore valuable.]

Al·bert Marr·in, Black Gold, ch. 3

"A[n oil well] drill bit's diamond teeth are set into three cone shaped steel blades, called cutters...The best-quality bits may cost over \$300,000 and last [a mere] 100 hours before requiring replacement. Clearly, drilling an oil well is a very expensive proposition... With luck, the bit will strike oil after only a few days at depth of several hundred feet. Yet it often takes weeks, with the bit reaching depths of 17,500 feet [3.3 miles, 5.4km]. If no oil is found by then, the boss declares a 'duster' or 'dry hole' —no oil. In other words, all money and effort spend were for nothing."

Leet and Judson, Physical Geology, Ch. 22, a 1965 textbook "Wells have been drilled <u>far offshore</u> beneath the ocean, and some wells now reach <u>4 miles into the crust</u>. Promising new regions are being explored in such <u>remote</u> areas as northern Alaska. As a result, although demand has increased steadily, so have the estimated reserves." [offshore=expensive, deep=expensive, remote = expensive. But it is all just a matrix illusion.]

Earth science and the environment textbook, 5.5 Thompson and Turk

"To extract petroleum, an oil company drills a well into a reservoir. After the hole has been bored, the <u>expensive</u> drill rig is removed and replaced by a <u>pumper</u> that <u>slowly</u> extracts the petroleum. Fifty years ago, many reservoirs lay near the surface and oil was easily pumped from shallow wells. But these reserves have been depleted, and <u>modern oil wells are often a few kilometers or more deep</u>."

Earth science and the environment 5.3 By Thompson and Turk

"Currently, the United States depends on 25 other countries for more than half of its mineral resources. Some must be imported because we have no resources of our own. We do have reserves of others, but we consume them more rapidly than we can mine them, or we buy them more cheaply than we can mine them."

[The last alternative is probably true. However it omits how the Arabs have us drilling for oil offshore and on the north shore of Alaska.]



The reason why oil wells are so close together is that the oil deposits occur in thin layers. Also oil is thick and viscous and needs a 2% slope to flow to the well.



ogging, or recording, of drill holes started in the 1920s in France pread quickly to Venezuela, the USSR, and Rumania, and by the

The following text accompanied the above photo:

"Every step of the oil-drilling process is closely supervised by <u>specially trained</u> petroleum <u>engineers</u> and monitored by <u>advanced computer systems</u>. At left, a <u>highly skilled</u> operator instructs workers on how to maintain a drill rig."

Cicero, On the nature of the Gods, 2.130

"From the depths of the earth, we extract iron, so necessary for the tilling of the soil. We also search out <u>deeply buried veins of</u> <u>copper</u>, <u>silver and gold</u>."

[1) All these minerals are most economically mined from deposits right on the surface. It is only the Arab parasite race that wants us digging deep MINES for the MINERALS it seeks to MINIMIZE and cartelize.

2) The place to find gold is in the planet's river beds present and past.]

Essentials of Geology textbook, Stephen Marshak

"Oil itself forms only in a relatively narrow range of temperatures, called the oil window, which generally can exist only in the topmost 6 to 9 km of crust." [How does the organic material get 6 to 9km down?]

Essentials of Geology, Stephen Marshak

"Take-home message: Searching for oil is a <u>complex and</u> <u>expensive</u> process. Geologists use seismic-reflection profiles to locate possible traps. Drilling taps reserves and pumping brings crude oil to the surface, where it is processed at refineries that crack hydrocarbon molecules.

[1) Searching for coastal oil is neither complex nor expensive. People just have to drill or hammer a pipe into a precious surfing beach or a precious wetland habitat.

2) Refining oil involves slowly heating the crude oil to around the boiling point of water. The more volatile 'fractions' of the oil such as gasoline evaporate first and are then condensed much in the same way as an alcohol still works. There is no cracking of molecules. Clearly the Arabs want us to think of the petroleum refinery process as complex when it is actually a technology from the 1860's.]

Hubbert's Peak, the impending world oil shortage, Kenneth S. Deff•eyes Ch. 5

"The most powerful stimulant for finding more oil would be a reduction in drilling costs." [A 2,000m well through limestone (solid rock) using patented drill bits probably costs a lot more than 20 times as much as a 100m well through soft sandstone.

Cheap oil prospecting

Imagine a 50m oil derrick that is 18m across at the base. The top part is pretty light and only exists to support the 16 story single piece drill pipe. Also the bottom of the derrick is quite heavy. This contraption is on wheels, The wheels are heavy wall steel cylinders with tank-tread style teeth. These wheels can turn right or left by 90°. There is no set up. The bot drills one place to a depth of about 50m, then it goes on to the next place. When that alluvial plane is probed, then the rig gets disassembled and is moved to another alluvial plane.

Maybe we can outfit some of those telescoping subway excavators with a 30m single-segment tilt-up rotating drill probe. Thus a single operator might be able to probe one spot each day to say 50m down. And because oil deposits are recursive, happening one on top of another, once we find on oil field, we can then call-in the multi-segment derricks to drill deeper well holes.

Drilling shallow test wells in this way is probably the easiest and cheapest way to locate oil fields.

Mobile drilling rigs

Imagine a typical oil drilling rig but on 4 tank treads. Imagine that the drill pipe segments are assembled and disassembled by robotics.

Natural Resources, Ecology, Economics and Policy textbook,

Ch. 19, Holechek, Cole, Fisher, Valdez

"Oil does not accumulate as an enormous underground lake. Rather, it has backed up in the pores of reservoir rock, or has accumulated in the space beneath an impermeable structure or stratum. Very often, oil is found in seemingly solid rock, which on close inspection contains minute spaces or pores." [The oil fields of the sandy/salty Persian Gulf actually are shallow lakes of oil 1-4 meters deep and many miles in length. This is clear from the oil field map shown below.]

Joseph Shade, Primer on the Texas Law of Oil and Gas, Introduction

"The oil business is capital intensive and risky. This is the main reason that the industry tends to have so many booms and busts. Although geologists can find areas where the factors required for petroleum exist, no one can accurately tell what lies below the surface until they drill. Exploring for and producing oil and gas takes a substantial amount of scientific know-how as well as money. And there is no guarantee of success. Prior to the early 1990s, in wildcat (unproven) territory, on average, only one in eight wells drilled was a commercial producer. <u>Today</u>, due to 3-D (and 4-D) seismic and other recent technological advances, discussed later, the chances of finding oil and gas have greatly improved in recent years."

Earth science and the environment, 5.5 Textbook by Thompson and Turk

"Sixty percent of all oil wells are found in relatively young rocks that formed during the Cenazoic Era [65 million years to the present]. Undoubtedly, much petroleum that had formed in older Mesozoic and Paleozoic rocks escaped long ago and decomposed at Earth's surface."

[Here is a textbook that makes oil look like something very old, and very far underground. Note the underlined foreigner English.]

Travis Hudson, Living with Earth textbook, 14.2

"the deepest onshore oil or natural gas well in the United States reached a depth of over 9500 meters (31,000 ft). Deeper drilling requires larger drill rigs...Because only one in ten (or more) exploration wells is successful, infrastructure for exploration drilling is commonly temporary."

Travis Hudson, Living with Earth textbook, 14.2

"exploration for oil and natural gas takes place in the most remote onshore and offshore places in the world. The search for oil and natural gas is a very challenging endeavor that involves conducting seismic surveys—imaging the subsurface with seismic waves" [These seismic surveys are not real.]

Travis Hudson, Living with Earth textbook, 14.2

"Most oil and natural gas comes from the remains of organisms that lived in oceans, especially tiny floating plants (algae) and animals (zooplankton), like those shown in Figure 14-6. When these organisms die, their remains sink and accumulate on the ocean floor. The remains are a type of sediment that becomes buried by other sediments. Over time, as Figure 14-7 on p. 448 shows the temperature and pressure that accompany burial by thick sedimentary layers change the organic remains into oil and natural gas."

Natural Resources, Ecology, Economics and Policy textbook,

Ch. 19, Holechek, Cole, Fisher, Valdez

"Oil and gas were formed from the fats and other lipids **[oils]** accumulated as debris of plants, bacteria, phyto-<u>plankton</u>, and zoo-<u>plankton</u> were buried and preserved, along with mud and silt, in ancient <u>marine</u> sediments. Micro-organisms began converting lipid-rich organic matter into methane as these materials were deposited. However the richest deposits of oil and natural gas were formed in extensive <u>coastal</u> marine environments with too little oxygen in bottom sediments to support thorough decomposition.

Over long periods of time, kerogen was formed by the leaching action of groundwaters. The organic matter escaping decomposition was more deeply buried beneath sediments. It was converted to kerogen [oil] by leaching from groundwaters. As land subsided from the separation of Earth's plates, sediment-bearing rock strata were exposed to greater temperatures. At temperatures from 50°C to 60°C, oil formed. At 100°C most of the oil contained in the kerogen was released and further actions created natural gas.

As plates collided, immense forces built mountain chains. crumpled rocks into folds, and thrust rock strata over each other to form complex structure. The sites where rock strata formed arches or domes (i.e. anticlines) became oil-rich pockets. Large, economically recoverable amounts of oil can be trapped in pools or remain in the pores of reservoir rock, porous sandstone, or limestone. Oil not contained in this manner can move freely to the surface where it is further transformed and lost as a recoverable fossil energy resource. Areas such as the La Brea [Tar] Pits in California mark sites where oil continues to ooze to the surface today. Oil is found in large quantities in the Persian Gulf area because <u>salt deposited by an evaporating sea</u> <u>effectively caps the upward movement of oil</u>. In addition, the region's aridity prevents water from reaching and destroying the resource."

Leet and Judson, Physical Geology. a 1965 textbook

"As early as 600BC, Nebuchadnezzar, king of Babylon, was building roads that consisted of stones set in asphalt. The asphalt was nothing more than the hydrocarbons left behind where natural oil had seeped to the surface and lost its lighter components by evaporation." [Just like the La Brea tar pits]

Where to find oil fields

1) Is there kelp growing offshore?

2) Is the coastline prone to tsunamis?

3) Is the place a desert or at least a dry area?

<map of Indian Ocean>

With respect to Australian and Antarctic subductions in the Indian Ocean, a good part of the floating debris that doesn't get trapped along the way, ends up either funneled and deposited in Bangladesh, or funneled through the straits of Hormuz, and deposited in the Persian Gulf. And these places, of course, experience a wall of water. And so does Cambay and Bangladesh, and Yangon and Hyder•bad.

The 1-way valve of Hormuz

The narrow mouth of Persian gulf probably functions as a sort of 1-way valve for floating debris and sand. This is because the water comes in funneled, high-speed, and turbulent. While the water flowing out is not so funneled, not so high-speed and not so turbulent. As well the front of the advancing wave, while it is behind the retreating wave. (more of this later)

Here we imagine a great tsunami pushing a giant front of floating debris in front of it, a front that is hundreds of meters thick like in that YouTube video of the jumble of dry garbage being driven by the tsunami down the street in Banda Ache. Now imagine a great mass like this, but full of mangroves and kelp. Imagine how this mass of plant matter scrapes up everything in its way that isn't either water or formation rock. Everything comes loose and is washed along. Everything, even much of the sand.

The debris of two coastlines converges at Hormuz and probably forms a great floating plug that the tsunami drives through the straights. Then, once inside the Persian Gulf, the tsunami wave tends to put the floating material to the edge of the pond by the continuing flow of water — and there it remains in great heaps as the waters retreat from behind it. Here is why we see all those long skinny oil fields at the edge of the Zagros Mountains on the oil-field map just below. Also, it should be pointed out that these long skinny oil fields probably occur all around the basin — it is just that they are not shown on the map.

In the following illustration, note the oil fields of the Persian Gulf shown in red. Note how the oil fields occur on the flat lands that we see all the time in Iraq war media. Note how little oil there is in the areas with hill contours. Note how the words "Zagros Mts." actually bleeds from the contoured areas of the foothills into the flat alluvial area near the Tigris river. Someone is trying to make you think that this oil-rich area is mountainous when it is actually alluvial.

The Persian Gulf is in fact a giant flood-plane filled with soil too salty to grow anything — that is except where the Tigris or Euphrates has not washed the salt out. How did all this sandy salty soil get in the Persian Gulf? And what about those huge deposits of oil sands in Canada? Again, why does oil so commonly occur with sand? And why is petroleum so often found with salty brine?

What floats and what temporarily suspends

The floating organics form the oil. The gravel doesn't go very far. The sand falls out when the water calm, and the fine particles don't settle out until after they return to the ocean. When a tsunami hits a bay, both the floating organics and the sand tend to get deposited.



Libya Tunisia oil fields, ETSBS

Libya's oil fields are right where we would expect tsunami debris to be funneled as a result of the African continent's drift northward. In fact all the greatest oil fields are exactly where we would expect tsunami debris to be funneled, and generally on alluvial land that is or was near sea level.



Persian Gulf oil fields

Like soap rings around a sink basin

Look at the orientation of the long and skinny oil fields of the Persian Gulf. There is a reason why they look like soap rings around a sink basin. It is because both are created by floating material at the edge of a basin.

<South China on map>

China should probably look for oil in its small tsunami funnel.

<Vietnam on map>

Vietnam's oil fields are in the Gulf of Tonkin. They are now forgotten thanks to that awful low-budget war and murderous totalitarian government that followed.

<Nigerian oil fields on map>

Nigerian oil is right where we would expect tsunami debris to be trapped. And funny how Cameroon has no proven oil reserves. That Nigerian god must have some powerful magic/corruption if he can keep non-Islamic Cameroon from discovering its oil. Maybe the Nigerian god also suppressed other mineral discoveries around the world to help maintain high prices for the mines owned by his loyal followers. You know, like how they sold that hard to reach copper deposit in Afghanistan to the

Chinese for \$3 billion dollars.

<map of Los Angeles>

The Palos Verde peninsula in Los Angeles also traps tsunami debris as it washes down the coast. Here is why much of the LA basin is full of sand that is less than 60 meters above sea level. It is also why Los Angeles is so rich in oil; over 98% of that oil still undiscovered and therefore not included in the world's proven reserves.

<lraq map with 100m topo contours>

Now Iraq is widely rumored to have more oil than Saudi Arabia. Isn't the far end of the Persian Gulf (in Kurdistan) where we would expect most floating plant matter to end up? Funny how Kurdistan is partitioned among three nations just like Poland was prior to WWI. Here we conceive of this division into three parts is a sort of modus operandi of the Harem-spawn Arabs with respect to their arch enemies and arch opponents. And here we note what happened to the Jews of greater Poland (my people) at the hands of a puppet dictatorship only 20 years after their nation was reunited.

Continental uplift and oil hundreds of meters above sea level

When Earth's tectonic plates strike one another they compress and rise in a widely accepted process called continental uplift. And due to continental uplift, ancient coastlines can be hundreds of above sea level.

Continental agglomeration

Due to the way that continents have agglomerated. ancient shorelines can be thousands of miles from current shorelines. Here is why there is a great oil field at the east side of the desert in the San Joaquin Valley. This is a relatively lifeless desert that apparently was once the coastline judging from the oil wells at the southeast corner.

Essentials of Geology textbook, Stephen Marshak

"Oil itself forms only in a relatively narrow range of temperatures, called the oil window, which generally can exist only in the topmost 6 to 9 km of crust." [How does the organic material get 6 to 9km down?]

Most oil is shallow

Some lies tell the truth with perfect clarity. Most oil fields are in fact, not far underground. They are like the La Brea tarpits — or rather the La Brea quicksand pits. This was a recent oil deposits sitting just below the surface. It was covered with a thin layer of sand that has adhered to the oil field. This crust would break when people or animals walked on it. Then these creatures will fall though the sandy crust to the oily quick below.

But even if the oil is a few hundred meters underground, it is generally in sandy, alluvial soil that is soft and easy to drill in. As well, the coastal topography that funnels floating masses of salty kelp and other organic debris in one tsunami, frequently does the same thing for many other tsunamis (and storms) over the millennia. So frequently where we find one oil field, we will find many other in the same place at different depths.

<prc>code code cod

Deep oil is propaganda

All those oil company ads about deep oil, ground penetrating radar, and R3M remote sensing are all Arab propaganda. So too is the image displayed on all the Wall Street Journal's coinoperated vending boxes throughout the United States. This micro-billboard was an old issue from years before. It told us how "our" oil companies are drilling for oil both offshore and three miles down in the Gulf of Mexico.



This propaganda graced the front of most Wall Street Journal sidewalk vending boxes in the US for almost a decade.

A gas well 5 miles deepone reason natural gas will cost more.



Time was when a natural gas well went down about a mile. And cost about a hundred thousand dollars. But those days are gone. Now the gas industry has to sink wells miles into the earth—in an effort to meet America's growing energy needs. And the deeper the drill

And the deeper the drill goes, the higher the cost goes Some companies have drilled four or five miles deep—at a cost of a million dollars a mile And they had to develop new drilling technology to do it.

Maybe you think all this is going to mean higher gas prices. Well, you're right. But scarcity and high expense are affecting oil, electricity, all types of energy. Gas will continue to be your most economical buy overall. Meanwhile, don't worry about your own gas supply—if your home has gas, you'll be supplied.

Gas, clean energy for today and tomorrow.

Here is more propaganda that the Arabs got "our" energy companies to pay for. The inference is that oil and gas must be getting scarce if "our" energy companies are drilling wells 5-miles deep. From Time Magazine.

Where are the kelp forests?

Look for kelp forests in gulfs to find oil fields.

Never live by a Sargasso sea

Sargassum=seaweed, a vine-like plant that grows on the sea floor and has numerous grape-sized air bladders that lift the vine to the ocean's surface where the sunlight is powerful. Funny how there is only one group of plants that does this — and funny how this plant seems to grow near subduction faults.

Kelp seems to be a plant that has adapted to take advantage of the CO2-rich waters of subduction zones. So we have to ask if kelp needs the water-borne CO2 to produce those "air" bladders to reach the sunlight?

Perhaps kelp tends to appear, spread, or thicken before an earthquake. Perhaps it only occurs near subduction zones in late stage. Perhaps certain species grow like crazy just before a subduction.

Oil surveys are also cymology surveys

We need to systematically drill our coastal areas and carbon date all the oil fields we find. This will not only give us an valuable idea about the amount of petroleum we have, but it will also enable us to do a long range cymology survey for the planet. It will also enable us to accurately model uplift on the various coastlines.

Oil and dry places

It is just a hunch, but I bet that the best oil is the saltiest and least rain washed. The high salt content preserves the oil from even extremophile bacteria. Because some oil is polluted with sulfur, we surmise that sulfate-reducing bacteria are the most salt tolerant and thus get to the oil first. So apparently, too much rain produces "sour" oil with a high sulfur content. So look for oil fields in place that don't get much rain during Earth's warm wet warm ages, places were the preservative salt is not washed out.

Oil surveys and paleontology

There are little doubt millions of quicksand fields like the La Brea 'tar-pits'. In fact oil fields might be the best place to look for fossils. Here we reflect on the 1950s "cult" film, the creature from the black lagoon, and how this film is blid = blurring idea that covers up how black lagoons are the richest source of fossils.

Estimating oil world oil reserves

To estimate how much shallow oil there is, we can drill 400m test wells in the world's sandy coastal areas (and formerly coastal sandy areas — but we stop when we hit formation rock. If we do this for say 5,000 wells, we can see what percentage have oil and how much oil they have. Then we can extrapolate and come up with an estimate of worldwide shallow oil.

What percent of our sandy areas are oil?

The alluvial areas of the Persian Gulf are around 650km x 1500km — or around 1,000,000 square kilometers of area. If it averages 500m deep — and if it is 1% oil, and 99% sand, then we have 5,000 cubic km of oil in the Persian Gulf. That is around 1,200 years of oil in the Persian Gulf alone.

We can do similar calculations for other sandy tsunami funnels around the world. This is how we will estimate world oil reserves.

60,000 tsunamis

There have been 60,000 1,000-year tsunamis in the past 60 million years. 2,000 years. Many wave probably produces many oil fields in many bays and gulfs.

Hammond World Atlas, 2003

"Regardless of the actual size of current reserves of fossil fuels, they are ultimately limited." [How can we say that the supply of oil is limited relative to the needs of humanity? How can we say this if we never survey our precious wetland habitats, and our precious surfing and frolicking beaches with a few wells? Clearly this is Arab propaganda.]

Chain Reaction Film, 1996

"We're running out of time. We have polluted and peopled this planet to the brink of extinction. We are destroying our world at a suicidal pace. We need a pollution revolution, and its not going to be easy because the world is addicted to petroleum. We have limited resources and we go to war to protect them. We need a new technology and this technology can't be sold, it must be given away, to everyone." [1) The Arabs love it when their customers are ad•dicted to what they are selling. 2) Ad•dict = to do what you are told. 3) Opium = obey'em. 4) Can you see who inserted this propaganda?]

Essentials of Geology textbook, Stephen Marshak

"Within a few years, thousands of oil wells had been drilled in many states, and by the turn of the twentieth century [Western] civilization had begun its addiction to oil."

Earth science and the environment, 5.10 Textbook by Thompson and Turk

"The U.S. consumes 25% of the world's oil yet owns only 3% of the known reserves... At current rates of consumption, we have more than <u>200 years of domestic coal reserves</u>, and at least several decades of natural gas reserves. Oil however, is another story...

In 1956, M. King Hubbert, a geologist, was working at the Shell research lab in Houston, Texas. Hubbert compared U.S. domestic oil reserves with current and predicted rates of oil consumption. He then forecast that U.S. oil production would peak in the early 1970s and would thereafter decline continuously. He predicted that America would have to make up an ever-increasing difference between domestic oil supply and consumption by relying on larger and larger imports, or <u>they</u> would have to turn to other energy resources. Other experts and economists ridiculed his prediction, but in 1970 the U.S. domestic oil production reached its maximum and it has been slowly declining since them.

In 2004... the United States imported nearly 70% of its petroleum. Because of this high dependence on foreign oil, the U.S. energy future is intimately linked <u>with the global one</u>."

[The first underlined text sounds like Arab propaganda. The 2nd underlined text looks like it was written by a foreigner. Maybe these foreigner aren't just putting propaganda in our school textbooks, maybe they are also running our 'shell' oil companies. Maybe they are struggling (jihading) to transform America into Roman front empire 2.0.]

Natural Resources, Ecology, Economics and Policy textbook,

Ch. 19, Holechek, Cole, Fisher, Valdez

"In 1994, the United States obtained 45% of the oil it consumed from foreign sources. By 2005, net imports will account for about 57% (EIA 1995). <u>Once again, the vast stores of oil found in the</u> Middle East will likely be critical in meeting U.S. energy needs in the near future. By 2015, baring unforeseen developments, OPEC will export about 52 million barrels each day to the United States. The United States has given itself some protection against the oil supply disruptions by creating an oil stockpile, the Strategic Petroleum Reserve. However, it can postpone economic turmoil for only a few months.

The outlook for natural gas is better than for oil, both in the United States and abroad. New studies suggest that the total U.S. reserves could be seven times greater than previously estimated and could last about 60 years. Estimates of world natural gas vary, but proven and undiscovered reserves will last about 104 years at the current rate of consumption."

Natural Resources, Ecology, Economics and Policy textbook,

Ch. 19, Holechek, Cole, Fisher, Valdez

"The United States is forced to move ahead with oil development largely because of its excessive dependence on automobiles. The public wants to be free of automobile pollution but does not want to sacrifice the loss of personal freedom the automobile provides. The long lines at gas stations during the very brief oil crisis we experienced in the 1970s <u>demonstrate</u> the extent of our dependence on gasoline [and Arab oil]. The only people spared this brief period of forced trip planning and high gas prices were those who relied exclusively on mass transportation."

Natural Resources, Ecology, Economics and Policy textbook,

Ch. 19, Holechek, Cole, Fisher, Valdez

"[Oil] Exploration is decided by the prevailing economic conditions created by supply and demand. [If this is propaganda, then this is what the Arabs want you to think and the opposite is true.] Exploration boomed in the early 1980s in response to higher oil prices created in part by the oil shortages of the 1970s. Shortages arose as OPEC (Organization of Petroleum Exporting countries) tried to force higher world oil prices. [The propaganda is that the Arabs had the power to cause world oil shortages.] The percent of successful versus failed exploration wells has actually increased since 1970. [Reinforcing the illusion of deep oil and Arab-run exploration companies that are only looking for deep oil.] Exploration involved more wells as opposed to drilling individual wells to greater depth. [Propaganda about oil being something deep] Efforts to find oil were successful, despite the fact that our oil resources have been steadily depleted. [Propaganda about running out of oil, which the Arabs control.] However, the gushers of yesteryear are no more. [Propaganda about how the peak has passed.]

Efforts to pump oil are directed by the ways it is trapped beneath the earth. The U.S. production of crude oil peaked in 1970 and has been in an uninterrupted decline since 1985. [True, but this is not due to actual scarcity.] The addition of the Alaskan oil field forestalled the decline in total production, but even its production has fallen since the mid 1980s. The overall decrease in total production is due to the falling productivity of individual wells rather than a decline in the total number of producing wells. Each day, the average U.S. well produces about 12 barrels of oil. In Saudi Arabia, each well averages 10,000 barrels per day! Years ago, U.S. oil wells relied to some extent on water and little gas pressure to force oil to the surface. Now, efforts to keep wells productive frequently must involve sophisticated oil recovery techniques, such as steam injection, to decrease viscosity and increase flow. Secondary recovery methods extract and additional 10 to 20% of the available oil from a well.

Today, most U.S. oil production is concentrated in only five states...Alaska, Texas, California, Louisiana, and Oklahoma. The oil fields of nonwestern Pennsylvania, were it all started in 1859, have long been depleted. Currently, major U.S. oil drilling projects are located offshore (Gulf of Mexico, California) and overseas. [Because it is part of the illusion that we are running out of oil.] Offshore production today provides more than a million barrels of oil each day and has done so since the late 1960s. Production requires the use of <u>expensive platforms</u>. Some reflect ingenious engineering and, in scale, may rival <u>the heights of tall</u> <u>city buildings</u>."

Physical Geology textbook James S. Monroe, Reed Wicander

[This is entirely propaganda]

"GEOFOCUS Oil, Plate Tectonics, and Politics: It is certainly not surprising that oil and politics are closely linked. The Iran-Iraq War of 1980-1989 and the Gulf War of 1990-1991 were both fought over oil [because it is scarce and valuable]. Indeed, many of the conflicts of the Middle East have had as their underlying cause, control of the <u>vast</u> [We Arabs have all the oil] deposits of petroleum in the region. Most people, however are not aware of why there is so much oil in this part of the world.

Although large concentrations of petroleum occur in many areas of the world, <u>more than 50% of all proven reserves</u> [We Arabs have all the oil] are in the Persian Gulf region. Interestingly, however, this region did not become a significant petroleum-producing area until the <u>economic recovery</u> following World War II. After the war, Western <u>Europe and Japan in</u> <u>particular became dependent on Persian Gulf oil and still rely</u> heavily on this region for most of their supply. <u>The United States</u> is also dependent on imports from the Persian Gulf, but receives significant quantities of petroleum from other sources such as Mexico and Venezuela.

Why is so much oil in the Persian Gulf regions? The answer lies in the paleogeography and plate movements of this region during the Mesozoic [245-65 mya] and Cenozoic [65mya to today] eras. During the Mesozoic Era, and particularly the Cretaceous [146-65mya] Period when most of the petroleum formed, the Persian Gulf area was a broad, stable marine shelf extending eastward from Africa. This passive continental margin lay near the equator where [the ecosystems are rich and] countless microorganisms live in the surface waters. The remains of these organisms accumulated with the bottom sediments and were buried, beginning the complex process of petroleum generation and the formation of source beds.

[The remainder is complete nonsense] As a consequence of rifting in the Red Sea and Gulf of Aden during the Cenozoic Era, the Arabian plate is moving northeast away from Africa and subducting beneath Iran. As the sediments of the passive continental margin were initially subducted, during the early stages of collision between Arabia and Iran, the heating broke down the organic molecules and led to the formation petroleum. The tilting of the Arabian block to the northeast allowed the newly formed petroleum to migrate upward into the interior of the Arabian plate. The continued subduction and collision with Iran folded the rocks, creating traps for petroleum to accumulate, such that the vast area south of the collision zone (known as the Zagros suture) is a major oil producing region." [1) Does this really belong in a geology textbook?

2) What a bullshit term is 'proven reserves'.

3) The U.S, Europe and japan are dependent on Mideast oil just like Rome was dependent on Mideast grain.

4) If the gulf oil formed 65 to 245 million years ago, why are most Persian Gulf wells less than 200 meters deep?

5) Isn't it just easier to see the Persian Gulf as the world's largest tsunami funnel?]

Essentials of Oceanography, Alan Trujillo and Harold Thurman, 4.8

"Students Sometimes Ask... When will we run out of oil? Not any time soon. However, from an economic perspective, when the world runs completely out of oil—a finite resource—is not as relevant as when production begins to taper off. When this happens, we will run out of the abundant and cheap oil on which all industrialized nations depend. Several oil-producing countries are already past the peak of their production—including the U.S. and Canada, which topped out in 1972. Current estimates indicate that by 2010—more than half of all known and likely to-be-discovered oil will be gone. After that, it will be increasingly more costly to produce oil and prices will rise dramatically—unless demand declines proportionately or other sources such as extra-heavy oil, tar sands, or gas hydrates become readily available."

Travis Hudson, Living with Earth textbook, 14.0

[All the Arabs have to do is shut down our oil output and say that coal and oil sands are harming the environment and causing global warming. Then they can sell their oil as if it was "black gold". Then the harem-bred parasite race will be in charge of the world economy once again.]

"oil supplies could be getting tight already. You see, the big question is not how long <u>will it</u> take to use most of the world's oil. It's when will production no longer be able to keep up with demand. There will come a time when everyone's best efforts will be unable to increase production—the time of peak oil production—and the amount of oil production will begin to decline. The shift from increasing to decreasing production that you can track in Figure 14-4 has been called the 'Big Rollover'. This is when the competition for oil will be intense, prices will rise, and it will be a seller's market.

Some people think that production will peak soon, if it hasn't already. Estimates for the timing of peak oil production and the Big Rollover vary from 2005 (as in Figure 14-4) to about 2040. Even if these estimates are wrong and the Big Rollover doesn't occur until later, it is probably coming in your lifetime. The combined consequences of increased oil demand, decreased production, and increasing oil prices will have profound effects on the world's economy and how our society will function."

Lets make petroleum from kelp

Lets try a bunch of approaches for making oil from kelp. This way we can understand what the ideal conditions are for oil formation. Lets take a bunch of different types of kelp and not rinse the salt out of them. Then lets contain the stuff at these temperatures: 20°C, 25°C, 30°C, 35°C, and 40°C. And lets take the water content down by 40%, 50%, 60%, 70%, 80% and 90%. That is 30 combinations. Then lets see how fast the stuff breaks down into crude oil.

Also, while we can certainly turn kelp into oil, maybe it is easier to just dry the stuff and burn it. It is hard to imagine that burning dry kelp would be any more polluting than burning the sweetest crude oil that it turns into.

The best use of kelp is probably as a biofuel Burning kelp is probably a terrible squandering of a valuable biofuel — a fuel for a new man-made food chain.

Kelp is a hugely important plant

Kelp is a plant that will grow without any rainfall at all. Thus we have a food-chain fuel that is entirely independent of rainfall.

We really need to understand kelp fully. How it spreads, what makes it thrive. Where it grows best. How to best grow it.

We really should make a catalogue of similar "desert" biofuels and the food systems we can engineer from them. And this should be one of the most important parts of applied biology, for it is organic fuel to feed the new ecosystems that we will use to feed ourselves in ice ages.

Maximizing kelp output

It is not hard to imagine many of the world's governments planting their kelp-able coastlines. Perhaps we will use chunks of waste concrete for this purpose. We will attach kelp vines to these, so they root, and grow individuals of the appropriate length.

Then we will drop these say every 200 meters apart at the appropriate depth. This is how we will re-plant our kelp forests.

19.. Coal



Vast-US-coal-fields, NREEP

Natural Resources, Ecology, Economics and Policy textbook, Ch. 19

Holechek, Cole, Fisher, Valdez

"It is difficult to estimate how long our domestic coal will last. Based on the 1994 production rate, which involves some exports, and the DRB [demonstrated reserve base] information previously discussed it should last around 250 years."

[Look at the map above. Surely the United States has enough coal to last for thousands of years. Here we see through the proven reserves ruse.]

Natural Resources, Ecology, Economics and Policy textbook, Ch. 19

Holechek, Cole, Fisher, Valdez

"Although strip mining is highly efficient, its adverse impacts on the environment do not go unchallenged. Strip mining temporarily, at least, disturbs surface and groundwater flow patterns. It causes an abrupt increase in the presence of soil chemical elements in the surface landscape. Without close supervision, some toxic elements can migrate off-site through seepage, runoff, or sedimentary transport." [The Arabs working in our supposedly free press are sure to make the most of the environmental costs of coal mining. They are also sure to struggle to make coal seem as dirty and polluting as possible. In fact, they even probably make sure to sell only the dirtiest coal that produced the most ac•rid smoke.]

Natural Resources, Ecology, Economics and Policy textbook, Ch. 19

Holechek, Cole, Fisher, Valdez

"Coal transportation is expensive and, depending on rail

distance, can double the mine price." [Once we nationalize our railways, we will let our transporters use our rail-roads for free just like with our tired-roads. Then this will not be a problem. Also oil is only about 20% richer in energy by weight.]

Natural Resources, Ecology, Economics and Policy textbook, Ch. 19

Holechek, Cole, Fisher, Valdez

"every ton of coal is the equivalent of more than 5 barrels of crude oil." [If a barrel contains 159 liters, and a liter of oil weighs .96kg, then 5.45 barrels weighs 832kg. Thus coal can be seen as 83.2% oil and 16.8 other stuff, most of which is sand. Say, if you burn 10kg of coal, what percentage is left as solids?]

Leet and Judson, Physical Geology, a 1965 textbook

"Coal is rapidly being replaced as a fuel by more efficient, easierto-handle oil and gas. Fortunately, there are also large supplies of these fuels in the United States"

Leet and Judson, Physical Geology Ch. 22, a 1965 textbook

"Most petroleum...and natural gas [and coal] have developed from organic remains originally deposited in a marine sedimentary environment. A modern example of such an environment is the Black Sea. Here the water circulates very slowly, and the bottom sediments contain as much as 35% organic matter, in contract to the 2.5% that is normal for marine sediments. When the putrefaction of organic remains takes place in an environment of this sort, the product is a slimy black mud known as sapropel (from Greek sapros, 'rotten', and pelagos, 'sea'). Petroleum and natural gas are believed to develop from the sapropel through a series of transformations not unlike the stages in coal's development from peat. [Maybe coal forms when a peat bog or other organic-rich environment in a salty bay experiences falling sea levels. This leaves the organics high and dry and salt concentrations thus rise. Thus the ecosystem's energy is preserved as coal.]

Three conditions are required for the development of a deposit of petroleum or natural gas: (1) source beds where the hydrocarbons can form, (2) a relatively porous and permeable reservoir bed into which they can migrate, and (3) a trap at some point in the reservoir bed where they can become imprisoned." [If you want to look for oil that has migrated from its original source, here is how you find it. But it is a bit of a snark hunt because most of this oil either dissipates or breaks down. You will have much more luck looking for oil in its original coastal locations.]

Natural Resources, Ecology, Economics and Policy textbook, Ch. 19

Holechek, Cole, Fisher, Valdez

"In the United States, the sulfur content of coals varies from 0.2 to 10% and, unlike carbon and energy content, is not directly related to coal type... Removal of the sulfur is not an easy task. The sulfur <u>attached to</u> coal can be removed by washing and other coal preparation methods. Currently, 40% of the bituminous coal used for power generation is cleaned in some manner. All bituminous coal is crushed to provide uniform size, to increase surface area for combustion, and to remove impurities...The organic sulfur contained within the coal itself requires post combustion removal, usually by employing scrubbers or liquid filters that put exhaust fumes through a spray

of water containing lime. The sulfur reacting with the lime is converted to calcium sulfate, which can be removed as a solid. A newer innovation for sulfur removal involves injecting crushed limestone into a boiler containing powdered coal and combusting the coal at a lower temperature. This reduces the release of both sulfur and nitrogen oxides, another serious pollutant contribution to acid deposition. Fluidized bed combustion can remove 90% of the sulfur, 50% of the nitrogen oxides, and 20% of the CO2."

[There are few words the Arabs hate as much as clean coal technology.]

Travis Hudson, Living with Earth textbook, 14.2

"Proper disposal of drilling <u>wastes</u>, guided by regulatory permits, is now common practice, but it wasn't always so. In offshore operations, drill cuttings and mud were often just dumped into the ocean. On land, the mud was mixed in pits, which then became repositories for waste cuttings, and mud after drilling was complete. If the cuttings and mud contained traces of oil or other toxic components, the unlined pits could become sources of soil and water pollution. Many old mud pits that have become environmental problems have subsequently been remediated and reclaimed." [1) Note the foreigner English underlined. 2) If oil occurs in alluvial places, the particulate material will come from a wide area. There should be no concentrations of toxic minerals. So here we see Arab propaganda to make oil drilling seem difficult and expensive.]

Travis Hudson, Living with Earth textbook, 14.2 Also know as "Third Planet" and used by UT San Antonio

"Because most oil wells in the continental United States have been in operation for many years, today's production averages six barrels of water for every barrel of oil. Such water commonly contains enough salt and traces of oil that it cannot be directly used for drinking or irrigation, nor can it be safely discharged to surface <u>drainages</u>. It is in effect brine that must be properly disposed of once it is separated from the accompanying oil or natural gas.

Most of the 20 to 30 billion barrels of water produced each year are injected into oil or gas fields to maintain their reservoir pressure and increase oil recovery. However, about 35% of the nation's produced water cannot be recycled this way and requires disposal. As you would probably have guessed, disposal of produced water prior to 1970s environmental laws and regulations commonly did not consider its environmental impacts. Many old salt scars developed where the brines were simply discharged into the surface near the producing oil or natural gas well. As this water evaporated, salt was deposited that impregnated soil, killed vegetation, and potentially contaminated groundwater. Today these salt scars are being remediated by adding gypsum (a source of calcium) and organic fertilizers to oil, planting salt-tolerant vegetation, and irrigating the area to help flush and clean the soil (if groundwater contamination is not an issue)." [1) Here salt seems to be the main contaminant released by oil drilling. 2) Note how salt is associated with oil. 3) If we are drilling in a coastal or desert area, the salt should not be much of a problem. 4) Why not have evaporation pans, scrape up the dry salt and cart it off to some salt-contaminate area.1

Travis Hudson, Living with Earth textbook, 14.2

"There are 149 operating refineries in the United States with the capacity to process 17 million barrels of crude oil each day. This processing requires handling and storing large amounts of volatile and potentially hazardous liquids and gasses. <u>The</u> abundant pipes, connections, valves, and tanks in refineries are

all possible points of mechanical failure.

Because refineries produce very combustible fuels like gasoline, it is not surprising that fires and explosions are a significant risk wherever they are located, and over the years there have been some big ones. In 1955, an explosion ripped apart a refinery in Whiting, Indiana, hurling massive <u>chunks of</u> <u>metal</u> thousands of feet. Some of it landed in a nearby residential neighborhood, where one person died. The resulting fire burned for eight days and consumed most of the refinery." [This is the Arabs trying to make the refining of oil look difficult and dangerous. They want to run every part of the energy industry. We should go in the opposite direction and let them run no part of the energy industry.]

Travis Hudson, Living with Earth textbook, 14.2

"The best way of diminishing the impact of oil refineries is to locate them where they do not conflict with other land-use choices, such as valuable wildlife habitat, or where people want to live."

Travis Hudson, Living with Earth textbook, 14.2

"Congress passed the Oil Pollution Act of 1990 in response to the Exxon Valdez accident. This act requires that all oil tankers in U.S. waters have double hulls. Double hulls significantly reduce the chance of major marine oil spills." [Thus with a few acts of sabotage the Arabs had an excuse for a law that drove nearly all the competition out of the oil shipping industry.]

Travis Hudson, Living with Earth textbook, 14.2

"Natural processes do a good job of cleaning up after oil spills, but they may take <u>awhile</u>—from a few years to several decades." [Not true. As soon as the salt is washed from the hydrophobic oil, bacteria will eat the oil. If the currents are onshore and the spill is close to shore, then the spill will make a mess of the shore. However, if the spill is far from shore, and the seas rough, the spill will turn into billions of tiny oil bubbles with lots of surface area for salt leaching.]

Travis Hudson, Living with Earth textbook, 14.2

"Seeps release more than 1 million barrels (62.4%) of the oil entering North American marine environments each year. This is the equivalent of four Exxon Valdez spills each year. There were globs of oil on the beaches of Santa Barbara long before the 1969 offshore well blowout, and there will be globs of oil there indefinitely in the future." [So they why was BP fined all those billions of dollars? Apparently the Arabs want their oil drilling puppet corporations poor.]

Crude oil smells like diesel fuel

If you smell diesel fuel in a gulf or lagoon after a tsunami or storm and there is no manmade source, what you are actually smelling is an oil field.

Oil naturally occurs in beach areas

Have you ever seen crude oil or tar wash up at the beach? Odds are, it is not manmade. Near-the-surface oil fields are constantly leaking oil.

The opposite of precious habitat

The correct way to view our Babe-watch, surfer-dude coastal areas is not as pristine habitat, but as deadly habitat. This is the opposite of a habitat in need of protection -I mean, if these places periodically get wiped out by tsunamis, what is the point of protecting them?

Expensive oil is based on our ecoism

Arab power will be devastated when we see the folly of our ecoism.

Filthy black oil wells, pristine white windmills, "filthy" and "clean"

In case you don't know, America and most other nations, have 'protected' 100% of their coastal areas and swamps from the "environmental horrors" of oil drilling. Today, all our oil is hidden under the church of the precious wetland habitat, or the church of the beautiful beach, or the church of the multi-million-dollar sand-bar death-trap neighborhood. Today, nearly all of America's coastal areas and swamps are precious places, where oil drilling is a federal offense. What force could have caused our government to make drilling for oil a federal offense?

How to clean up oil spills

If we decide to keep using oil tankers and/or drilling for coastal oil, we might want to have some dual-use boats and collection equipment standing by. Pairs of boats drag a long floating Vshaped boom between them. At the back of the boom we will have another boat, a lighter than water vessel that has no bottom. When it is full of oil, other ships come along side and suck out the oil.

This approach however does not work too well in rough seas. So in rough seas, we will have to rely upon the churning of the sea to break the oil slick into bubbles that will speed up the ability of bacteria to eat the oil that is otherwise too salty.

For diffused slicks, we may want to blow a cloud of alkali powder over them so they turn to soap and dissolve. We might the best system for this is to use large crop dusters.

20.. ATLANTIC CIVILIZATION

Atlantic = Atlantis

In Greek times, the Cyrillic pronunciation was used and the "C" in Atlantic was pronounced like an "S"

Homer, referring to the Greek god Poseidon

"The god whose liquid arms are hurled <u>around the globe, whose</u> <u>earthquakes rock the world</u>." [Poseidon was the god of sea, earthquakes, and tsunamis. Funny how Poseidon's tsunamis aspect has been forgotten by mythology books today.]

Hesiod, Theogony 14

"Artemis who delights in arrows, and <u>Poseidon [the sea god] the</u> <u>earth-holder, who shakes the earth</u>, feared Themis, and flirty Aphrodite..."

Homer, Odyssey, line 74

"Poseidon the Earth-shaker" [He was both the sea god and the god of earthquakes]

Homer, Odyssey 5.281

"Poseidon, Lord of Earthquakes"

Sophocles, The Women of Trachis, 502 "Poseidon, the shaker of the earth"

Hesiod, Hymn 22, to Poseidon

"I sing about Poseidon, the great god, the shaker of the earth and <u>fruitless sea</u>, god of the deep who is also lord of Mt. Helicon [Hell-icon home of the muses] and wide [and dangerous] Aegean. A double role the gods allotted you, O Shaker of the Earth, to be a <u>tamer of horses and a savior of ships</u>! Hail Poseidon, Holder of the Earth <u>dark-haired</u> lord! O blessed oen, be kindly in heart and help those who voyage in ships."

Thucydides i.23

"Tales told about earlier times, but barely confirmed in as fact, suddenly ceased to be incredible. <u>Tales of earthquakes</u>, <u>which</u> <u>occurred over most of the earth at this time, great violent ones</u>"

Plato, Kritias (108e) c.360 BC

"The war was between our city and the kings of the Atlantic [Atlantis] island [land]. These, as I just said, once held an island [land] larger than Libya [Africa] and Asia put together, though it was later overwhelmed by earthquakes, and is the source of the impassible barrier of mud that prevents [Mediterranean] ships from sailing through the Straights [of Gibraltar] into the open [Atlantic] ocean [and around the Mideast's spice trade monopoly]."

Aristotle, On the Heavens 198a

"We should dismiss the incredible theory that India can be reached via Gibraltar, with the ocean [outside the Mediterranean] forming a single unit. The supporters of this opinion can only point to the existence of elephants at both ends of the earth as proof that they are connected."

Fact: Columbus reached America in just 35 days.

Aristotle 399.22

"Before now, mighty earthquakes have torn the Earth in diverse places, and violent rains have burst fort and flooded it. And the inundation and withdrawals of waves have often turned the dry land into sea and the sea into dry land. And the might of storms and winds have sometimes destroyed entire cities"

Hesiod c. 700BC, Theogony 845

"The whole earth, sea and sky seethed. <u>The long waves raged</u> along the coastlines around and about. The rush of the immortal gods. And there arose an endless shaking. Hades trembled where he rules over the dead below."

Plato, Timaeus 24D c.360 BC

"Our records tell how your people [the Arabs] checked another great empire which arrogantly advanced from its base in the Atlantic ocean to attack all the cities of Europe and Asia. For in those days the Atlantic was navigable. There was an island [land] sitting opposite the straits called the Pillars of Hercules. This island [land] was larger than Libya and Asia combined. From it, travelers could in those days reach the other islands [lands]. And from these [lands] the whole opposite continent which surrounds what can truly be called the ocean. For the sea within the strait [the Mediterranean], we are talking about is like a lake with a narrow entrance. The outer ocean is the real ocean, and the land which entirely surrounds it is properly considered a continent [meaning an ocean's container]

On this island of Atlantis [Atlantic continent] a powerful dynasty of kings had arisen. These ruled the whole island [land] and many other islands [lands], as well as [interior] parts of the continent. In addition, they controlled, within the straits [of Gibraltar], Libya up to the borders of Egypt, and Europe as far as Tyrrhenia [Tyre, present day Lebanon. Also, note how land areas are defined by the seas connecting them, with the Atlantis being the territory around the Atlantic Ocean.]

This dynasty, gathering its whole power together, tried to enslave, as one empire, your country [Greece] and ours [the Mideast], and all the lands within the straits [of Gibraltar, the Mediterranean. Note how lands are defined by the waters they front on.] ... At a later time there was an earthquake and flood [tsunami] of extraordinary violence, and in a single dreadful day and night, all their fighting men were swallowed up by Gaia, and the island [land/continent of Atlantis [land of Atlantic, the Atlantic seaboard] was similarly swallowed up by the sea and vanished. This is why the sea in that areas is to this day impassable to navigation, which is hindered by mud just below the surface. It is the remains of the sunken island. [This tale was modified in two ways: 1) The original tsunami warning was made vague and thus pruned from the tree of knowledge - This so that the parasite may use this knowledge once again to reset its great game. And 2) We see a new tale about dangerous shoals that prevent people from sailing out of the Mediterranean and around the Mideast's trade monopoly. And incidentally, the 2nd tale tells us just who was struggling to erase the 1st tale about Su-nami=your names. It was the same people spreading the pseudo-science garbage about the Earth being flat.]

Aristotle Meteorologica 354a.22

"The water outside the pillars of Hercules is shallow because of all the mud, and calm because the seas are in a bay."

Plutarch (d. 120AD), Pompey 38

"He also had a consuming passion to attack Syria and march through Arabia to the Red Sea, so that he might extend his conquests to the ocean which surrounds the world on all sides. Already in Africa, he had been the first to go forward victoriously as far as the <u>Outer sea</u>. In Spain too he had carried the power of Rome as far as the <u>Outer Sea</u>" [These three mentions seem forced, or shoe-horned in. They say pretty clearly, that someone was struggling to make the world forget about the continent now called America.]

Strabo, Geography (2.3.6) c. 5 AD

[Poseidonios] "correctly sets down in his work the fact that the Earth sometimes rises or experiences settling, as well as other changes that result from earthquake and similar actions.... He cites Plato's remark that the story about the island of Atlantis is possibly not fiction. Concerning Atlantis, Plato relates that Solon, after consulting the Egyptian priests, reported that Atlantis did once exist, but disappeared— an island, no smaller than a continent."

Plato Kritias (108e) c.360 BC

"We must first remind ourselves that in all 9000 [900] years have elapsed since war was declared between those who lived outside, and those who lived inside the Pillars of Heracles [= the straights of Gibraltar.

c. 1250BC, we see a Mycenaean assault on Troy, and 1230 is the supposed time of exodus, and the beginning of the decline of Egypt. Also, around this time, the archeological record shows much more urban destruction and shipwrecks around the Mediterranean. So 9000 years is propaganda that attempts to confuse 900 years in the minds of the audience.

Apparently there was a great empire on the Atlantic, an Atlantic or Atlantis empire. And apparently, this empire was strong enough to rival the empire of the Eastern Mediterranean.] This is the war whose course I will now outline. The leadership and conduct of the war were on the one side in the hands of our city, and on the other side, in the hands of the kings of Atlantis island [citadel]. These, as I just said, once held an island [citadel] larger than Libya and Asia put together, though it was later overwhelmed by earthquakes, and is the source of the impassible barrier of mud that prevents [Mediterranean] sailors from sailing through the Straights [of Gibraltar] into the open [Atlantic] ocean.

Don't get confused

There are two changes to the memory of Atlantis:1) Hugely valuable legends about an Atlantic tsunamis were muddled to the point where they were forgotten.2) These legends were changed to keep people from sailing around the Mideast spice trade monopoly. This second change tells us who is responsible for the other change.

Philo Judaeus, On the incorruptibility of the World. (26) c. 50AD

"Consider how many inland districts have been swallowed up by flood waters: Not just coastal zones, but places completely inland... it is said that many cities have also disappeared, having been swallowed up by the sea, which in•undated them [L. unda=wave]... the island of Atalantes [and its coastal empire] which was greater than Africa and Asia, as Plato said in the Timaios, in one day was <u>submerged</u> beneath the sea as a result of an extraordinary earthquake and inundation and suddenly disappeared, becoming sea, <u>not indeed navigable, but full of</u> gulfs and eddies."

Thucydides, c.410BC, Peloponnesian War 3.89

"When these earthquakes occurred, the sea at Orobiai [orb?] and Euboia [eu•p?], drew back from what was then the coastline, rose in a great wave that washed over part of the city [world]. Although the sea subsided in some places, in others the flooding was permanent, and places that were formerly land are now sea. <u>All the people that could not escape to high ground died</u>. A similar in•unda•tion happened in the area of Atalante, and islands on the coast of the Opuntian Locri [Islands on the coast of the Punti'an Loci, Bahrain and Socotra]"

Atlantis = a·tel·antes = incomplete before

Gr. atel, ateles = imperfect, incomplete Gr. Ate = the Greek goddess of mischief, misfortune and harming others. The daughter of Zeus, she personifies blind folly leading to disaster.

Italian Apocalisse = Apocalypse

At first I thought it was apo•kleptes=away-from•stealing. But then I saw the Italian spelling and realized that it is epochal•lyse = epochal•dissolving, as in tsunami. Gr. lyse = loosen, loo-send, dissolve/ lissolve, wash away.

An epochal-lyse is a great worldwide tsunami that occurs when either Australia or Antarctica leaps like a giant wave machine. When Australia leaps, the Pacific and Indian Ocean get slammed and the Atlantic gets a devastating backwash flood afterwards. When Antarctica leaps the Atlantic gets slammed (much more than the Pacific due to its narrowness) and the rest of the world gets a nasty backwash flood afterwards.

Plato, Timaeus 22e

"There is at long intervals a variation in the course of the heavenly bodies and the consequent widespread destruction of earthly things by fire. On such occasions, those who live in the mountains or in <u>high and dry places</u> suffer more than those living by the sea, or on rivers [river deltas] ... When on the other hand, the gods purge the Earth with a deluge, the herdsmen and

shepherds in the mountains escape, but those living in the cities in your part of the world are swept into the sea..."

Plato, Timaeus, 22e

[Here we see exactly what the Arabs are and what they have been doing.]

"Our records [in the Mideast] are the oldest. ...Since ancient times, we have preserved a written record of any great achievement or notable event which came to our attention. This whether they occurred in your part of the world, or anywhere else. By contrast, almost everyone else has barely developed writing and the other basics of civilization, when the periodic flood strikes, sparing nobody but the illiterate and uncultured. The result is that your people have to begin again like children, in complete ignorance of what happened in our part of the world or in yours in early times. So these genealogies [and histories] of your own people which you were just recounting; they are little more than children's stories. You remember only one deluge, though there have been many, and you do not know that the finest and best race of men that ever existed lived in your country. You and your fellow citizens are descended from the few [bumpkin] survivors that remained. But you know nothing about it because so many succeeding generations left no record in writing."

Seneca, letter, 6.1.4

"A season of plague can empty cities, not carried them off. But the disaster of an earthquake [tsunami] stretches far and wide. It is unavoidable, voracious, and deadly to everyone. For it not only devours houses, families and whole cities, even <u>submerging</u> whole nations and regions."

Seneca, Moral Epistles, 71.15

"The entire human race, both past and future, is condemned to die.

Some day men will ask what happened to every city that has ever ruled, or has been part of an empire. All will eventually be swept away by some sort of destruction or other. Some will end in war, others by peace, sloth, and luxury—the plague of prosperity. All fertile plains will be blotted out of sight by a sudden overflowing of the sea, or by a subsiding of the land. All will be suddenly be swept away into the seas."

An account of a funneled tsunami

[Here is an account of the funneled Krakatoa tsunami. The town incidentally has been rebuilt in the jaws of death.] "Suddenly we saw a huge wave of massive height advance from the seashore with considerable speed.

Immediately the crew snapped into action under great [time] pressure. They managed to turn [the ship] into the face of the imminent danger. The ship had just enough time to meet the wave head-on. After a moment, full of anguish, [When they didn't know if they would make it over the tsunami swell.] we were lifted up at a dizzying speed. Then the ship made a great leap. Then another three waves of colossal size appeared.

And before our eyes, this terrifying upheaval [tsunami] of the sea, in one instant and one sweeping flow consumed even the ruins of the town. The lighthouse fell in one piece. And all the houses of the town were swept away in one blow like a house of cards. Everything was gone. There, where a few moments ago lived the town of Telok Betong, was nothing but open sea."

[Written by N. van Sandick who was aboard the Dutch vessel Loudon. From Essentials of Oceanography, Alan Trujillo and Harold Thurman, Ch. 8.6]

The ultimate tsunami funnel

Look at how the coastline funnels in both directions. It is easy to see how a tsunami could be funneled and raised by 10 or 20 fold by the shape of the coastline.

All the great cities are located in tsunami funnels

The Mideast has been struggling for thousands of years to make sure that the richest and smartest of its host civilizations live in cities and beach areas that will be destroyed in the next tsunami, the next epochal•lyse.

This does wonders for preventing the next Perseus from arising. Perseus was the last Greek that showed a gorgon its hide•ous reflection. Medusa's sisters Sthenos=Narrow, and Euryale=Wide, learned that lesson very well. Today they do what they can to eliminate the smartest eu•mens in a variety of ways. One of the most powerful is getting them to settle in tsunami death traps like:"

- 1) the Manhattan funnel
- 2) the Chunnel funnel
- 3) the Bangkok funnel
- 4) the Venetian funnel
- 5) the Tel Aviv tunnel
- 6) the Beijing/ Tianjing funnel
- 7) the Hanoi or 'an•oi' funnel
- 8) the Bangladesh funnel

The last three are notable because their borders or state borders look like tsunami funnel destruction zones.

The power of myth

The all-destructive flood is one of the most universal 'myths' in the world. Few if any 'myths' are this universal. Perhaps it comes from a real event. Perhaps we should map all the cultures that are afraid to live near the ocean and how far they consider to be a safe distance.

The Indian legend of Vishnu and Manu

In Indian legend, the 10th incarnation of Manu ruled when the great flood came and submerged everything. In legend Vishnu warned Manu of the flood and Manu built a boat for his family along with the writings of the sages of antiquity, Manu's family then repopulated the world.

My translation of Genesis 6-8

"After 150 days, the waters began to subside. Then the ark came to rest in the Ararat [Arab] mountains. Then the waters subsided for another 150 days and more mountain tops became visible. Then after 340 days, Noah opened his ark and released a black bird, which flew here and there until the Earth was dry again. Noah also sent out a white dove, to see if the waters had subsided from the land. But the dove found no place to put her feet. And she returned to him in the ark; for the waters still covered the face of the whole Earth."

[Here we have a book from the Mideast attributed to a prophet born in the Mideast. Here is a book said to be holy and the word of god. But clearly someone is trying to hide the risk of tsunami with this tale. Instead the great flood is blamed on worldwide rains that raised sea levels — a story that is preposterous.

So this is not a tale of creation, this is primitive science pro-pagan-da = for-pagans-give written by Arabs (Spanish da= give). This is a lie that blurs and kills an old cautionary tale about tsunamis and helps set up a large portion of humanity to die in the next big tsunami.

What sort of a fool believes anything a bunch of desperate Arabs "recorded"? And what sort of fool believes in an Arab prophet, a prophet born on the Arabian peninsula, and a

prophet that lived his entire life on the Arabian peninsula? To me all the ancient testaments looks like the self-serving propaganda of Mideast Inc.

And I go further. I say that this Genesis 6-8 is so evil, and so malignant that it taints anyone and anything connected with it. I say that this book furthers the parasite's d'ex•pull or devil's agenda. I say this book this bible belongs to the devilish de•ex•pull of the Arabs. And I say all those who worship this bible actually worship the de•ex•pull, the devil.

And one more thing, after the great tsunami, the scavenging black birds of the land of no resources found food, while the peace loving dove of the host part of the world could find none. You all know these black scavenging birds, they have recently descended on Europe in great numbers and they are called "refugees". In the old days they ravished (arab-ished) the countryside as they went.

Here we have a Mideast testament that is supposed to be the word of god. First it acts to hide the risk of tsunami. Then it goes on to explain how the scavenging black birds feasted and the doves did not prosper for a long time. So I ask you, is this book the word of a god or good spirit shared by men — or is this the word of a parasitic d'evil (de•ex•pull) group spirit that seeks to kill your best so it will have an easier time enslaving your people?

Clearly this book of sacred Mideast knowledge is not real. Once you see something as self-serving propaganda it can't be the word of god can it?

Funny how there is Mideast propaganda hidden in the 'hollowed' ground under our sacred myths.

Bible, Genesis, 6-8 (original King James version)

"After 150 days, the waters subsided. And the ark rested on the 17th day of the 7th month, the mountains of Ararat. And the waters decreased continually until the tenth month. In the 10th month, on the first day of the month, were the tops of the mountains seen.

And then after 40 days, Noah opened the window of the ark he made: And he sent a raven forth, which went forth, to and fro, until the waters were dried up from the earth. He also sent out a dove, to see if the waters had subsided from the land. But the dove found no place to put her feet. And she returned to him in the ark; for the waters were on the face of the whole earth."

The Epic of Gilgamesh, The Story of the Flood circa 2100BC

"In those days, the people multiplied and the world teemed, and roared like a wild bull. And the great god was awakened by the shouting. [The god] Enlil heard the noise and said to the gods at their meeting: 'The confusion of mankind is intolerable and sleep is no longer possible by reason of the <u>babel</u>.' So the gods agreed to exterminate mankind. Enlil did this, but Ea warned me in a dream because of an oath [I made to him]. He whispered their words at my house of reeds. ... "... Listen... O man of Shurrupak, son of Ubara-Tutu. Tear down your house and build a boat. Abandon your possessions and seek life. Despise your worldly goods and keep your soul alive. Tear down your house I say, and build a boat. Here is the design of the boat as you shall build. Let the width be equal its length, let her deck be roofed like the vault that covers the abyss. Then take up into the boat the seed of all living creatures." [The underlined boat design is disinformation so the infidels would build top-heavy and unstable boats] ...

For six days and six nights the storms blew. Wind and rain flooded and destroyed to the world like an army at war. As the seventh day dawned, <u>the storm from the south</u> subsided, and the sea grew calm, <u>and the flood water was still</u>. I searched the
face of the earth, but all was silent. All mankind had turned to clay.

The surface of the sea stretched as flat as a roof-top. I opened a hatch and light fell on my face. Then I sat down and wept, the tears streaming down my face. For on every side was the waste of water. I looked for land in vain, but 14 leagues distant there appeared a mountain, and there the boat grounded, on the mountain of Nisir, the boat held fast, she had fast and did not budge. ... As the seventh day dawned, I released a dove. She flew away, but finding no resting-place she returned. Then I released a swallow, and she flew away, but finding no resting place, she returned too. Then I released a [black] raven. She saw that the waters had retreated, she ate, she flew around, and she cawed, and she did not come back."

Then I threw everything open to the four winds, I made a sacrifice and poured out a libation to the gods on the mountain top. Seven by seven cauldrons I set up on their stands, I heaped up wood and cane and cedar and myrtle [myrrh?]. When the gods smelled the sweet savor, they gathered like flies over the sacrifice. Then, at last, Ishtar also came. She lifted her necklace with the jewels of heaven that once Anu had made to please her. 'O you gods here present, by the lapis lazuli around my neck, I shall remember these days as I remember the jewels of my throat. These last days I shall not forget. Let all the gods gather around the sacrifice, except Enlil. He shall not approach this offering, for without reflection he brought the flood. he consigned my people to destruction.'

When Enlil had come, when he saw the boat, he was wrath and swelled with anger at the gods, the host of heaven, 'Has any of these mortals escaped? Not one was to have survived the destruction.' Then the god of the wells and canals, Ninurta said to the warrior Enlil,"

Puranas and the Brahmans

In the Indian traditional history of the Bur•anas and Brahm•anas, we see Vishnu warning Manu of a great flood. Manu built an ark to carry his family which landed on a mountain peak and a new humanity sprang from Manu and his family.

So apparently, there was or were periodically great floods that killed most of humanity in the low-lying tsunami funnels. This except those the people who heeded the advice of Vishnu (or whatever god) and sensibly lived on high ground. Here we note how some Middle Easterners sensibly live in the Bronx, the highest part of New York City—As opposed to Manhattan and Brooklyn, which are only a few feet above sea level. Also notable are the people who live on the high ground of Jerusalem as opposed to the many sand bar communities on the coast of Israel.

Revelation 2:9

"Those of the synagogue of Satan, which lie and say they are Jews but are not: I will make them come and worship at your feet, and know that I love you. And because you obey the words of my patience, I will keep you from the testing hour, which shall come upon all the Earth to try [all] those who dwell upon the earth." [hour of temptation = testing hour = tsunami]

Plato, Timaeus 25e

[Next in a dialogue of the great Plato-Socrates. Here an old man swears in a hard to believe way that the Atlantis/Atlantic civilization legends he heard as a boy are true. Here someone is trying to muddle and discredit the old legends of Atlantic civilization.]

"That is... Socrates, the story which Critias told when he was an old man, which he had heard from Solon. ... after so long a time my memory was imperfect, so I decided to rehearse the whole

story before telling it. That is why I was so quick to agree to your conditions yesterday... I told the story to others as I remembered it, but when I got back, I thought about it over night and I managed to recall all of it pretty well. It is amazing, as is so often said, how what we learn as children sticks so firmly in our minds. I'm not sure that I could remember again all I heard vesterday. Yet I would be surprised if any detail of this story which I heard so long ago had escaped me. I listened to it then with a child's intense delight, and the old man [I am today many decades later] was glad to answer innumerable questions, so that the details have been indelibly branded on my memory. What is more, I have told the whole story to the others early this morning, so that they might be as well placed as I am for the day's discussion. ... I am ready to tell the story, Socrates, not only in outline, but in detail, as I heard it. We will transfer the imaginary citizens and city which you described yesterday to the real world, and say that your city is the city of my story..."

Aristotle 367.33

"The combination of a tidal wave with an earthquake is due to the presence of contrary wind. It occurs when the wind that is shaking the earth does not entirely succeed in driving off the sea - which another wind is bringing on, but pushes it back and heaps it up in a great mass in one place. Given this situation, it follows that when this wind gives way, the whole body of the sea, driven on by the opposite wind, will burst out and cause a flood. This is what happened in Achaea. There a south wind was blowing, but outside a north wind. Then there was a calm and the wind entered the earth, and then the tidal wave came on and simultaneously there was an earthquake. This was the more violent as the sea allowed no exit to the wind that had entered the earth, but shut it in. So in their struggle with one another, the wind caused the earthquake, and the wave the in-undation, as it settled down." [The Arabs would never let something so critically important as the new encyclopedia to be anything but what they want it to be. Aristotle is their encyclopedia. I would call it simultaneously unrewarding and requiring great effort - both apparently by design.]

Earthquakes are local and often affect a small district only; whereas winds are not local. Such phenomena are local when the exhalations at a given place are joined by those from the next and unite. This, as we [at the Aris-total encyclopedia] just explained, is what happens when there is drought or excessive rain locally. Now earthquakes do come about in this way but winds do not. For the former have their source inside the earth, so that the exhalations all move in one direction; the sun has less power over then than over those in the air so that, when once they have been given a start by its motion, which is determined by its various positions, they flow in one direction.

When the wind is present in sufficient quantity it causes an earthquake which is horizontal like a tremor; except occasionally, in a few places, it runs vertically, upward from below, like a throbbing. 368.25

Plato, Timaeus 38c

Same book different science propaganda

[Here the great Plato-Socrates proffers up some pro•pagan•da — obviously Mideast propaganda — that blocks the outsiders from being able to navigate by the stars.]

"The moon he set in the orbit nearest the earth, the sun in the next and the morning star and the one called sacred to Hermes [Hermes=Mercury] in orbits which they complete in the same time as the sun does his, <u>but with a power of motion in a contrary sense to him</u>. Consequently, the sun, Hermes [Mercury] and the morning star [Venus] all alike overtake and are overtaken by each other [this was always the biggest problem for our

parasite's geo-centric nonsense cosmologies that prevented its competitors from being able to sail by the stars.] For the rest, if one were to describe in detail where the gods set them and for what reasons [a plug for astrology], it would involve more attention to a side issue that is justified. The topic is one which we should deal with later when we have leisure, as it deserves some time.

Anyhow, these beings got together and synchronized their motions in time. Then they became living creatures with bodies bound by the ties of the soul. Then they started moving with the motion of the Different, which traverses that of the Same obliquely and is subject to it [This is to explain retrograde motion]. Some went in larger circles, some in smaller ones. those with the smaller circles moving faster, those with the largest moving more slowly. And so the movement of the Same caused the bodies which move fastest to appear to be overtaken by those that move most slowly, though they are in fact overtaking them. For because their movements are a combination of two distinct contrary motions, it gave them a spiral twist and made the body which falls behind it most slowly (its own motion being the most rapid of all) and seem to keep pace with its most closely. [Don't be baffled by the bullshit.] And in the second of the orbits from the earth god lit a light, which we now call the sun, to provide a clear measure of the relative speeds of the eight revolutions [earth-orbiting objects], to shine throughout the whole heaven, and to enable the appropriate living creatures to gain a knowledge of mathematics from the uniform movements of the Same. [Rather the opposite is true.] In this way and for this reason, there came into being night and day, the period of the single and most intelligent of revolutions [that only the smartest people understand]. The month, complete when the moon had been round her orbit and caught up the sun again. The year, complete when the sun has been round his orbit.

Only a very few men are aware of the periods of the others. They have no name for them and do not calculate their mathematical relationships. They are indeed virtually unaware that their wandering movements are time and all, so bewildering are they in number and so amazing in intricacy. [so don't worry about something so esoteric as retrograde motion here.] Nonetheless it is perfectly possible to perceive that the perfect temporal number and the perfect year are complete when all eight orbits have reached their total of revolutions relative to each other, measured by the regularly moving orbit of the Same [of course your Astronomer and his grandchildren will all be dead by then]. In this way, and for this purpose, the stars which turn back in their courses through the heavens were made, so that this world should in its imitation of the eternal nature resemble as closely as possible this perfect intelligible Living Creature."

The great Plato-Socrates

Here is the best known thinker of the ancients, the confusingly named Plato-Socrates. Plato-Socrates is the ancient father of meta-knowledge, or philosophy, or whatever confusing thing we are supposed to call it. Many of us know Plato-Socrates. He was supposedly the wisest of the ancient Greeks. Here Plato-Socrates is saying things that are certainly and obviously corrupted by our Mideast parasite. For here he is telling us not to sail past the pillagers of Hercules, the infamous pirates that plagued shipping at the Mer•Cadiz sphinx where the seas narrow between Spain and Morocco, at the western mouth of the Mediterranean.

If we dumb Rumi did that, then we might start sailing down the coast of Africa and eventually discover a route around the Mideast. And this is something that did eventually happen (despite the flat-Earth propaganda you see here) — an event that was devastating to the single unified parasitic cause of Mideast Inc. Anyway, again, here we have the mighty Plato-Socrates "informing" us about Atlantes or Atlantic civilization, and then in the next breath saying that the route out of the Mediterranean and around the Mideast is now blocked. Who else can be behind this propaganda?

Can you not see what all ancient writings are now? These are not writings that have stood the test of time with respect to our truth — Ancient writings are documents that have all stood the test of time with respect to the Mideast's version of the truth. They are all what the Arabs wants us to think. At best they are a waste of time, a distraction, and at worst they are deadly propaganda setting us up to die in the next natural disaster. Here Plato-Socrates was used to spout science propaganda about how the western opening of the Mediterranean was impassible. And all this was to enslaved our economies under the Mideast's (spice) trade monopoly — a monopoly that included anything special enough to ship between Europe, Asia and Africa prior to the 1500s.

Deucalion = du•kali•on = of•green/fresh•big, the Greek Noah, the son of Prometheus. He survived the deluge Zeus sent upon the earth to wipe out wicked mankind. Deucalion was the metaphorical son, the offspring civilization of the Pro•men•thean spirit.

Remember Prometheus or Pro•men•theus? He is the immortal spirit shared by men, something that can never be killed. He is the spirit that gave man fire, symbolizing all human advancement over the animals. And because of these gifts, Zeus (the parasite) chained him to a rock (the rock inside the Kaaba in Mecca actually). That was all Zeus could do, chain him to a rock, because the spirit of pro•men•theus is immortal. So according to the myth, his flesh is eternally picked at and ripped apart by vultures — like humanity under the rule of the Arabs.

Anyway, Deucalion was the son, the offspring civilization of the Pro-men-thean spirit. He was where the Pro•men•theos had gotten mankind. According to Arab legends, Deucalion was farsighted enough to build an ark before the deluge. When the flood came, Deucalion and his wife Pyrra (Gr. pyra•mid = fire•shape) sailed away on the ark, taking a long all the animals they could. They floated until the rains stopped, and the water subsided. They had run aground on the slope of a mountain which they later found to be Parnassus. This was at the caves of Delphi, where the priestesses of Apollo lived. Deucalion consulted the oracle, who informed them that the race of mankind had been wiped out. Deucalion asked the oracles how man might be restored to earth. Out of her deep trance she answered, 'Go with head averted, and thrown behind you (over your shoulder) the bones of your mother'. Then those who did this turned into the people who repopulated the earth after the great flood. And basically world was take over by the cannibal Brothers who did this with the bones of their mothers. At least this is what this Arab-looking legend seems to be saying in rather clear congruence with the legend of Genesis from the Arabian bible. Also in congruence is the way that a problematic Arab/parasite legend was transformed into a European/host legend.

Ammianus Marcellinus, Roman History, (17.7.13) c. 385AD

"Earthquakes take place in four ways: Either they are brasmatidae, which raise up the ground in a terrible manner, and throw vast masses to the surface... Or they are climatiae, which, with a slanting and oblique blow, level cities, buildings, and mountains. Or chasmatiae, which suddenly, by a violent motion, open huge chasms and so swallow up portions of the Earth, <u>as</u> in the Atlantic ocean, or the coast of Europe when the large island was swallowed up." [For some 'bazaar' reason, this small section has been omitted from the Penguin version.]

Penguin version

Pliny the younger, Natural History (6.31) 77AD:

"There is another island near the Atlas Mountains, known as Atlantis. Five days' sail beyond it are deserts, as far as the Ethiopian Hesperiae and the promontory, which we have mentioned as being called Hesperu Ceras, a point where the shoreline turns towards the west and the Atlantic Sea. Facing this promontory are also said to be islands called the Gorgades, the former abodes of the Gorgons..."

My re-translated version

Pliny the younger, Natural History (6.31) 77AD:

"There is another group of islands called Atlantic near the Atlas Mountains [a land today called Morocco. Here] the shoreline turns towards the west and the Atlantic Ocean at the promontory, called the Hesperu Ceras [Western horn, the original Horn of Africa]. For five days sail beyond it, the Ethiopian Hesperiae [African west] is desert. Opposite this promontory are said to be islands called the Gorgades, the former abodes of the Gorgons..." [Atlas' brother was Gadeiros. this is either Agadir Morocco, or Gades, today Cadiz in Spain.]

The town of Traducta

In Roman times, there used to be a place near Gibralter and the Mer Cadiz sphinx called Tra•ducta = between•duct

See also

) Bacon's New Atlantis.

3) More's Kingdom of Nowhere.

4) The floods/deluges of Deucalion and Khasisatra.

5) Aelian's Varia Historia 3.18.

6) The Mexican Coxcox, Teocipactli, and Tezpi.

TSU·NAMI = SU·NAMI = YOUR NAMES (on the proscription list)

Plato Kritias (113c) c.360 BC:

"He also begat and reared five pairs of twin sons, dividing the island of Atlantis into ten portions... The eldest was the king named Atlas, and from him the whole island and the ocean got the name of Atlantic...

Now Atlas had a large and honorable family and his eldest branch always retained the kingdom, which the eldest branch retaining the kingdom for many generations. They were richer than any king ever before and probably any one hence. They had everything there was from both in the city and country. Due to the greatness of their empire many things were brought to them from foreign countries, and besides, the island itself had most of what they needed to live. In the first place they dug out of the ground whatever was to be found there, mineral as well as metal. This includes something which is now only a name and was then something more than a mere name. Namely orichalc [ouri-ak-al-ak, supposedly tin, but probably iron]. This was dug out of the Earth in many parts of the island, and except for gold was then the most precious of metals. "

Apollodoros, The Library (3.60)

"The kingdom was divided among the sons of Ouranos [Greek personification of the heavens, overthrown by Cronos, who was dethroned by Zeus], the most renowned of whom were Atlas and Cronos [the old ones of the Mideast]. Of these sons, Atlas received as his part of the regions on the coast of the [Atlantic or outer] ocean, and he not only gave the name of Atlantioi to his

peoples, but likewise called the greatest mountain in the land Atlas. They also said that he perfected the science of astronomy and was the first to publish to mankind the doctrine of the sphere [of earth being a sphere]; and it was for this reason that the idea was held that the entire heavens were supported upon the shoulders of Atlas." [Prior to the 1200s BC, the Atlanteans gave birth to the idea, and held-up the idea that the earth was a sphere. They made this idea legend because it severely undermined the power of the Arabs that were constantly attacking them. After the Atlantic tsunami, the Arabs came and did what they could to wipe out the Atlantic civilization that was sailing around them. In the Eastern part of the Mediterranean these attacks were known as the Sea People Attacks that precipitated the Bronze Age Collapse, the collapse of Mycenaean civilization the Greek Dark Ages. The Arabs could not however eliminate the legends. These could only be muddled into something else. And so it was that the legend of the Atlanteans giving birth to the idea of a spherical world became the silly, stupid legend of Atlas bearing or holding up the world. No more memory of A•tel•antes.]

Hesiod c.700BC, Theogony 807

There are the sources and ends of earth's dark underworld and the unfruitful sea and the starry heavens, that even the gods shudder at. And there are the shining [Sh•inning = not going in] gates, and an immoveable threshold of bronze having endless deep roots, something grown of itself. And beyond, far away from all the gods, the Titans live, beyond gloomy Chaos, on the opposite side of the dark Chasm [of understanding]. But <u>the</u> glorious/ famous allies of thundering Zeus have their home at the Ocean's foundations — even Kottos/Cottos and Gyges/Gyes, but Bri•A•reos being so goodly/ worthy, the deep-roaring Earth-Shaker [Poseidon] made him his son-in-law, giving him his daughter CYMO•POLEA in marriage. [Gr.

CYMO/KUMO/KUMA=wave + POL=city. Here it is worth mentioning the Nereids or MAR•IDS=ocean•thoughts. There is CYM•OTHOE (Gr. ortho= regular) and CYMO•DOCE=waves•docile who stills with ease the waves in the misty sea and gusts of strong blowing winds. There is also CYMA•TOLEGE (waves•that-take-a-toll?). There is also fair legged Amphitrite (Poseidon's wife and Triton's mother)]

NERE-IDS = narrow-ids

When Chronos ate his children

After the tsunami struck, it may have taken as much as a generation or two to wipe out all the Atlanteans. But once this happened, Chronos had no need of his children, so he killed them too. One survived, however, by hiding out in the Arabian citadel. This called itself Zeus or su's or your'uns

Hesper·ides

The Hesper•ides were the daughters or offspring of Atlantis. Their mother was Hesperis, a personification of the 'region of the West.' Their home was an island in the ocean off the north or west coast of Africa.

Euripides, Heracles, c. 420 BC, 391-401

"Then he [Hercules] travelled to the distant West To the garden of the Singing Maidens, To gather golden fruit from the leafy apple-tree [To gather golden apples of the Hesperides] Killing the dragon [Atlantic civilization] wrapped around it Guarding it from all comers. He probed the inlets of the high seas And made them safe for all men's ships. [Killing all the surviving Atlanteans] He came to the house of Atlas, And under the central vault of heaven, He stretched his arms out And with his own strength Bore the starlit palaces of the gods"

Plutarch, Sertorius, 7:

[Sertorius] "escaped with difficulty... he went through the straits/ sphinx of Gades, and sailing outward, keeping the Spanish shore on his right side, he landed a little above the mouth of the river Baetis [the Guadalquivir river, near Sevilla], where it falls into the Atlantic ocean, and gives the name to that part of Spain. Here he met with seamen recently arrived from the Atlantic/ Atlantis Islands...." [I have not seen Diodorus Siculus 131.M nor More's Kingdom of Nowhere, nor the myth of Atlantis from the Yorubas of Nigeria and Benin]

Polybius 3.57

"Some readers may possibly wonder why, after enlarging upon the geography of Northwest Africa and Spain, I have not specially dilated [expanded] upon the Straights of Gibraltar, the Atlantic Ocean and its peculiar phenomena, the British Isles and the tin industry, or the silver mines in Spain itself—subjects which previous historians have devoted many pages of controversy.

My reason for leaving aside this branch of history has not been any idea that it is irrelevant, but an unwillingness, in the first place, to be perpetually interrupting the narrative and diverting attention of the serious reader from my transcendental subject matter.... [35 lines of similar filler follow]

In the past, it would have been impossible to point to any more than a few Greeks who have attempted to investigate the frontiers of the world-the [main] deterrent being how impractical the undertaking is. At that time, the dangers of sea travel were almost literally innumerable, though they were only a fraction of the dangers of travel by land. Moreover, even if a traveler succeeded, by choice or necessity, in reaching the ends of the earth, he was still apt to be frustrated in the accomplishment of his objective. Any extensive firsthand observation was rendered difficult by the fact that some regions had become un-civilized and others were uninhabited, while the differentiation of human speech made it still more difficult to obtain information by inquiry about what was observed. Even, however, when the information was obtained, the most difficult achievement of all form the observer's point of view was to exercise sufficient self-restraint to resist the temptations of sensationalism and marvel-mongering, to give his own first allegiance to the truth and to report to us the whole truth and nothing but the truth. Consequently, accurate history about these subjects was not so much difficult as practically impossible in the past. Thus we shouldn't blame the writers of the time for their errors and omissions. Instead we should admire them for what facts they did discover-and for how they advanced knowledge of the subject under difficult circumstances.

Recently, the empire of Alexander in Asia and the supremacy of Rome elsewhere have opened up almost the entire world to sea and land travel. [unfortunately,] men of action have found their ambitions diverted to military and political careers. [And that is why there are still no geography scrolls about what lies past Gibraltar.]

My principal objective in exposing myself to the <u>dangers</u> which I encountered in my travels to Africa, Spain, Gaul and the Ocean which washes the further shores of these countries, has been to correct the ignorance of our predecessors in this branch of knowledge and to make this part of the world as familiar to the

Hellenic pubic as the rest." [And here is that Brotherly geography scroll.]

Dionysius of Halicarnassus, The Ancient History of Rome 1.6

"After him, Timaeus of Sicily dealt with the ancient period in his general history [of the world].... Readers already familiar with Hiero•nymus [Sacred•name] Timaeus [time•A=father time], or Polybius [many•bias], or any of the other writers..."

Polybius 7.25

"It is proverbial that one drop from the largest jar is enough to identify its contents. This is applicable to the subject at hand. When once one or two mis-statements have been detected in a historical work, and these mis-statements have been made deliberately, it is evident that no further reliance or confidence can lie in any of the claims of such a writer. In the hope of convincing even the dedicated supporters of Timaeus, I would like to say something about his practice of writing summaries of oral histories of events passed down [1) Timaeus was a Timocracy, just like Socrates was an Isocracy. 2) The original published version of the underlined text was: 'his policy and practices regarding speeches and pleadings and diplomatic notes verbales and, in short, the whole genre of oratory, which may almost be regarded as summaries of events and as the unifying element of historical writing'. 3) Plato's Timaeus includes an oral history of a great tsunami that wiped out a then ancient civilization on the Atlantic Ocean.] The fact that Timaeus has falsified, intentionally falsified, the oratory [oral history] in his works, can hardly escape his readers. Instead of reproducing the words spoken in their actual form [garbled like the words you read right now], he determined what should have been said and then proceeds to detail what he purports to be the oral history. [The original published version of the underlined text was: 'speeches and the other corollaries of the given series of events'.] Instead of reporting the words actually spoken, he acts like a student given a topic as an exercise and is trying to make it an occasion to show-off his abilities.

[Next the very people who destroyed the written records of the great Atlantis/ Atlantic tsunami are blasting Timaeus for writing down oral legends in order to preserve them. This so that they can obliterate all memory of the great tsunami. So that it may happen again and destroy the best of the host civilization and bring about another great age for the parasite.]

The first function of History is to find the exact words actually spoken, whatever they may be. The second function is to find the reason why those words or the action taken was crowned with [declared] a success or a failure. The bare statement of facts themselves is merely entertainment without being the least bit instructive. Whereas the additional explanation of the cause makes the study of History a fruitful activity. Similar situations offer analogies that help us forecast the future. Thus historical parallels sometimes act as a warning and other times they encourage us to strike out boldly into the oncoming tide of events. However, a historian that suppresses both the words actually spoken and their cause - offering fictitious and long-winded explanations - this historian destroys the [most critical] characteristic of History. And this is precisely the offense of which Timaeus is guilty of. In fact, its common knowledge that every scroll of his work is full of such counterfeit material."

Horace (d. 8BC), Altera iam teritur

"cast off your womanly fear and sail off from the Etruscan coasts. The encircling [Atlantic] ocean awaits. Let us seek the rich islands and farms, the blessed farms, where every year the earth, untilled yields corn; and unpruned vines bloom eternally. ... The pine-built Argo's oarsmen did not venture here, and no lewd queen of Colchis ever set foot here. No Sidonian [Lebanese] sailors turned their vessels' <u>beaks</u> this way, nor Ulysses' toiling companions. No infection harms cattle, nor planet's sweltering fury blasts the sheep. Jupiter set these shores apart for a God-fearing race."

Horace, (d. 8BC) Dive quem proles

"the warrior son of Sea-goddess Thetis; who shook the Dardanian towers with his appalling lance"

[Are the Dardanian towers the same thing as the Pillars of Hercules except they are at another sphinx, the one at the Dardanelles, Ilium and Troy?]

ANTAEUS was the son of Poseidon the earth shaker and Earth. He compelled all comers to wrestle with him, overcoming and killing them all until he was defeated by Hercules.

Exodus 13:21

"And the Lord went before them by day in a pillar [gateway, portico] of clouds, to lead them the way, and by night in a pillar of fire, to give them light.

[The Pillars of Hercules now look like the 'Her•cul Gate' or the 'Mer•kal Gate' = Sea•green Gate, or coasts•fresh Gate. And on the other side of this sea was A•mer•rica = no•coasts•richer.]

Before Christmas there was Saturnalia

The pillars of Hercules were also called the pillars of Chronos, father time. The Romans called the Atlantic Ocean, the "Mare Chronium", or the Sea of Chronos. And Chronos is also identified with Saturn who also ruled over a great Saturnian continent in the Western Ocean. In myth, Chronos/Saturn came to Italy and taught the Italians many things and was remembered by the Roman festival of Saturn in December, a festival called Saturnalia, a predecessor of Christmas.

Now the Ancient Roman celebration of Saturnalia tells us much about the freedom of the Atlantic—Saturnian— Chronian civilization, freedom that is quite reminiscent of American freedom. You see, the Ancient Roman Saturnalia seems to have recalled the colonization by the Atlanteans. Here master and slave met as equals. The distinctions of poverty and wealth were forgotten. No punishments for crime were inflicted. Servants and slaves went about dressed in the clothes of their masters. And the children, or the child culture received gifts from their relatives, a recollection of the Golden Age.

Saturn also appears to be a counterpart of Jupiter or Jew•pater. And Plato supposedly tells of the rule of the Atlantean survivors in Italy. Perhaps when Chronos eats his children, that is the great Antarctic tsunami eating the A•tel•antes civilization's colonies

The 1755 Lisbon tsunami

It is worth noting that most of the 60,000 deaths in the 1755 Lisbon "earthquake" came from a tsunami that had a 60 foot vertical run-up, right through central Lisbon. For the incredulous, the area that was washed away is still visible in the architecture of Lisbon today. Apparently Lisbon's 'Golden Gate' increased the height of the wave.

Another remarkable thing about the Lisbon disaster is that it was and still is known to the people of Portugal as a tsunami. It is just that the outside world thinks of the Lisbon disaster as an earthquake. Mostly, I suppose this is due to Voltaire's Candide play, the reality bending Forest Gump propaganda of its day. It is also worth noting that we used to call tsunami as "tidal waves", a term that completely masks their dangers.

LISBON = lys·bon = wash·good

LUSITANIA = the old Roman name for Portugal. It comes from Lys•it•ania = dissolve•it•again

Propaganda

Hammond World Atlas 2003 ISBN 0-7607-5361-X "Earthquakes — Danger from the Depths

When the ground begins to shake beneath our feet Well into the Middle Ages, earthquakes were regarded as the work of mythical, supernatural beings or signs of the wrath of God. The guake that destroyed Lisbon in cataclysmic waves of fire and flooding on November 1, 1775 caused many people to wonder about the prevailing philosophical systems. Could anyone still look upon our world as the "best of all possible worlds", as a planet governed by reliable natural laws? And why had Lisbon, of all places, a city of churches and monasteries devoted to piety, been singled out by God for such terrible punishment? That earthquake marked the beginning of the science of seismology. The Portuguese minister Pombal had reports compiled by observers all over the country. The British engineer John Michell computed the speed of the shock waves. Questions were raised about the origin and the cause of the [earth]quake." [Here the Lisbon seismic event is characterized 9 times as an earthquake and not a tsunami. Some lies tell the truth more accurately than any confession. Clearly someone is trying to minimize the danger of tsunami. Who could that be?]

Some recent tsunamis run-up heights

1896	Sanriku Japan	100-ft.
1877	lquique, chile	80 ft.
1755	Lisbon	60 ft.
1737	Kamchatka	210 ft.
1724	Lima, Peru	80 ft.

High up on the cliffs of the Algarve

Do you want to see how dangerous your Atlantic city is? Just go to the dry cliffs of Portugal's Algarve and look for un-fossilized clam shell fragments. You will find them in some places over 10stories up. You can do this anywhere it doesn't rain too much. Too much rain will tend to dissolve the shells.

The last strategic part of the Spanish re-conquista

The Spanish took back most of Spain in the years 1235-1265. In fact by 1265, they had taken back all of Spain except Granada and the 6% of Spain closest to Gibraltar. Then it took the Spanish another 227 years (until 1492) to take back that last 6%. The end was such slow going because 'Gibraltar' was a life or death matter for the Arabs, and the Spanish were battling Mecca's entire Islamic empire here. The Arabs had to control both sides of the Mar•Cadiz Sphinx in order to stop infidel ships from entering and leaving the Mediterranean. If they didn't do that, both their Eurasian and Mediterranean trade monopolies would collapse.

Funny coincidence it is that three huge events happened in Spain in the same year,1492. 1) The Italian Christopher Columbus sailed from the Spanish sea port of Cadiz on the Atlantic ocean. 2) The Arabs in Spain surrendered. and 3) Europe was flooded with dark hairy Sephardic "Jews" from Spain.

<u>Giant coincidences like this are the stuff of causality.</u> And one of these things probably caused the other two. The best explanation is that Columbus told the Spanish how to get rid of the Arabs. It was simply to help the rest of Europe to get around the Mer•Cadiz sphinx. Once people from the rest of Europe started sailing from Cadiz, there was no point in the Arabs supporting their forces in Spain. So the Arabs in Spain gave up and either pretended to be Jews or went converso. After all they weren't about to go back to the land of no resources, nobody does that, except the ones chosen to go back for breeding purposes.

And Incidentally, in 1118AD, the re-conquista started in Zaragoza or Sarah•ghassa on the ex•bar•oo or Hebrew river, in case the Spanish are deluded about where they come from. See, it was the old Mideast leavers kicking the new ones out because the new ones were still so loyal to the people back home and because of this, their behavior was constantly offense or eff•hence, making the host cry out in complain about the new tentacles of the hydra.

Gr. LIX = liquify, lick, dissolve, or flood

Lixus sounds like a town that washed away. History records that the town of Lixus was first settled in 1180 BC but later disappeared. This might be when this place was first re-settled. Regardless, the 'bazaarly' named ancient town of Lixus was north of the Rabat Morocco, on the ATLANTIC Ocean, near the ATLAS MOUNTAINS, or ATLANTEAN MOUNTAINS as they used to be called.

Perhaps if we know the strata, we can chart debris density to find the Manhattan, the capitol of the world until around 1200 BC. Also, It is probably not quicksand, but lix•sand.

Outlandish theories

Old English UTLAND = OUTLAND

Old English **UTLENDISC** = OUTLAND and OUTLANDISH, words that once meant foreign before they applied to crazy theories.

For centuries the Mideast has been carful to steer OUTLANDER settlements into places that will suffer the fate or the original OUTLAND, a place now known as OUTLANDTIS or now ATLANTIS.

Those who cannot learn from history are doomed to repeat it

The parasite has been around for around 6,000 years. And during that time, it has seen countless river civilization towns come along and cut into its fat monopoly profits. If it made the hills a little dangerous through some shocks (terrorism), very often the next tsunami would wipe out the town and solve the problem for the Mideast.

Here we must ponder the role the parasite had in making Amsterdam, New Amsterdam, London, Hamburg, Beijing, Shanghai, Bombay, Bangkok, Dubai, Singapore, Seoul, Tel Aviv, Venice, and countless other low-lying tsunami vulnerable cities around the world so important and populous. Because, odds are that eventually, all these places will be swept away by a tsunami and their nations decapitated.

Then the parasite's ravens and buzzards, will feast while your doves have nowhere to go. What is this thought doing in your god's creation myth, its genesis myth?

<Manhattan tsunami funnel on map>

Here is the coast of New York. Behold how it is a tsunami funnel. That is why the place was called New Amsterdam. Funny how hard it is to find a map that does not have Manhattan at one side or the other. Funny how few maps there are showing the Manhattan tsunami funnel on one page.

You of the low countries

Everyone from London to Copenhagen. Please wake up. You are some of the finest people in the world. When the wave comes, the Arabs will have a much easier time dominating the rest. Please move.

New Amsterdam was said as a warning

The people who gave Manhattan this label (lab•al) did it as a warning and not as a compliment. The Arabs have always gone easy on jaws of death cities. They can't stop our progress, but they can channel it into the jaws of death.

In the years between 1588 and 1776, may people didn't want to go to Amsterdam because it was below sea level and they didn't think it was safe. They instead set out for America. And of course, the Arabs directed all the ships to land at Manhattan [Mn•a•ton = think•up•lots], but many people just called the place New Amsterdam because it was in a funnel, and they could easily see how all the soil had been washed off.

A·TEL·ANTES = cut off before

Funny how none of the above are common knowledge? Funny how no crackpot in the media, not one, has ever suggested that all the many flood legends were about great tsunamis, or that so many of our cities risk being wiped out today.

Isn't the beneficiary obviously the parasite civilization? And isn't Western Civilization the obvious sacrificial victim? Can you not see the tree of knowledge being pruned for the benefit of the Arabs?

Aeschylus - The Eumenides (408-413)

"Athena: From another world I heard a call for help. I was on the Scamander's banks, just claiming Troy. The Achaean warlords chose the hero's share of what they had won — They decreed that land, root and branch all mine, for all time to be, for Theseus' sons a rare, matchless gift." [The Scamander/ Scamandrus is the only river that flows into the Dardanelles, the narrow straight or sphincter connecting the Black Sea and Danube with the Mediterranean. Until the Romans ran an aqueduct to Constantinople, this river was the most practical place to have a fortress to guard Euryal, the so-called wide trade sphincter of the Mediterranean, or Middle Sea. This is opposite Gallipoli and near the Hellen's•pontus, the bridge to Hellas/Greece.

This was the choke point for trade between the Mediterranean, and the Black Sea Danube and Russian civilization. Given this 2500 year old remark, it seems highly unlikely that Troy was anywhere else but at ILLI•ON, (or thereabouts) at the mouth of the Scamander river. Also, it should be pretty clear that the Greeks and Middle Easterners were fighting over trade parasitism in the ILLI•AD = the advance or attack of the ILLI.

Now let's apply this same modus operandi to the Mer•Cadiz sphinx, now called the Straights of Gibraltar. They are not going to put their citadel in Spain where the large and well provisioned European populations can be easily attack the traders who were exploiting them. So the cit•adel city was probably the African side. It was also safer on the Atlantic side, or left of the Moroccan horn as opposed to the Mediterranean or conservative right side of the horn. And Madeira and the Canary Islands are too far away for they are over 1,000 km away. So the big city was probably on the Atlantic coast of Morocco. And just like with the other sphinx, this community will need water, so we need to find the closest water source on the Moroccan coastline. This would appear to be on the O. Lou•kkos river and the ancient town renamed as Lixus which means something like dissolved. After all, in English LIXIV- means to separate into soluble and insoluble constituents by mixing with a liquid. In fact, here the root of LIQUID is obvious, and it comes from the destruction of the great A•tel•antes, or in•complete•before civilization on an ocean now called ATLANTIC or ATLANTIS

This town became wealthy as the trading center as it could easily control trade between the Mediterranean and Atlantic. But they were always trading against the Mideast's monopolies. And after some time, they probably made more by betraying the Mideast's agenda of less and worse and pursuing the agenda of more and better. After that, it didn't take long before there was complete disregard for the old Mideast agenda.

Anyway, had that tsunami not occurred, humanity might have industrialized 2,500 years earlier. Unfortunately it happened and Mideast blackbirds or vultures took the opportunity to killed all the survivors living in communities. This lead to the so-called Bronze age collapse around 1100 BC and the Greek dark ages which squandered perhaps 500 years in mankind's development

Anyway, back to the lesson of the Scamander. Look for the water sources that have large sandbar islands or sandbar peninsulas. The O. Lou•kkos river looks like a good place to start.

Ammianus Marcellinus, 354-378AD, 15.4

[The Arabs don't want people using the rivers for trade.] "The Ister [Rhine], which rises with a prodigious head of water in the recesses of lofty mountains, makes its way without being joined by any tributaries over high cliffs, like the Nile pouring headlong down its cataracts. Its waters are so abundant that it would be navigable from its very source, were it not that it resembles a torrent rather than a stream. When it reaches level ground, it runs between high banks until it enters the vast round lake of Constance which the neighboring Raetians call Brigantia. This is nearly 60-miles long and about the same width. Access to it is barred by thick, rough forests, except where the disciplined valor of the old Romans has made a broad path despite the many obstacles posed by barbarian, terrain, and climate."

Plato, Phaedo 109b

"We live around the sea like frogs or bugs around a pond, and there are many other peoples inhabiting similar regions. There are many low-lying places all around the earth, places of every shape and size, into which the water and mist and air collects."

Francis Bacon, New Atlantis

"Divine Revenge overtook not long after those proud enterprises. For within less than the space of 100 years, the great Atlantis was utterly lost and destroyed. Not by a great earthquake, as your man says (for the whole tract is little subject to

earthquakes), but by <u>a particular deluge or inundation... that</u> ...was not deep. Not past forty foot, in most places from the ground, [it was higher in tsunami funnels] so that although it destroyed man and beast generally, yet some few wild inhabitants of the woods escaped. Birds were saved by flying to the high trees and woods. For as for men, although they had buildings in many places higher than the depth of the water, yet that inundation, though it were shallow, had a long continuance, whereby they of the vale [valley, inland valley] that were not drowned perished for want of food and other things necessary [as well as "black bird" attack]

So as marvel you not at the thin population of America, nor at the rudeness and ignorance of the people. For you must account your inhabitants of America as a young people. Younger a thousand years, at the least, than the rest of the world. For that there was so much time between the universal flood and their particular inundation. For the poor remnant of human seed which remained in the mountains peopled the country again slowly, by little and little; and being simple and savage people (not like Noah and his sons, which was the chief family of the earth), they were not able to leave letters, arts, and civility to their posterity, and having likewise in their mountainous habitations... So you see, by this main accident of time, we lost our traffic with the Americans, with whom of all others, in regard they lay nearest to us, we had most commerce."

I hesitate to include anything from L. Sprague de Camp's book Lost Continents or I. Donnelley's Atlantis and the Antediluvian world because they both look like such a bunch of garbage on first glance. However, both seem to be Brotherly books disguised as garbage.

Lost Continents by L. Sprague de Camp ch.4

[it] "is rather like wrestling with the giant jellyfish Cyanea: the substance is too soft and slippery to grasp, and there is not even a brain to stun." ... As for 'collective amnesia', that is like saying you're being followed by a little green man whom you can't see because he vanishes every time you turn your head to look for him."

L. Sprague de Camp, Lost Continents, ch.4

"If you tried to reconstruct the history of armor from the exhibits in the Metropolitan Museum of Art in New York alone, you might conclude that iron armor came into use suddenly in the 1300s in a highly developed state. But as we know from art and history, iron armor was made many centuries before 1300; the earlier pieces, however, have almost all rusted away to nothing or were turned into the smiths for scrap. "

L. Sprague de Camp, Lost Continents, ch.4

"Evidently the Mayas are physically one more Amerind tribe, belonging to the Mongoloid or Yellow Race, though like many Amerinds they run to darker skins and <u>bigger noses</u> than such old world Mongoloids as the Chinese. ... Nor is there any reason to trace their <u>prominent convex noses back to the</u> <u>Armenoid racial type of the Near East, as Hooten and Gladwin</u> have tried to do, for equally aquiline noses are common among many Amerinds like the Blackfeet, and Armenoid ancestry would probably have brought with it other Armenoid characteristics like the vastly curly beards you see on Babylonian statues."

L. Sprague de Camp, Lost Continents, ch.4

"The Amerinds of North and Central America have a widespread myth of culture-heros who cam from across the sea, often called "white"... Among the Yucatecan Mayas the white strangers are the Chanes, who landed from scaly [assembled, not dug out] boats at Vera Cruz, taught the people the civilized arts, and founded Chichen Itza" [in around 920 AD.]

According to legend

The Titan Atlas had seven daughters by the Oceanid Pleione (a daughter of Oceanos). These were called the Atlantides or daughters of Atlantis/Atlas, or the 'Seven Sisters'. They were named: Alkyone, Merope, Kelaino, Elektra, Sterope, Taygete and Maia. These seven sisters, daughters of Atlantis were located outside the Straights of Gibralter to the west of the Mediterranean.

In later centuries there were legends of 'counter island(s)' called Antilia(s), which is where the Antilles islands got their name. The Antilles include Cuba, Jamaica, Hispaniola, Puerto Rico, Bonaire, Curacao, St Eustatius, St. Martin and the curiously named island of Saba.

Lost Continents by L. Sprague de Camp ch.4

"Felix Berlioux in 1874 claimed to have located that capital of Atlantis on the west coast of Morocco between Casablanca and Agadir, where the Atlas mountain chain slopes down to the sea. Here, said Ber•lious, and not on any island lay Plato's city of Atlantis, otherwise Kerne, the capital of the Atlantioi in the account of Diodoros the Sicilian. Once the Atlanteans had ruled a great North African empire, but were defeated in the 1200s B.C. by a combined Egyptian-Phoenician army" [after a tsunami perhaps]

I. Donnelley, Atlantis and the Antediluvian world, 1882, P. 299

"The Kyklopes [one-eyed cyclops] also were three in number — Brontes with his thunder, Steropos with his lighting, and Arges with his stream of light. They were represented as having only one eye, which was placed at the juncture between the nose and brow. It was, however, a large, flashing eye, as became beings who were personification of the storm cloud with its flashes of destructive lightening and peals of thunder.

We shall show hereafter that the invention of gunpowder dates back to the days of the Phoenicians, and may have been derived by them from Atlantis. It is not impossible that in this picture of the Kyklopes we see a tradition of seagoing ships, with a light burning at the prow, and armed with some explosive preparation, which, with a roar like thunder and a flash like lightning, destroyed those against whom it was employed.? It at least requires less strain upon our credulity to suppose these monsters ... than to believe that human beings ever existed with a hundred arms, and with one eye in the middle of the forehead, and giving out thunder and lightning.

The natives of the West India Islands regarded the ships of Columbus as living creatures, and that their sails were wings." [Thus the explain-away myth of the fire-breathing dragon.]

Plutarch, Life of Cimon 16

"An earthquake of unprecedented severity shook Sparta [in 464BC], breaking off mountain peaks and destroying all but five houses in Sparta. King Archi•damus [old•lady] understood the danger that was yet to come. He saw the citizens trying to salvage their valuables and had the trumpet give the signal for an enemy attack, to make them all rally to him immediately with their weapons. That and that alone saved Sparta in this crisis, for the hel•ots [farm-slaves called 'sun•ears'] came rushing from all over the countryside to put an end to the Spartan survivors."

Pliny the younger, Natural History (6.36) 77AD:

"The Romans call it Tartessos; the Carthaginians [A]Gadir [on the Atlantic coast of Morocco], that word in the Punic language meaning a boundary. It was called Erythia because the Tyrians, the original ancestors of the Carthaginians, were said to have come from the Erythaean, or Blood Red Sea." [Here we concieve of Carthage as this north-African and Middle Eastern empire — and pretty much the same no-resources territory as the Islamic world today. Carthage in Tunisia was the capital, or the decoy capital during the Punic Wars. But before that, the empire had two capitals, one in Morocco at the Mer•cadiz sphinx, and one somewhere by or through greater Arabia]

Gibraltar

Arabia pretty much always controlled the trade flows between Europe, Asia and Africa. But at some point, they spread out to settle the other sphinxes, at the Hellen's-Pontus (Greek bridge) and at Gibraltar (Gid'r•alter). Gibraltar was much farther away and no doubt, the more problematic and rebellious of the two. On top of this, Gibraltar was a natural fortress that could be resupplied either by land or sea. If it only weren't for that funneled tsunami.

Now clearly, Gibraltar on high ground was itself not vulnerable to tsunami. The only thing was that once the tsunami struck, the navy was lost. So no longer could the place be resupplied by sea. And given that trade was the main industry, most of the people were wiped out economically.

The smartest fled immediately for they knew that the Arabs had a golden opportunity to massacre its Gr.arch=ruling or #1 enemy. Arabia would soon be attacking and laying siege and eventually mass•ak•our•ing everyone in Gibraltar. In fact the Arab Harbs started working frantically immediately to gather boats and the best fighting men from all over the Mediterranean. All they had to do was hint at the great opportunity this was for war spoils from the then wealthiest city in the world. Anyway, soon they came in great numbers to "help" but secretly attack and utterly Mass•ak•our everyone in Gid'r•alter.

Pay heed ti-coastal America, the parasite hates you just as much as the Gidr•alter. After the tsunami is when you have to worry most about the nuclear war and multi-plague.

Manhattan, bought for \$17 worth of glass beads

Recall the legend about how the entire Manhattan island was purchased with a box of trading beads. I see a number of interpretations that make sense

1) The Indians refused to live there and didn't care that the foreigners chose to live there. This fits with what happened with Beijing/Tianjing, Bangladesh, Djibouti, and Pompey/Herculaneum. So the story about the place being purchased for a few beads hides the fact that the Indigenous people did not want to live there.

2) The greek sounding Huds•on=water•big river is/was the gateway to the Great Lakes. Ships would go up the river to the Greek sounding Albany (Al•peh•ani) where they would turn left and sail up the Mohawk river passing the towns of Troy, Utica, Ithica, Rome, and Syracuse on the way to Lake Ontario at Os•we•go or Lake Erie (ouri) at Rochester (Rock•east•our). The Mohawk river was where the ferocious Mohicans or Mecca•kins lived. These in•dei'ns or non-believer barbarians were a war-like bunch bent on keeping their sphinx valuable for Mideast Inc. which had to be anywhere there were people. These native Americans lived a primitive culture that was highly enthralled to the Parasite. These people lived in a matrix that had been well hones for centuries. They did what the parasite needed them to do. They attacked trade on the their river, the Mohawk river and harmed their invaders to the maximum extent they could.

Now Schenectady (s•connect•iti) is a weird name for the place that connects the Hudson to the Mohawk river. And Connecti•cut is another weird name for a place that is up the Hudson a ways and on the right.

But again, the mouth of the Greek sounding Huds•on river is the logical location for a trading city called New York (novi•our ak) — except for the tsunamis. So we have to wonder if perhaps novi•our ak was once destroyed by tsunami and attack and the parasite spirit was gloating in legend that it eventually traded a box of worthless glass beads for the whole Atlantic/Atlantis island — and in the process passed the torch to a new bunch of settlers.

The ultimate real estate scam

Repeatedly, since the dawn of history the Mideast has bought up, or just staked out and laid claim to all the dangerous places that nobody wanted to live on. Then it would struggle against anyone who took the high road or chose not to live in one of their jaws of death communities. Here is the main reason why coastal cities thrive.

They get these lands for nothing and then over the decades and centuries, they sell tiny lots in the most dangerous places for huge sums. Here is why so many people live in flood zones.

The Inland empire

Funny how the part of Los Angeles that will survive the tsunami is called the "Inland Empire". It certainly looks like some people think that history will record how a coastal empire will get wiped out but the inland empire will survive.

Lesotho and Swaziland are inland

This is visible on the Apple dictionary map. We should probably interview some of the old timers. about why they are afraid of living near the ocean. We can do the same thing in many traditional cultures.

Also see the myth of Atlantis from the Yorubas of Nigeria and Benin.

Plato, Kritias (108e) c.360 BC

"The war was between our city and the kings of the Atlantic/ Atlantis island. These, as I just said, once held an island larger than Libya and Asia put together, though it was later overwhelmed by earthquakes [tsunamis], and is <u>the source of</u> <u>the impassible barrier of mud that prevents [Mediterranean]</u> <u>ships from sailing through the Straights [of Gibraltar] into the</u> <u>open [Atlantic] ocean [and around the Mideast's spice trade</u> <u>monopoly]."</u>

Aristotle 393.32

"Libya [Africa] extends from the Arabian isthmus [sphinx] to the Pillars of Heracles [Straights of Gibraltar], though some describe it as stretching from the Nile to the Pillars [of Hercules at the straights of Gibraltar]. Egypt, which surrounds the Mouths of the Nile, is given by some to Asia, by others to Libya." [Lybia means a free land, and in ancient times, the name referred to the entire continent of Africa. The name Africa is from Eff•rica= Shout-thatits•rich.]

Ne Plus Ultra = No further

In legend, the words inscribed on the pillars of Hercules

Plutarch, Alexander, 66

[Alexander] "offered up a prayer that no man after him might ever pass beyond the bounds of his expedition." [and thus connect Europe and Asia and go around the land of no resources in between. The Mideast has always been opposed to this of course, that is why they said the world is flat in the 1400's just before Vasco Da Gama sailed around them.]

Aristotle 352.19

"The land of Egyptians, who are supposed to be the grandfathers of the human race, was obviously deposited by the [Nile] river. This is clear to anyone who looks at the country. And it is further proven by the facts about the Red Sea.

One of their [Egyptian] kings tried to make a canal to it [from the Nile to the Red Sea] (for <u>it would have been of no small</u> <u>advantage to them if their whole region became accessible to</u> <u>shipping</u>. [Quite the contrary, but they can't admit it.] _Sesostris is said to have been the first of the ancient kings to try this undertaking. Unfortunately, he found that the sea was higher than the land. Thus Sesostris first, and Darius afterwards, [As well as Napoleon] stopped making the canal, lest the sea should

mix with the river water and spoil it."

[The Arabs always sought to throttle trade going through natural sphinxes. such as the Egyptian Sphinx at Cairo, the Mer Cadiz Sphinx at Jid•our•alter, and the Bros•porous sphinx at That most ancient city East•end•pull or Constantino•polos

Hesiod c. 700BC, Theogony 814

"the glorious allies of loud-thundering Zeus have their dwelling upon Ocean's foundations, even Cottus and Gy•es [Cyme] but Bri•are•os, was good so the deep-roaring Earth-Shaker [Poseidon god of earthquakes, sea and tsunamis] made him his son-in-law, giving him Cymo•polea [City•waves] his daughter to marry [for all eternity]."

SANTORINI = s•anti•ouri•nee = not•before•our•brothers **THERA** = thura = sacrifice. We know there were big shoreline towns in Crete that were devastated by the tsunami. So we imagine that the parasite was probably helping people to live in the jaws of death 3,660 years ago, just like today. These were helped to become sacrifices to Ishtar. Thus the name of the town of Thera actually means sacrifice, animal, or animal sacrifice.

The great flood of 1650BC

1) Leonard Woolley found a great alluvial layer that covers all of the Persian Gulf basin. This layer dates to 1640BC. So we know that a tsunami hit the Persian Gulf.

2) We know of a Mediterranean tsunami normally dating to 1650BC. This is commonly ascribed to the eruption of Santorini. Is there even an ash layer on nearby islands?

3) I collected clam shell fragments from inland areas of Southern California up to 30m above sea level and sent over 60-85 of these in for carbon dating. One came back dating to 1670-BC and another to 1680-BC. It should be noted that these are approximate dates, give or take a few decades, and that seashells will measure-out older than lower density bio-matter found alongside them.

4) Do the shells around the Mer Cadiz date to 1650BC?5) It would appear that around 1650BC there was an Antarctic tsunami. Either the continent rose, or an great ice sheet came loose.

6) The low lying parts of most oceans were slammed by the biggest tsunami in the last 2,500 years. Looking at New York, Beijing, London, Amsterdam, Hamburg, Copenhagen, Quito, San Diego, etc. We imagine that most of the great coastal cities 90% disappeared as soon as they were hit.

7) Only a global Cymological survey will tell us what happened.
8) If the Mediterranean (Medsea) didn't really flood in 1650, and all the outer oceans did, then there was an Antarctic tsunami.
9) If the valley run-ups in the Mediterranean were flatter, then an ice sheet probably slid off and raised worldwide sea levels.
10) The people of the Mediterranean probably had time to run away, but many probably lost everything at once. And many probably signed on with the Arab pirate ships and were helped to prey on, and kill-off the rest. That is what pirates do you know, prey on people an move on to prey on new people.

11) The earliest pottery shards in Rome date to the 1600s. 12) In the 1600s BC, we see the Egyptians talking about how the Nile River Delta attracted many settlers. Most of these 'Hyksos' (pronounced 'hicks') came from Crete and Canaan. By the late 1600s BC, so many settlers had arrived, that the Nile Delta became a cultural extension of Canaan. The Hysos had semitic sounding names like Khyan, (Cain) an Yakubher (Jacob). See the Rind papyrus.

13) By the 1540s Egypt became spectacularly rich again, and under Tut•moses-1 (r. 1504-1492BC) Egypt extended its rule to

the Euphrates river.

15) After the tsunami, nobody wanted to live in Mesopotamia until about 1100AD. But after about 540 years, people forgot about the risk.

16) The ex-hodos of Moses is normally dated to 1320-1300BC. Moses finally figured out a way to lead his semitic people out of Egypt and away from the Egyptians.

Hesiod, Theogony 197

[This is about Cy•therean, supposedly another name for Aphrodite. The holiness of Cythera is the dangerous sort of holiness, like the angels of Los Angles, or the graveyard of La hoya

Aphrodite = a•bro•di•te = no•bro•talk•you, and here we understand perhaps what foam born means.] "First she [Cytherean] went near holy <u>CY•THERA</u>, and from there, she went past <u>seaside</u> CY•PRUS, and came forth [like a giant tsunami wave] an <u>awful</u> and lovely goddess, and grass grew up around her shapely feet. Men and gods call her Aphrodite. They call her the <u>foam-born</u> goddess and richcrowned CY•THEREA, because she grew amid the [wave] foam, and CY•THEREA because she reached CY•THERA , and CY•PRO•GENES because she was born in windy CYPRUS." [Here someone was obviously trying to turn CY•THERA into CY•THEREA, so obviously the real name was CY•THERA.]

This seems to be about the explosive eruption of the volcano on the island of Thera. Today Thera is the biggest town on Santorini. This eruption occurred around 1650BC. It is worth noting that the Island and the city were both called Thera in ancient Greece. So perhaps It is CYME•THERA the wave of Thera, that was blurred into CY•THERA and then eventually CY•THEREA, and finally Aphrodite after some generations. So it seems that there was a CYME•THERA, a WAVE•OF•THERA.

Here are some other points from the same time and place to reify this theory:

Euboea is a long-thin island NE of Athens separated by a long-thin channel (the Eurypos channel) with perhaps a 20:1 funnel facing Santorini. Now at least 99,999 out of 100,000 days this channel made a large, lovely and calm channel for the Athenians to move goods on. However that one tsunami day every so many centuries was the problem. Anyway, there was a town on the north side of Euboea called CYME. There was also a famous king of Euboea named LYCUS. Gr. lys = dissolve
 The narrow channel that separated Euboea from the mainland was called the Eurypos channel (the Eury-pus=wide-mouth) channel. On the Athenian side of the channel was a town named CYNOS. Also of note is the way the main town on Euboea was located right where the Bronze age collapse, and Chalcis after

3) The **CY**•**CLADES** are the islands around Santorini. These were/are in the same wave•clade (Gr. klados=branch, group), so the very name of these islands, Cym•clades = wave•group. 4,5) In Homeric times, the north west coast of CRETE

(**CY**•**RETE**?) was called Ky•donia, or **CY**•**DONIA** in English. 6) **CY**•**THERA** is an island just off Cape Malea near Sparta. It lies SSW of Athens while thera is SE of Athens. Present day Kithira

7) CY•THNOS= a Cycladic island

8) SI-PHONOS = a Cycladic island

9) STY·RA = coastal city in the channel east of Athens and opposite Marathon

10) SCY·ROS = island northeast of Athens

11) SYROS = island southeast of Athens

12) CYNURIA = coastal district east of Sparta facing the

Cy•cladic islands.

13) the **MY·RTOUM sea** = the sea between Athens and Sparta facing the Cy•cladic islands. Cy•tomb sea? Mar•tomb? (Gr. tumbos=tomb)

14) GYTHEIUM = coastal town near Sparta at the back of a tsunami funnel facing the Cy•cladic islands.

15) CY·CLOPS

16) CY•RENE = Greek city in north Africa

17) CI-LICIA = the tsunami funnel coast near Cyprus at the NE corner of Mediterranean. looks like wave-dissolved.

18) SYRIA = Cyria? The area adjacent to Cilicia.

19) SAMOS island, near Turkey

20) SYME island, north of Rhodos

21,22) CNIDUS & CUMALI = at the tip of a long Turkish peninsula near Rhodos. Cnidus is where the Spartan army was eliminated by the eternal secret 3rd party in any war — the party secretly keeping the war alive for profit.

23) CY-ANEAE = a coastal city in SW Turkey, 100km east of Rhodos

24) CY-ZICUS = a city in the Sea of Marmara that looks like a two way tsunami funnel for Turkish Earthquakes.

25) CY-RENE = city in Tunisia

26) CY-PRUS = island. The main town on the west side facing Santorini was called Paphos or Gr. Pathos= suffering

27) SI·DON = Cy·don, like Cydonia

28) Khania (Crete) was Canea, and before than Cydonia29) In the Greek Dark ages, the capital of crete was Cn·ossus. This was before it became kn·osos and later Iraklion.

30) SI-CILY = the big island in the middle of the Mediterranean.

31) CY·ME = Island in southwestern Turkey

32) SYRACUSE = city in eastern Sicily facing the Cy•cladic islands

33) SYBANS = tsunami funnel city in Italy, present day Sibari

34) present day **SQUILLANCE** Italy, is in a tsunami funnel **35) KIMOLOS = cymolos** = an island 90km northwest of Santorini

36) Gr. NESOS = island, and Naxos is the biggest Cycladic Island that is near "the island", or Santorini

37) AKRA SPATHA is a coastal headland in Northwest Crete. It looks like Akro pathos = high suffering.

38) KATA POLA = a town on Amorgos, 50km from Santorini. It looks like Kata polos = sunken city

39) Homer was reputedly born in SMYRNA (Cyme)

There are not many cities that begin with a Cy- outside the Eastern Mediterranean that date from after Greek times. They exist in two groups. Here are some from the indian ocean. They came from a different tsunami: **40) SIMI** = an island near Rhodos

Other coastal cities with CYM names

41) SUMER (Mesopotamia) = cymer, the land of the wave42) CAMBAY, gulf of = cym•bay, inlet north of Bombay

KHAMBAT, gulf of = new name for gulf of Cambay

43) CEYLON = old name of Sri Lanka

44) The GANGES River = Cym•ges

45-50) Smaller coastal places in India include: CONTAI, GANGAM, COONDAPOOR, CANACONA, CANNANORE, CHANGANACHERI.

51) SIAM = Thai for thailand

52) CHUM·PON, Thailand

53) CHON·BURI, Thailand

54) CAMBODIA = cym•hodia = the low lying 'wave-path' in the gulf of Thailand. This was the part than nobody wanted for a long time. The Harem-brats got ahold of it for nothing because nobody wanted to live there. Then a century or two later, one of the Arab figurehead kings moved from Chiang Mai to Bangkok in

the jaws of death.

55) KHMER = cym•mer = wave•ocean

56-62) low-lying places in Cambodia: SIEM REAP, KOMCHAI MEAS, KOH KONG, KAM POT, KAMPONG CHHNANG, KAMPONG CHAM. CHAMBAK.

63) NAM•CAN = water•wave = the town at the southernmost tip of Vietnam. Thai nam=water.

64) CA MAU PENINSULA = at the southernmost tip of Vietnam 65-75) low-lying places in Vietnam: CAM RANH, CAM LAM, CAM PHA, SANYA, GANGBEI, BAC GIANG, LANG CHANH, CAM LO, CAN LOC, CAM XE, GIANG THANH 76) SUMATRA = cyma•tra

77) SINGAPORE = cym•ga•pore = wave•got•port. Singapore gets it bad from a tsunami in either ocean. Look at there are only 6 narrow channels between mainland Asia and Flores island. These were all cut by tsunami erosion. These are all places where the tsunami water builds high and goes tearing through. And the reason why the 'Straights' of Malacca are the widest of these channels probably has to do with tsunami erosion too.

The reason why Singapore is so prosperous and great is the same reason why New York, Shanghai, Tokyo, London, Amsterdam, Hamburg and the San Francisco Bay Area. All these places are in the jaws of death and the Arabs want as many of the best of the land of the host living in these places. See, what they do is leave these places alone. They don't harass the infidels who live in the jaws of death.

78-79) KOMODO Island = cym•hodos = wave way. This is in one of the channels between the curiously named 'Lesser
SUNDA ISLANDS' (smaller Cym•da = wave•give islands)
80) SUMBA island = an island near Flores

81) SUMBAWA = an island between Lombok and Flores

82) CANTON = cym•ton = wave•big, the former name of Guang Zhou

83) GUANG DONG province, cym•dong

84) SHANG HAI = cym•high

85-97) Low-lying places in China: CHANG-CHENG, CHANG-JIANG, GAN-CHENG, YA-CHENG, SANYA (Yaxian), HAI-KANG, ANPU-GANG, GUANG-GHAI, KAOH-SIUNG, CHANG-HUA, SAN-CHUNG, CHENG-KUNG, GAN-YU 98-105) low-lying places in South Korea: KUNSAN, KANGGYON, KIMJE, CHONGUP, CHANGHUNG, KANGNUNG, CHUMUNJIN, KANSONG

106-112) low-lying places in North Korea: SINUIJU, CHONGJU, CHANGYON, KUUM-NI, KIMCHAEK, SUNAM-DONG, CH'ONGJIN

113-119) Low-lying places in Africa: CANARY ISLANDS, GAMBIA, SENEGAL, GUINEA, CONAKRY, GHANA, CAMAROON.

120-126) Low-lying places near Boston Massachusets : CAMBRIDGE, SOMERVILLE, QUINCY, CONCORD, SALEM, KENNEBUNKPORT Maine, SOMERVILLE New Jersey.

The next group are coastal places are in England 127-129) CUMBRIA, CUMBERLAND = the English area south of Solway Firth = S•al•way Forth. The CUMBERLAND GAP, the tsunami flood area that nobody wanted to live in. The no-man's land that separated the English from the Scots.

130) MORECAMBE = a coastal town in West England.131) CANVEY = a town at the mouth of the Thames. Not London.

132) CANTERBURY & KENT = the town/county where the English Channel is narrowest.

133) CORNWALL = cymwall?, an apt name for this peninsula, as it serves as the wall of a tsunami funnel

134) SOMERSET = the county on the south side of the Bristol Channel, a tsunami funnel.

The next group are coastal places are in Wales

135) CYMRU = Welsh for Wales (the Irish sea funnels tsunamis by about 9:1)

136) CYMRAEG = Welsh for the Welsh language

137) KINTYRE = in Scotland, where the Irish sea funnels by 9:1

138) KENNEDY = in Scotland, where the Irish sea funnels by 9:1

139) CAMELOT = a place of Ancient legend

140-154) Other CYM, CYN coastal town names in Wales and Southwest England: **COLWYN** bay, **CAERNARFON** bay, **CEMAES** bay, **CLYNNOG**-FAWR, **CARMARTHEN** bay,

CAERLEON, CAMBEAK, CAMELFORD, CAMBORNE, CAMROSE, cape CORNWALL, COMBE MARTIN,

CONGRESBURY, CINDERFORD, CONNAH'S QUAY

155) The **CAMBRIAN MOUNTAINS** run through Wales. Here we understand that precambrian means much the same thing as anti-delugian.

156) HAMBURG = cym•burg? The most tsunami vulnerable city in Germany is also the most expensive, just like New York and London.

Other cities with tsunami names

157) GUAYA-QUIL = get away from here, or die here. Sp. guadal=sandy bog. In South American Spanish, gua = get away, and guaca = tomb, funeral mound. Guayaquil is a city is at the end of a tsunami funnel.

QUITO = the other main city in Equador. Sp. Quita = "get away". **IQUITOS** = a city in nearby Peru

CUENCA = a major city in Equador near Guaya•quil. Maybe the Incas lived high up for a reason.

Words from Gr. cym = wave

SMEAR = cymer? SMART = cymer•te CAMBER = curved like a wave SINBAD = Cymb•ad = towards the waves SIMMERING means full of waves in Greek Sanskrit SMRITI = remembering The SMRITI = an important and ancient Hindu text SOMNUS = Roman god of sleep APOCALYPSE = epocal•lys?

The S-unda Islands

S•unda = no•wave, and these are the no•wave islands. They are east of Sumatra and north of Java, and the lesser Sunda islands which rum from Bali to Timor. It is curious how the "unda" islands are all Muslim. Apparently the kill everyone through tsunami tactic worked once before.

TSUNAMI = harbor waves

Supposedly Japanese for harb•our waves. Maybe they are sym•nami, or named waves, and maybe a harbor wave is a harb•our wave.

Triton = according to the Apple dictionary, "a <u>minor</u> sea god usually represented as a man with a fish's tail and carrying a trident and shell <u>trumpet</u>", these trumpets perhaps to warn others of a tsunami. It is notable that the triton mollusk has a zoological family of Cyma•ti•idae = wave•you•idea. It is also notable that trite means unimportant.

Life of Homer, pseudo-Herodotus, epigram 4

[Symrna is a funny name. It comes from S•mer•na = no•mar•right?]

"By the will of Zeus who holds the aegis of the people of Phri•con [frat•with], riders on wanton [deliberate and unprovoked cruelty] horses, more active than fire raging in war [what a metaphor for the Brotherhood]. [We] once built the towers [and started a town] of Smyrna [at the end of a tsunami funnel in Turkey], wave-shaken neighbor to the sea, through which glides the sacred river Meles. From there arose the glorious <u>daughters of Zeus</u>. These would have gladly made the city famous. But in their folly, these men scorned <u>the divine voice and fame/notoriety/celebrity of song</u>. [As if songs were the word of god, and the catchiness was some kind of divine resonance?] ... My legs don't want to linger in the sacred streets of <u>Cyme</u> [Gr. cyma, kuma=wave], and my heart urges me to leave for another place."

Hesiod, Theogony 240

Nereus [Mer-eus] and [his wife/consort] rich-haired Doris, daughter of Ocean the perfect river, were born children lovely amongst goddesses [they had 50 daughters], Ploto, Eu•cr•ante, Sao, Amphi-trite, Eudora, Thetis, Galene, Glauce, CYM-OTHOE, [??] Speo, Thoe, lovely Halie, Pasi-thea, Erato, rosy-armed Eunice [eu•nike, good•victory], gracious Meli•te, Eu•limene, Agaue [Agua=water], Doto, Proto, Pherusa, Dy•name•ne, Nisaea, Actaea, Proto-medea, Doris, Panopea, comely Galatea, lovely Hipp•othoe rosy-armed Hipp•onoe, CYMO•DOCE [waves-docile?] who with CYMA-TOLEGE and AMPHI-TRITE easily calm the waves upon the misty sea and the blasts of raging winds, and CYMO, and EIONE, and rich-crowned Ali-mede, and Glauco-nome fond of laughter, and Ponto-porea. Leagore, Eu•agore [good•market], Lao•medea, Poly•noe, Auto-noe, LYSI-AN-ASSA, Eu-arne, lovely of shape without a blemish. Psamathe of charming figure and divine Menippe, Neso, Eupompe, Themisto, Pronoe, and Nemertes, who has the nature of her immortal father. These 50 daughters sprang from blameless Nereus, skilled in excellent crafts.

And Thaumas married Electra the daughter of deepflowing Ocean, and she bore him swift Iris and the long-haired Harpies, Aello (swift-storm) and Ocypetes (Swift-flier) who..."

[DOCH AN DORIS seems to be "douche and Doris". Doris is married to Nerius, the old man of the Sea. They have 50 daughers between them, including CYMO•doce (wave•docile) CYMA•tolege (wave•tel•edge=waver far•edge), and CYM•otho (regular waves), as well as Lysian•assa (disolve-people•asia) and CYMO. Therefore this phrase seems to mean tsunami-bath and Doris.]

Hesiod, Theogony 507

"Now lapetus [I•peh•tus=the•say•yours, father of Pro•men•theus] married the neat-ankled [hairless-legged?] virgin Clymene [Cyme=wave], daughter of Ocean. She bore him brave Atlas, and glorious Menoetius

[Meno•theus=strong/spirited•religion] and scatter-brained Pro•me•theus [Pro•me•theus=for•man•religion], and clever Epi•me•theus full of various schemes, ruses, ploys, and tricks [Epi•me•theus= above•man•religion], who from the from the beginning caused mischief to men who eat grain. ... But menoetius was outrageous, and far-seeing Zeus struck him with a bright thunderbolt and sent him down to Hades because of his mad presumption and excessive price [for shortfall grain/ petroleum/ incense/ hashish].

And Atlas through hard struggle holds up the wide heavens with unwearying head and arms, standing at the ends of the earth before the clarion Hesperides

[Hesper•idies=Venus•ideas]. For this is the lot that wise Zeus assigned to him. And he bound ready-witted Promentheus with adamant chains, and a sh•aft driven through his middle, and set an eagle [the harem Bros] upon him, which eats his immortal liver. But by night the liver grew back completely, as the eagle devours it the whole day.

Ovid, Metamorphosis, 180

"Three times, four times, he shook those awe-inspiring <u>locks</u> [locks ??] and with them moved the earth, seas and stars. ... Now the entire human race must be destroyed, throughout all the lands which Nereus surrounds with his roaring waters."

Ovid, Metamorphosis, 261-310

"[Jupiter decided on] a different punishment, namely to send rain pouring down from every quarter of the sky, and so to destroy mankind beneath the waters.... Neptune himself struck the earth with his trident. It trembled, and by its movements threw open channels for the waters. Across the wide planes the rivers race, overflowing their banks, sweeping away in one torrential flood crops and orchards, cattle and men, houses and temples, sacred images and all. Any building which managed to survive this terrible disaster unshaken and still standing was in the end submerged when some wave yet higher than the rest covered its roof, and its gables lay drowned beneath the waters. Sea and earth could no longer be distinguished. All was sea, and a sea that had no shores.

Some tried to escape by climbing to the hilltops, others, sitting in their curved boats, plied the oars where lately they had been plowing. Some sailed over cornfields, or the submerged roofs of their homes, while some found fish in the upper branches of trees. ... Wandering birds searched for some land to rest, till their wings grew weary and they fell into the sea. The ocean, all restrains removed, overwhelmed the hills, and waves washed the mountain peak, a sight never seen before. The greater part of the human race was swallowed up by the waters. Those who the sea spared died from starvation in a long-term famine."

Popol Vuh, ch. 1.3

[The Popol Vuh is A Guatemalan oral history written down in "the 1700s" by one Father Francisco Ximenez.]

"The Heart of Heaven brought about a great flood which <u>fell on</u> <u>heads of the wooden creatures</u> [was higher than the treetops?]. ... those they had created, did not think about, or pray to their Makers. And for this reason they were killed, they were deluged and flooded. A heavy resin fell from the sky... This was to punish them because they had not thought of their parents, the Heart of Heaven, called Hurican [Hurricane]. And for this reason the face of the earth was darkened and a black rain began to fall, by day and by night... <u>The desperate ones ran as quickly as they</u> <u>could</u>. They wanted to climb on to the tops of their houses. They wanted to climb to the treetops...Such was the ruin of the men who had been created and formed, men made to be destroyed and annihilated. ...

[Here is a tsunami myth that was halfway turned into a storm myth. People run quickly from tsunamis, not storms. People climb into the treetops in tsunamis, not storms.

The footnote says:] "The ideas of a flood in olden times and the belief in another which would be the end of the world... still existed among the Indians of Guatemala in the years following the Spanish conquest, according to the Apologetica Historia (Ch. 235, p.620). Bishop Las Casas says in this work that 'They had, among them, information of the flood and of the end of the world, and called it Butic, which is the word which means flood of many waters and means the final judgement and so they believed that another Butic is about to come, which is another flood and judgement' "

A.R. Burn, Pelican History of Greece. Ch. 1 "Twice, c. 1730 and 1570, the palace at Knosos was shattered by earthquakes. It stands, we now know, on a fault, an earthquake line. ... In Thera, c. 1520, a volcanic eruption buried the town in lava (its people had fled in time); and c. 1480 there was a huge consequent disaster. Probably the volcanic cone collapsed, causing tidal waves greater than those of Krakatoa in AD. 1883. Coastal sites in Crete suffered fearful damage. Many were abandoned. But Knosos, on its rising ground, survived again. It grew and spread with its two-story, flat-roofed houses, to a size comparable to the great cities of Babylonia. With its harbor-town of Amnisos [amnesia], Evans conjectured a population of about 100,000 souls. The basis of so much prosperity and such a population was not only the agriculture of a great island at peace, but a far flung trade."

A.R. Burn, Pelican History of Greece. Ch. 1

"Thera became (we shall see) a bronze-age Herculaneum [Pompey, covered in volcanic ash]

A.R. Burn, Pelican History of Greece. Ch. 1

"The metal trade also stimulated the foundation of a stronghold at a famous site, commanding the Dardanelles: the first fortress of Troy. A neolithic settlement <u>in the plain</u> near the mouth of the Scamander is succeeded in the early copper age by a fortress on the hill of Hisar•lik"

Super-rich ports and cities by the bay

They really are two sides of the same coin. And very often this money is invested in lots of cheap airport parking so the matrix slaves will continue to burn lots of gas driving to the airport, instead of taking the parasite's ride sharing shuttles or taxis.

Sp. **ATENAS** = athens

Sp. ATL·ANTE = atlas (mountains)

Sp. ATL·ANTICO = atlantic

Sp. ATL·ANTIDA = atlantis

Sp. ATOL·ON = atol

Sp. ATOLL·AR = stuck in the mud

Sp. **ATOL**•**OND**•**RADO** = reckless, thoughless (like the people who lived in the tsunami funnel) literally a•tel•onda•rado = not•ongoing•wave•rado

What is an atoll?

It is a sandy island. One barely above sea level. It is a place that will probably not survive the first tsunami. That is what an ATEL is. That is what the ATEL•ANTIQ civilization was. The arabs drove them to live on sand islands off shore with terrorist attacks. Then the shocked survivors came under intense attack by the Arabs. And the light haired doves had nowhere to go, while the black haired vultures prospered.

Aeschylus, Suppliants 220

"Look: here's the trident of the Isthmus god" [Poseidon, the god of the sea, was also called the Isthmus/Sphinx god.]

Sp. **MARISMA** = swamp, mar•isthmus

Fr. **IN·ONDER** = to inundate, flood or swamp Spanish **HUNDIR** = to sink, submerge, engulf, ruin, destroy, cause to collapse, vanish, plunge,

ENGULF = what happens where tsunamis are gulfed or funneled **GULF** = according to the Apple dictionary: "a large difference or division between two people or groups, or between viewpoints, concepts, or situations" [such as between parasite and host.] Sp. **CIENAGA** = the swamp. In Los Angeles, La Cienega Blvd. is the street with all the oil wells, which are in a hilly place. La Cienega parallels the coast and seems to be from

cien•agua=century•water

Los Angeles = The Angels

It is a Spanish translation of an Indian name. It was about all the people that died in the last tsunami.

NICARAGUA = niger•agua = black•water = black liquid = petroleum HONDURAS = ondas•duras = waves•hard PANAMA = pan•ana = everything•reborn GULF OF FONSECA Gulf of Fon•seca = speach•dry

Midgard's serpent is in Scandinavian myth a monstrous serpent that encircles the Earth <u>with its tail in its mouth</u>. It will cause the sea to flood the land with the lashings of its giant tail. Its siblings are Hel or Hell and Fenrir, the phantom wolf who will swallow the sun at Ragnarok, the final battle between the gods and the powers of evil, the Scandinavian equivalent of the German myth of Gotterdammerung, or the downfall or twilight of the gods.

A testament to tsunami forces

Look at the topography of San Diego. Look how tsunamis have eroded coastal canyons into the mesa. Look how the erosion is much more pronounced the erosion is near the coast.

Look at all the erosion done to Mission Valley. The funneled water did that. not the stream. The stream's true erosive power can be seen above 300' in altitude. All the flat bottom part was eroded by tsunami.

Look at the massive erosion in Rose canyon and Del Mar canyon. Funny how the nation's biggest county fair is located in a tsunami flood channel.

Look at the Hudson river valley and the New York tsunami funnel, with Manhattan's skyscrapers arrayed like dominoes in defiance of an humanly irresistible force.

Meet John Doe film, 1941

"You'll be buried in Potter's field and forgotten"

["What is Potter's field in New York? The way it keeps getting mentioned in the media, it seems like it might have pot shards and bones from the last bunch of people wiped out by the last tsunami. This was probably the old port, where the amphora bearing ships were and where the amphora filled warehouses were. It is probably right underneath the colonial era garbage dump. We would expect the amphora factories to be located at a river mouth for clay, and outside the town where wood was more plentiful.

La Jolla = La Hoya = the grave, or graveyard

This is the Spanish translation of the Indian name for the coastal areas of San Diego. It was a problem for the tree of knowledge, just like quicksand, so it was pruned off, dried out.

Today, the only part called La Jolla is a hill, the coastal high point of San Diego, the least likely coastal spot to suffer a tsunami.

Ammianus Marcellinus, 354-378AD, 26.10

[The following comes immediately after a 'generalized account of atrocities committed under Valens' which was omitted from the Penguin version. This may be a metaphorical tsunami, not a real one.]

"on 21 July... a frightful disaster, surpassing anything described either in legend or authentic history, overwhelmed the whole world. It was just after dawn when, after a thunderstorm of exceptional violence. The solid frame of the earth shuddered and trembled, and the sea was moved from its bed and went rolling back. The abyss of the deep was laid open. Various sea

creature could be seen stuck in the slime. Huge mountains and valleys, which one supposes had been hidden since the creation in the depths of the ocean, saw the light of the sun for the first time. Many ships were stranded on what became dry land. Many people ran around in the shallows that were left trying to pick up fish and similar objects. Then however, the roaring sea, as if indignant at its repulse, turned back, and rushed over the seething shoals to burst in a fury upon islands and wide tracts of the mainland. Innumerable buildings in towns or wherever they were standing were leveled to the ground. The whole face of the earth was changed by this mad conflict of the elements, and revealed amazing sights. The sudden return of the vast sea when it was least expected drowned many thousands. When the waters returned, many ships were destroyed by the force of the tsunami, and the dead bodies of their shipwrecked crews were left lying on their backs or faces. Other great vessels, hurled along by the raging currents, landed on the roofs of buildings, as happened at Alexandria. Some were carried nearly two miles inland, like the Spartan [Roman] ship which I saw myself during a journey near Mothone [mouth-one, one-mouth], gaping at the seams from long decay. [Rome was decayed, and perhaps this was a metaphorical and manmade tsunami, not a real one.]

Ammianus Marcellinus, 17.7 contains a section on the nature and types of earthquakes this section is normally omitted from most texts.

After Santorini, in 1640BC

It seems like the Arabs gathered up all the warlike people they could from all around the world (as they always do, as they will do again). Then they got all their pirate boats together, and they delivered these keep-what-you-kill, animal-boat black-bird/blackbeard pirate types to all parts of the Mediterranean, attacking one town after another that was weakened by the volcano and tsunami. They probably said they had come to help at first. Then said they were from some wiped-off-the-map city and they had nowhere to go. Could they stay as suppliants/refugees. Then more came, and more and more until they were in the majority. Then the order was given to despoil the town.

The natural disaster probably only killed a quarter or a half or 7/8ths, the Arabs killed everyone else who would not join or be of value as a slave. They caused many towns to disappear. This is clear from abundant archeological evidence.

But populations recovered quickly thanks to the mass exhodos of the entire Mideast. These settled in a great town called Atlanta or Atlantic, or Atlantis. This was near the Mer Cadiz Sphinx. The ones left behind, the guardians of all the old knowledge about the tsunamis for example, they helped steer the <u>Jews</u> into the <u>Jaws</u> of death, a person to be <u>Chewed</u> up, <u>Jawed</u> to death. They all pulled real hard to put the Manhattan = manna•ton of the era in a tsunami funnel by sending all their business there. Boy humanity is screwed up.

Also, when the pirate fleet had served its use, it was lead into an attack against the Egyptians which were probably still so vastly numerous that they completely massacred them. This was also probably after a multi-plague and with the Egyptians using truly inferior weapons.

Gustavus Meyers, History of the Great American Fortunes, 2.1

"Up to 1825, it was a moot question whether the richest landowners would arise in New York, Philadelphia, Boston or Baltimore. For many years Philadelphia had been far in the lead in extent of commerce. But the opening of the Erie Canal [which made New York the port of the Great Lakes and the Midwest] at once settled this question. At a bound [in a single jump] New York attained the rank of the foremost commercial city in the United States, completely outstripping its competitors. While the trade of these [other cities] fell off precipitately, <u>the population</u> and trade of New York City nearly doubled in a single decade. The value of land began to increase stupendously. The swamps, rocky wastes and [tsunami] flats and the land under water of a few year before became prolific sources of fortunes [for the Arabs]. Land which had been worth a paltry sum ten or twenty years before sprang to a considerable value and, in course of time... [came to have] a value of hundreds of millions of dollars." [Thus the Arabs made great sums selling worthless land to the Jews living in the jaws of death.]

Gustavus Meyers, History of the Great American Fortunes, 2.3

"The action of the city officials in disposing of city land to themselves, to political accomplices and to favorites (who, it is probable, although not a matter of proof, paid bribes) took two forms. One was the granting of land under water, the other the granting of city real estate. At that time the configuration of Manhattan Island was such that it was marked by ponds, streams and marshes, while the marginal [tidal] lines of the Hudson River and the East River extended much further inland than now.

When an individual got what was called a water grant, it meant land under shallow water, where he had the right to build bulk heads [seawalls] and wharves and to fill in and make solid ground. Out of these, water grants was created property now worth hundreds upon hundreds of millions of dollars. The value at that time was not great, but the prospective value was immense. This fact was recognized in the official reports of the day, which set forth how rapidly the city's population and commerce were increasing. As for city land as such, the city not only owned large tracts by reason of old grants and confiscations, but it constantly came into possession of more because of non-payment of taxes.

The excuses by which the city officials covered their short-sighted or fraudulent grants of the water rights and the city land were various. One was that the gifts were for the purpose of assisting religious institutions. This, however, was but an occasional excuse. The principal excuse which was persisted in for forty years was that the city needed revenue. This was a fact. The succeeding city administrations so corruptly and extravagantly squandered the city's money that the city was constantly in debt. Perhaps this debt was created for the very purpose of having a plausible ground for disposing of city land. So it was freely charged at the time. ...

...Having obtained the water grants and other land by fraud, what did the [Arab fronting] grantees next proceed to do? They had them filled in, not at their own expense, but largely at the expense of the municipality. Sunken lots were filled in, sewers were placed, and streets opened, regulated and graded at but the merest minimum of expense to theirs landlords. By fraudulent collusion with the city authorities they foisted much of the expense upon the taxpayers. How much money the city lost by this process in the early decades of the nineteenth century was never known. But in 1855, Controller Flagg submitted to the common council an itemized statement for the five years from 1850, in which he referred to the 'startling fact that the city's payments, in a range of five years (for filling in sunken lots, regulating and grading streets, etc.), exceeded receipts by the sum of more than two million dollars'. ...

...one of the original conditions was that they were to construct terminal streets — a provision which they never performed. In consequence, they had no clear title. They remedied this situation by lobbying through the [Civil War] Legislature, in 1865, a law, allowing them to pay a designated sum to the city in lieu of that non-performance. By the payment of a small amount, most of them obtained from the city a full and clear title. In developing the water front, the Department of Docks had to buy back such of these waterfront grants as were needed for wharves and bulkheads, and it had to pay exorbitant sums. From the organization of the Department of Docks down to 1906, inclusive, New York City expended \$70-million for the purchase of bulkhead and wharf property."

21.. MASS EXTINCTIONS

Robert Bakker, Dinosaur Heresies, Ch. 21.

"I advocate a wide variety of heresies about the dinosaurs, so why could I not accept the [Walter Alvarez] theory of their extinction based on the striking meteor and the resulting Iridium layer? My defense is simple. I champion heresies only if they fit the facts better than orthodoxy.

The theory of the great meteoric explosion fails to fit the facts in one major area. It insists that the extinctions were sudden, [and] catastrophic. All the dinosaurs supposedly died out in a few dozen years, or approximately that. But for quite a while now, orthodox paleobotany has maintained the extinctions were spread over tens of thousands of years or more [millions of years actually]. And no question, this time orthodoxy has got it right. Paleontologists working in Montana claim they observe a gradual extinction of dinosaurs and Cretaceous mammals and a gradual build-up of new groups of Mammalia, destined for world domination in the new era. In fact, with few exceptions ... paleontologists are in rare agreement. The last extinctions were not a single weekend of colossal slaughter but a drawn-out process requiring thousands or even millions of years."



The current consensus theory of mass extinctions is that they are caused by asteroids striking the Earth and causing an asteroid version of a nuclear winter. The first problem with this theory is shown with this chart of Earth's extinction rate. I mean, shouldn't we expect something falling from the sky to cause a sudden shock, and then the effect should taper off. But the extinction data doesn't show look anything like that. In fact, not only do extinction rates build up, but they build up over millions of years. How could a meteor cause a mass extinction that built up over 10 million years?

And where are all the meteor impact sites? They supposedly found one at the Cretaceous-Tertiary boundary in Mexico, but the other impact sites are still missing. By contrast there are hundreds of giant volcanos worldwide. And not only are these easy to find, but they could easily have caused many mass extinctions. Just look at the eruption of Lake Toba 74,000 years ago. This is known to have ejected 2,800 cubic kilometers of material. There is simply no need for meteors to explain giant dust clouds.

<old distorted solar system image>

Now remember that old picture of earth's hard skin, this menace to science? Remember how we visualized the scale of our planet's hard shell all wrong?

Well this image of our solar system is another menace to science. This illustration fails to give the intuitive impression that there are actually some 35,000 unique positions for our planet on its orbit around the sun.

<true scale clip>

To see this relationship in scale we will use a 1:1 billion scale model. Here a 1.27 cm blue marble is in an orbit about 300 meters across. That is something the diameter of a man's finger in an orbit three soccer fields in diameter. Here we get a sense for how the planet occupies 1/35,000th of its orbit at any given time. And here we get a sense that our Earth is a pretty hard target for random chance to hit — especially in today's mature and well-cleansed, or well-drained universe.

The chances of giant meteor striking earth

Now the supposed nemesis meteor that will supposedly smash into Earth one day is generally said to currently be outside the solar system. And that is why it remains undiscovered. For if it were in an orbit like that of say Pluto's, we would have discovered it already.

But let's just imagine that the object has an orbit like that of Pluto. And let's just imagine that Pluto and Earth were in conflicting orbits like Pluto and Neptune have conflicting orbits. Let's crudely calculate the probability of these two planets occupying the same piece of space at the same moment.

Pluto's orbit takes 248 years and covers 5.9 billion km, or 7.3 million Pluto diameters. If we combine that with the 35,000 unique positions Earth has on its orbit, we have a collision probability of one in 127.5 billion per orbit of Pluto, which is 248 years long. (7.3 million x 35,000 \div 2 = 127.5 billion) This is the same as 1:31,622 per billion years. And mind you, this is for a planet scale object, and an object within the solar system. The giant meteor that supposedly struck the earth was supposed to be less then 10% the size of Pluto and probably would have already been discovered if it had an orbit less than 10 times the size of Pluto.

<Thick-skin-earth-3.jpg>

By given how thin and fragile Earth's lithosphere is, our planet is extremely vulnerable to external gravity. Thus weak and prolonged gravitational forces from space are capable of lightly massaging our little magma balloon, causing increased sea floor spreading and volcanism. In other words, catastrophic climate changes can be caused without any impact at all. The correct alignment of a multi-star system might provide sufficient gravity to cause a long period of High geological activity.

Here we realize that the very idea of an external gravitational force dislodging an asteroid or comet from solar orbit is something that not only involves an unnecessary 2nd step — but that the 2nd step involves the astronomically unlikely scenario of the dislodged object hitting our planet.

As well, any star or gravitational force strong enough to dislodge a nearby asteroid or comet from any orbit would also massage the shape of our little magma balloon, and cause a huge rise in the leakage of internal heat into the oceans.

What does the extinction rate mean?

Why should we assume that new species always come on the scene at a constant rate? For all we know, the "extinction rate" is simply the flip-side of the species creation rate. Maybe the extinction rate is only describing a hotter, wetter, life rich world with more energy and more climate niches for more species to come about, and others to go extinct in.

Robert Bakker, Dinosaur Heresies, Ch. 21.

"It is important to remember that both genera and species of dinosaur had been dying out all through the Cretaceous—all through the Mesozoic, in fact. What made the final Cretaceous extinctions special is that no new wave of [reptilian] species appeared to replace those that had died out. In one sense, that is the essential point of all mass extinctions—the rates of extinction outpace the production of new species, so whole groups simply run out of species entirely."

Robert Bakker, Dinosaur Heresies, Ch. 21.

"The mass murder that marked the end of the Cretaceous Period seems to attract all manner of solutions. Perfectly respectable scientists, <u>who pride themselves on their caution</u> when dealing with their own specialty, indulge in the wildest flights of fancy when it comes to cracking the mystery of the Cretaceous killer. I keep a file of published 'solutions'. Among its contents, it is

suggested the dinosaurs died out:

'because the weather got too hot',

'because the weather got too cold',

because the weather got too dry',

because the weather got too wet',

'because the weather became too hot in the summer and too cold in the winter',

'because the land became hilly',

'because new kinds of plants evolved which poisoned all the dinosaurs',

'because new kinds of insects evolved which spread deadly diseases',

'because new kinds of mammals evolved which competed for food',

because new kinds of mammals ate the dinosaur's eggs',

'because a giant meteor smashed into the earth',

because a supernova exploded near the earth',

because cosmic rays bombarded the earth',

or 'because massive volcanoes exploded all around the earth'. "

Robert Bakker, Dinosaur Heresies, Ch. 21.

[Iridium comes from two sources, meteors and volcanos.] "The historical pattern followed by mass extinctions simply does not support the theory of a Death Star's killing off faunas suddenly, within a few years' time. What, then, does the iridium layer mean? I am not certain.

Sediment-depositing processes had slowed down at the very end of the Cretaceous when the Iridium-rich layer was laid down. Some geologists have therefore suggested that terrestrial volcanoes might have produced the iridium, which became concentrated because it was mixed with unusually small amounts of sediment [due to a dry ice age] ...

In any event, history proves that celestial collisions cannot be the chief culprits in the collapse of ecosystems. At best they are accessories. But that leaves the more important question unanswered. What is it that attacks the evenness of an ecosystem?"

What is a nuclear winter?

According to the nuclear winter theory, a large number of nuclear detonations will produce enough atmospheric dust to cause a type of ice age called a nuclear winter.

Star Trek episode #25, 1967.03.09

"The main circulating pump for the entire reactor is gone... Without the pump mechanism, the reactor will go super critical. <u>It could poison half the planet</u>. We can't shut it down, it provides heat and air and life support for the whole colony." [This is propaganda. 1) People are living 30km from the Chernobyl reactor today. 2) There are reactor designs that don't rely on pumps to stay cool. In fact there are reactor designs where the fuel rods rest on lead supports. If the lead melts, the rods will fall diagonally away from one another and the heating will stop. 3) The Arabs hate nuclear and geothermal power.]

Fred M. Bullard, Volcanoes of the earth, Ch.17

"Hedervari introduced an eruption-magnitude scale for volcanic eruptions, comparable to the Richter scale of magnitude for earthquakes. Both are based on the total energy released... Hedervari also expressed the eruption magnitude in terms of atomic-bomb equivalents, using 8.4x10²¹ ergs as equal to one atomic bomb (Bikini test bomb)...

A one-megaton nuclear device is the equivalent of 1,000,000 tons of T.N.T. and equals 4.18x10²² ergs. One kiloton equals 1,000 tons of T.N.T. and equals 4.18x10¹⁹ ergs. The atomic bombs dropped on Japan were about 20 kilotons each. By comparison, the 1883 eruption of Krakatoa has been rated as equal to 200 megatons."

[Thus the Bikini test bomb was 200 kilotons, or 10 times the size of the Japan bombs. Thus the Krakatoa eruption was as powerful as 1,000 Bikini test bombs, or 10,000 Japan bombs. And if Tambora was 84 times the size of Krakatoa, then it was as powerful as 84,000 Bikini text bombs, or 840,000 Japan bombs.

Volcanic winter vs. nuclear winter

Be sure to recognize that the nukes are either exploding in the air or on the surface. The volcanos are exploding miles underneath the ash heaps we call volcanos. Therefore Volcanos are not only orders of magnitude larger than nukes, but they are also orders of magnitude dustier per megaton of energy released.

Thus the idea of a nuclear winter seems to be another propaganda idea without any basis in fact.

The Tsar Bomba

Let's consider the 1958 above ground test of the 100 megaton Tsar Bomba, or the "Caesar Bomb" by the Soviet Union. This one device released as much energy as 100 one megaton war heads. According to the Hedervari calculations above, it was 5,000 times the size of the device that destroyed the center of Hiroshima. According to other calculations it was 3,000 times the size.

The US nuclear arsenal = 35 Tsar Bombas

The US arsenal is supposed to have a total explosive force equal to around 3,500 megatons. Thus, by explosive power, the Tsar Bomba was about 3.5% of the estimated size of the entire United States nuclear arsenal today. Adding in for all the other nuclear weapons in the world, the Tsar Bomba was probably around 1% of the world's entire nuclear arsenal today.

Mauna Loa Observatory Atmospheric Transmission



Now if the Tsar Bomba is X, and a full nuclear discharge on Earth is 100x, and 100x will cause a sort of ice age, shouldn't we have detected some climate change as a result of the detonation of the Tsar Bomba? Well, no downward climate change was noted. Nobody noticed ANY decline in solar energy at the time.

Now recall the smallish eruption of the Pinatubo Volcano that reversed the world's warming trend for over 2 years. Pinatubo spewed 1.4 cubic kilometers of material into the sky. Funny thing is that the Tsar doesn't even show up on the solar shading charts like Pinatubo, which we could plainly see evidence of.

So, here it seems that if all the nuclear weapons in the world were discharged all at once, we might put in the atmosphere a small fraction of the material that the Pinatubo volcano put in the atmosphere. And the Tambora eruption had 180 cubic kilometers of ejecta, about 129 times the size of Pinatubo.

A 10,000 megatons global nuclear arsenal

Now don't misunderstand. Nuclear weapons are terribly deadly to people because they are typically detonated at the precise center of our communities. This is in sharp contrast to the planets volcanos which most sensible people live far from.

However, for the sake of global sunlight screening pollution, it is instructive to compare humanity's 10,000 megaton nuclear arsenal with the 200 megaton eruption of Krakatoa, and the inferred 16,800 megaton eruption of Tambora. And again, we must realize that volcanos are around 100 to 1,000 times dustier than nukes because they happen under great heaps dusty volcanic ash.

Of puny earthlings and their mighty nukes

So if all of the nukes held by all the puny earthling were all detonated, it would release about 60% of the energy of the biggest volcano of the past 200 years. And as far as sunlight shading dust is concerned, these nuclear detonations might produce 1/100th, or 1/1,000th as much dust capable of shading the sun.

What about the deadly radiation?

Now let's talk about how the Tsar bomba increased worldwide background radiation by around 20%. However, the Tzar Bomba was a poorly engineered Soviet era device. Today, state of the art nuclear devices have much more complete reactions, and produce less than a tenth of the radioactive contamination per megaton.

So a full out nuclear war, with 100 times the megatonnage of the Tsar bomba, would increase world-wide background radiation by maybe 3 to 10 fold. And this increase

will product much more illness, but only among maybe 5% of the population. And this will simply fade away over the years and decades, leaving only a small bump in background radiation after a couple decades.

The point is that after an all-out nuclear war, life would go on, pretty much completely unaffected, outside the world's 1000-or-so largest cities. (The big cities will get multiple overlapping detonations). In the small and remote towns there would be no nuclear winter, and a tolerable increase in background radiation. And except for the people who live near a nuked population center, there will be only a minor increased risk of cancer. So in the event of an all-out nuclear war, human populations probably wouldn't even fall by 2/3%.

<political cartoon of Kim Arab Mole clutching nukes>

Now people often speak of a nuclear deterrent. For example, even feeble North Korea supposedly can't be cowed today because of its nuclear weapons. The logic is that no matter how awful the dictatorship, it is simply not worth risking nuclear war over the matter.

However, if a major Western power ever fell victim to an anonymous nuclear attack, there will surely be follow on threats, genuine or not. At that point, the added risk of attacking all the rouge and potentially rogue nuclear states will fall sharply, while the reward side of the equation would increase sharply.

Essentially, after an anonymous act of nuclear terrorism, the logic of nuclear deterrence instantly flips for all the small pariah states. What was once a nuclear deterrence becomes an incentive or even a guarantee of nuclear annihilation for all the small pariah states and anyone else that seems to be behind the terrorism, or acting as puppet masters. And there will be no warning, no negotiation, and no demands, because the massive strike will have to be as much of a surprise as possible. And it shall also be completely overwhelming for that group of small pariah states.

So the nuclear "assets" of North Korea and Iran are in fact horrible liabilities that will assure the annihilation of these nations in the event of pretty much any anonymous nuclear terrorism. And this is true even if their nation had nothing to do with the actual nuclear attack. The sensible thing to do is to simply wipe them off the map, just to be sure.

Given how foolish their path is, the large nuclear powers would reap great benefit from a declaration of policy here. These should keep a definitive list of nations that will be considered rogue, pirate or puppeteer in the event of an an an anonymous nuclear or WMD attack. This will shift the riskreward equation with respect to both nuclear and WMD proliferation. It will also serve to curtail the pursuit of the rogue, pirate or puppeteer agendas worldwide.

Here it is worth reflecting on the endless history of Persia (Turkey/Iran) being used an expendable war puppet by Arabian interests. Simply look at the democratic reforms of Mazdak i Bamdad around 530AD and how Khosrow-1 led a counter-revolution, killing all the Mazdakites. Then the Arabian puppet Khosrow (like LBJ – note the paradigm) renewed Persia's ruinous war with Byzantine Rome. By the late 500s, both superpowers of the day (Rome and Persia) were exhausted from war, and plague. The bubonic plague incidentally made its first recorded appearance in 542 AD, killing around half of Byzantine Rome and presumably half of Persia. Thus Arabia (Greater Arabia) sat back and watched as its main enemies foolishly wore themselves out fighting each other until there was nobody left. (Actually Arabia sort of helped things along). Anyway, into the power vacuum came Mohammed (b. 570AD) and his slave's religion of Islam, meaning "submission" -Submission to the will of Arabia and its shape-shifting harem-bro

secret-service. (These are shape shifters because their mothers come from your land and they are all half or 3/4 of your race while their fathers are all from the harems.)

We might also reflect on how the recent Iran-Iraq war purged both both Iran and Iraq of their secular Muslims. In Iran, the puppet government was seeking out the smartest men and boys of Iran (even grade-school boys), drafting them to be purged in an idiotic WWI-style trench war, complete with poison gas. Thus over a million Muslims died. Pretty much all the potential troublemakers of both nations.

We should all consider Iran, and North Korea to be Arabia's expendable puppet states, sort of nation-scale suicide bombers or scapegoat with regard to their nuclear programs.

Don't fall for it. The puppet strings clearly lead back to the Haremi or Hashemi Arabians. If things ever go in the direction of WMD, just make sure that you understand that the Arabian harem breeders were the ones behind it, and you should obtain your just retribution from Arabia and the Arabs whatever else you do.

Part of Arabia's nuclear strategy is to help give rise to the false idea of a nuclear winter. This is an idea that makes many nuclear nations afraid to use their nuclear weapons — for fear the world will end in a nuclear ice age. But again, this is simply not true. You are absolutely free to wipe Arabia off the map, and this especially includes the parts you are told are your greatest allies, Saudi Arabi and the nation of Is•real or more accurately Isn't•real.

Another part of Arabia's nuclear strategy was to help give rise to the false idea that neutron weapons were somehow amoral because they left most buildings standing. Remember the neutron bomb from around 1980? It was the bomb that killed people with a neutron radiation blast but left "buildings" intact. Well, that is not very accurate. Neutron bombs were actually developed to use a neutron radiation flash to kill people deep underground, in hardened bunkers. These are places like in those underground nuclear facilities in Iran and North Korea, facilities that we have no practical way of attacking today except by using men on the ground. They are also the places where your arch-enemies, the Haremi leadership will be hiding. So it is immensely useful and beneficial to have neutron weapons in your arsenal.

Anyway, thanks to an amazingly intense PR campaign, America's corrupt democracy decided not to even make this vitally important weapon. Had we developed our neutron bomb capability 30 years ago, we would be having much less trouble with the nuclear ambitions of North Korea and Iran. At least, we would have the capability of killing the people in these facilities, should we choose to use low-yield nuclear weapons to check the spread of nuclear weapons.

Fortunately, other types of nuclear warhead can be quickly converted into neutron weapons. Make haste here. Make haste, because the future of the free world may depend on our ability to kill the Haremi who might seek to hide deep underground once the ice age starts. Rush them into production.

Not triggered by nuclear testing

For a while I wondered of nuclear tests might perhaps have accelerated the bubbling process through some novel frequency of vibration. I wondered if we might have been tapping on the soda glass and increasing bubbling. But considering how volcanos are much more powerful, this idea seems to be unworthy of consideration.

***** If you have not read the other two main sections, go there before continuing *****

23.. ATMOSPHERE

Did you learn about climate science from Star Trek? Star Trek science propaganda 'Return to Tomorrow' 1968.02.09

"Sulu: Planet dead ahead captain, becoming visual.

Spok: Class M planet captain.

Kirk: Close to Earth conditions.

Spok: With two very important exceptions. It is much older than Earth and about half a million years ago, <u>its entire atmosphere</u> was totally ripped away by some sort of cataclysm. The planet has evidently been dead since then. Sensors detect no life of any kind."

Star Trek science propaganda 'That Which Survives' 1969.01.24

"Spok: The facts do not fit any known categories of planet. Kirk: Let's take the facts one by one. That should explain something.

Spok: Undoubtedly. <u>The age of this planet would seem to be</u> <u>only a few thousand years</u>. It would be impossible for vegetation to evolve in so short a period.

Kirk: Its size is approximately that of Earth's moon. **Spok:** But its mass and its atmosphere are similar to Earth. **Kirk:** That would be difficult to explain.

Spok: It would be impossible captain. <u>An atmosphere could not</u> evolve in so short a period of time.

Kirk: And yet it has.

Spok: Evidently. But <u>the inconsistencies are so compounded as</u> to present a seemingly impossible phenomenon."

[Endless re-runs of Star Trek brainwashed many of us while we were still in primary school. The always logical and never-wrong Spok character, the Enterprise's make-believe science officer got us while we were young and our minds pliant — while we were too young to realize that Spok wasn't a real authority on anything at all.

Clearly someone wants us to think of Earth's atmosphere as something permanent. Some lies tell the truth with perfect clarity once you see through them.]

James Lovelock, Gaia, 1972, Ch. 1

"Our results convinced us that <u>the only feasible explanation of</u> <u>Earth's highly improbable atmosphere</u> was that it was being manipulated on a day-to-day basis from the surface, and that the manipulator was life itself" [This is one of the foundational books on climate change.]

Astronomy Today textbook, Chaisson, McMillan, 8.3

"all planetary atmospheres slowly leak away into space. Don't be alarmed—the leakage is usually very gradual! As a rule of thumb, if the escape speed from a planet exceeds the average speed of a given type of <u>molecule</u> by a factor of six or more, then <u>molecules of that type will not have escaped from the planet's</u> <u>atmosphere in significant quantities in the 4.6 billion years since</u> <u>the solar system formed</u>. Conversely, if the escape speed is less than six times the average speed of molecules of a given type, then <u>most of them</u> will have escaped by now, and we should not expect to find <u>them</u> in the atmosphere. [foreigner English]

For air on Earth, the mean molecular speeds of oxygen [8] and nitrogen [7] that we just computed are comfortably below one-sixth of the escape speed...

Hydrogen molecules (H2: molecular mass=2)...have had time to escape <u>since our planet formed</u> [repetition is often an indicator of a propaganda placement] ..Consequently, we find very little hydrogen in Earth's atmosphere today. However, on the planet Jupiter, with a lower temperature... has retained its

hydrogen—in fact, hydrogen is the dominant ingredient of Jupiter's atmosphere."

[This propaganda tries to make earth's atmosphere seem like something that formed once and then depleted. If we don't swallow this, then the CO2 greenhouse theory becomes much harder to believe.]

James Lovelock, Gaia, 1972, Ch. 1

[I received] "an invitation from <u>Shell Research Limited</u> for me to consider the possible global consequences of air pollution from such causes as the ever-increasing rate of combustion of fossil <u>fuels</u>. This was 1966, three years before the formation of Friends of the Earth and similar pressure-groups brought pollution problems to the forefront of the public mind.

Like artists, independent scientists need sponsors but this rarely involves a possessive relationship. Freedom of thought is the rule. This should hardly need saying, but nowadays many otherwise intelligent individuals are conditioned to believe that all research work supported by a multi-national corporation must be suspect by origin. Others are just as convinced that similar work coming from an institution in a communist country will have been subject to Marxist theoretical constraint and will therefore be diminished. The ideas and opinions expressed in this book are inevitably influenced to some degree by the society in which I live and work, and especially by close contact with numerous scientific colleagues in the West. So far as I know, these mild pressures are the only ones which have been exerted on me." [This is one of the foundational books on climate change, and the author is saying that even thought he got lots of oil money for his research, his work is not biased. And this work came out in the year before the 1973 Arab oil embargo.]

James Lovelock, Gaia, 1972, Ch. 1

"Our findings and conclusions were, of course, very much out of step with conventional geochemical wisdom in the mid-sixties. With some exceptions, notably Rubey, Hutchinson, Bates, and Nicolet, most geochemists regarded the atmosphere as an end-product of planetary outgassing."

[Before the research funded by the Shell oil company, we believed in outgassing. Look how the Shell oil company paid to establish a new matrix reality though a fake scientific consensus about outgassing.]

James Lovelock, Gaia, 1972, Ch. 1

"Our contrasting view required an atmosphere which was a dynamic extension of the biosphere itself. <u>It was not easy to find a journal prepared to publish so radical a notion</u> but, after several rejections, we found an editor, Carl Sagan, prepared to publish it in his journal, <u>lcarus</u>." [The idea was radical and not accepted at first. But eventually a steady flow of oil company funding produced research. Then this research mimicked a scientific consensus about a matrix explanation for reality.]

James Lovelock, Gaia, 1972, Ch. 1

"One important consequence of this ceaseless activity of life would be the cycling through the biosphere of the atmospheric [out] gases ammonia, carbon dioxide, and methane... [except for water, this is about 96% CO2.] As a result, there would be a decline in the atmospheric abundance of these gases; carbon and nitrogen would be fixed and deposited on the sea floor as organic detritus, or possibly as [the] calcium-and magnesium carbonate included in [the shells of] these early creatures...

These processes may have been slow on our [nongeological] time-scale, but before many tenths of an aeon [previously defined as a billion years] had elapsed, the

composition of the atmosphere would have changed considerably as the carbon dioxide content was gradually

<u>depleted</u>. [The CO2 doesn't deplete because it is constantly being replenished by outgassing. Look at the chalk white cliffs of Dover England. There are massively thick limestone deposits like this worldwide. Did all that carbon come from a massively thick early atmosphere here on earth — or did it leak out over the eons? What force keeps the seafloor ridge active?]

Apple dictionary: carbon

"carbon dioxide or other gaseous carbon compounds released into the atmosphere, [are] associated with climate change: the level of carbon in the atmosphere has been consistently rising... fossil fuel consumption and carbon emissions continued to rise." [Here we see a climate change ad in a dictionary.]

Apple dictionary: carbon

"Compounds of carbon (organic compounds) form the physical basis of all living organisms." [Where does all the carbon come from and how is it replaced when seashells and plant matter are buried?]

Star Trek, Next Generation TV show

Data the ever-logical android: "The radiation levels on Al Dei-a have been building up over a long period of time. It is similar to what was experienced on earth in the 21st century when the ozone layer had deteriorated and the surface of the planet was flooded with ultra violet radiation." [more Arab atmospheric propaganda.]

Earth science and the environment 21.7 Textbook by Thompson and Turk

[What about volcanic gas and CO2 lost to buried seashells? Why was this left out?]

"We have learned that the amount of carbon in the atmosphere is determined by many natural factors, including rates of plant growth, mixing of surface ocean water and deep ocean water, growth rates of marine organisms, weathering, the movement of tectonic plates, <u>and volcanic activity</u>. Within the past few hundred years, humans have become an important part of the carbon cycle. [or so goes the Arab propaganda] Modern industry releases four greenhouse gasses—carbon dioxide, methane, chlorofluorocarbons (CFCs), and nitrogen oxides.

People release carbon dioxide whether they burn fossil or bio fuels. This release is inherent in the chemistry of combustion. Carbon in the fuel reacts with oxygen in the air to produce carbon dioxide. <u>Furthermore, once carbon dioxide is</u> <u>released, it is, for all practical purposes, impossible to remove</u> <u>this gas from the atmosphere. If you drive your car to town</u> <u>today, the carbon dioxide released will remain in the atmosphere</u> <u>for centuries</u>."

[The underlined section is simply not true. Plants and shellfish are greedy for CO2 and when they die, much of their CO2 gets buried "forever".]

Travis Hudson, Living with Earth, 10.3

"People have become an influence on global climate. We are <u>burning up</u> [foreigner English] so much fossil fuel that we are changing the concentration of carbon dioxide in the atmosphere. In the last 150 years, since the beginning of the industrial age, the concentration of atmospheric CO2 has increased from 280 to 380 parts per million, enough to cause global warming. This recent change is an exceptional rate of increase, <u>but people may</u> have influenced atmospheric greenhouse gas concentrations for thousands of years."

[The propagandists reach too far by this thousands of years

claim. Clearly the Arabs have involved themselves in the earthscience textbook industry. 3) Hud•son = water•boy.]

Companion volume to PBS Television series Planet Earth, 1986, Jonathan Weiner, Ch. 3

"This ocean [of air, the atmosphere] weighs some 5,000 million million tons"

[this is 5,000,000,000,000 tons and humanity weighs about 500,000,000 tons. Therefore the atmosphere weighs about 10,000,000 times as much as humanity. Have we really warmed an atmosphere that weighs 10 million times as much as humanity?]

Volcanic gas that is 95.8% CO2

Bullard reports that the Larderello geothermal plant in Italy used/uses naturally occurring steam to drive turbines. Aside from water vapor, this steam is/was 95.8% CO2. This is precisely in the middle of Mars which is 95% CO2, and Venus which is 96.5% CO2. These 3 planets are 3 of a kind with the same 96% CO2 outgassing, more or less.

But on Earth, life is clearly greedy for the carbon it is based on. Clearly plants gobble up as much CO2 as they can. After all, CO2 is not even 1% of the atmosphere. It is 1/25 of 1% in the atmosphere. And this is because life is so hungry for CO2.

<helium balloon against a ceiling>

Magma is infused with a number of different gasses. Hydrogen and Helium are the two most common elements in the universe. It is notable that Earth's atmosphere is almost devoid of both these gasses. The reason is that Hydrogen and Helium drift ever upward among the heavier gasses. They rise until they drift out of Earth's gravitational field and are picked up by the sun's gravity. And of course, if the hydrogen hits an oxygen molecule on the way out, then it combines to make water.

<Earth vs Saturn illustration>

But with the sun nearby, Earth's gravity is not strong enough to hold on to gasses far above the surface. Saturn, a gas giant, on the other hand has a huge atmosphere that is 97% Hydrogen despite the fact that the planet has roughly the same surface gravity as Earth (8% less actually). What is going on is that Saturn is 9.8 times as far from the sun and thus experiences very little solar gravity. Therefore Saturn holds onto its hydrogen, while earth doesn't.

<illustration>

Here we come to view a planet's atmosphere as the balance between the gas escaping from the planet's solid part, and the gas that is either lost to outer space or buried back into the planet through various biological reaction. That is what the atmosphere is, it is the outgassing that remains on the outside of a planet, but has not either been re-absorbed or lost to space. That is what the air we breathe is.

Mars

Avg. temperature = -50°c Atmospheric density = 1/159 of Earth's

The frozen Mars planet shows us what happens when a planet stops outgassing and stops being geologically active. Mars is a frozen world with an atmospheric pressure 159 times less than Earth, and an average temperature of $-50^{\circ}c$

Mercury Half of Venus' distance to the sun 1/15th of Venus' mass

Mercury also has no atmosphere, the sun's intense gravity

simply strips the tiny low gravity planet of any atmosphere. Now the greenhouse people sometimes bring up the fact that Mercury is about half Venus' distance to the sun, but has an average temperature of 170° C. The greenhouse people then claim that Venus' CO2 rich atmosphere must be the reason for its 480°c average surface temperature. This is nonsense. The surface of Venus is hotter due to its high pressure atmosphere which substitutes for rock depth.

Venus

Now the greenhouse people are correct about Venus's atmosphere making Venus so hot; but they have the wrong mechanism. Venus, thanks to its mass (15x that of Mercury) and being almost twice the distance from the sun, can't effectively hold on to its other lighter gasses. But it can still hold on to its heavy CO2 (6+8+8=24).

So on Venus, it is not only hydrogen and helium that float up and are lost to the sun, but nitrogen, and even water H2O (1+1+8 =10) would join them in floating upwards to be picked up by the sun. What is left is an atmosphere that is 96.5% CO2. And this atmosphere is about 93 times the density of Earth's.

It is an atmosphere so dense that the average Venusian surface pressure is equal to over 1 kilometer deep sea water here on Earth. Anyway, the point is that Venus has similar temperatures and pressures to Earth's sea floor ridge. So on Venus, it looks like a highly pressurized gas atmosphere keeps the planet seismically active, just like the oceans do here on Earth. Here, it is not hard to imagine that a not-so-deep Venusian rift valley would have semi-molten magma in direct contact with the planet's dense atmosphere, acting like a high pressure air heater, a geothermal air heater.

3 of a kind, one has been changed by a life infection that took

Now while Mars is stuck in volcanically inactive mode — Venus is stuck in volcanically active mode. Mars is a -50°c world with 159 times less atmospheric density than Earth; and Venus is a +480°c degree world with 93 times the atmospheric density of Earth. Earth has the goldilocks amount of seismic activity and atmosphere, an amount tied to ocean depth.

How heavy are CFC's?

Now back on Earth, helium and free hydrogen drift away in minutes because they are such light gasses. But heavier gasses are also carried into the upper atmosphere by air currents and lost to the sun's gravity. Even enormous, massive CFC molecules (chloro•fluoro•carbon) supposedly make it into the upper atmosphere. The process is exponentially rarer and slower for heavier gasses, but gasses like Argon and even CO2 are still slowly lost to space in minuscule amounts.

It is life, however, that removes most of the CO2 and Nitrogen from the atmosphere. And while some CO2 is buried with dying plants; Most permanent CO2 removal happens when creatures use the carbon in CO2 to make calcium carbon•ate in their shells and bones. When this stable calcium carbonate is buried, it is then pretty much removed forever from the surface. The famous chalk white cliffs of Dover, for example, are white because of this calcium carbonate in the shells of shellfish.

There are also huge limestone and dolomite deposits all over our planet: And while the limestone is not so chalk white, it is still largely composed of calcium carbonate and CO2 soaked up from the surface. These deposits are worldwide and they have been building for over 500 million years, and they hold millions of times more carbon than mankind has ever had anything to do with.

Here we get a sense for the planet scale amounts of CO2 that have been 'eternally' outgassed from inside our planet at the sea floor ridge. This volcanic gas entered the atmosphere and was inexorably trapped by organisms over the eons, building into planet scale formations of sedimentary rock rich in organic carbon.

And let's get one thing clear. The atmosphere certainly come from within our planet, because, there is nowhere else for it to come from. Remember, Earth constantly LOSES gas to its surface and the surface constantly loses gas to space and reaccretion.

Atmospheric thickness

When we measure CO2 levels in the ice cores, to a large extent, we are looking at the ratio of CO2-rich new volcanic gas/air in the atmosphere. But it is unlikely to be a 1-for-1 linear relationship because, during warm-ages:

1) Bio-activity is exponentially more active at higher

temperatures. Thus plants will be exponentially hungrier for CO2 when it is warm.

2) There are plants over more of the planet's surface.

3) The ice caps retreat and there is more surface area for plants that consume CO2.

4) The planet is better watered, and land plants are thus hungrier for CO2.

5) There is more bio-energy reaching the oceans and shellfish become hungrier to CO2.

So CO2 levels are probably not directly tied to outgassing in a 1:1 relationship. Outgassing is probably more than 50% higher during a warm-age, and because this is around 96% CO2, it just gets consumed by the living creatures of our planet.

The easiest way to see the iceage outgassing rate is to drill the recent seafloor ridge. If Holocene spreading (over the last 7,000 years) is occurring at 7cm/year on each side, then we have 49,000cm or 490m. How fast was the seafloor spreading occurring in the area just past 490 m? If it was spreading at 1/3 the speed, then we have a pretty good indication that Ice age seafloor ridge outgassing occurs at 1/3 the current rate. From there, we need to add in an amount for outgassing from explosive volcanos.

A thinner "higher altitude" atmosphere worldwide

To some extent, Earth's ice age temperatures are no doubt due to a thinner atmosphere such as we see in the mountains today. If fact, during ice ages, the whole planet may be understood as more of a high altitude place thanks to the lower outgassing levels.

Here we imagine an iceage atmosphere that is colder due in part to being thinner and having less air molecules coming in contact with the planet's warm surface, and therefore less heat is being picked up from the surface. In other words, Earth's ice age atmosphere is more like geologically inert Mars (thin and cold): And less like geologically hyperactive Venus (thick and hot).

Much less life force during ice ages

1) Much of the planet is covered in ice.

- 2) There is much less rain.
- 3) There is less light for plants.
- 4) There is less CO2 for plants.
- 5) The rain does not penetrate far inland.
- 6) It is colder.

This is a biosphere that is much less able to gobble up CO2. And the warmage biosphere is probably much hungrier for CO2.

Therefore, the amount of CO2 coming out in a warm age is probably much higher than 50%.

Use argon as a benchmark

A way to calculate historical atmospheric thickness might be to find the concentration of Argon in the ancient atmosphere. This gas is largely inert, and due to its relative heaviness, it tends not to be lost to space very much. So the relative argon level should stay relatively constant relative to the other gasses in the atmosphere.

The historical tree-line

It is important that we have a precise history of the high altitude tree line on our planet. This will give us valuable information that we can use to estimate historical atmospheric thickness. It will also tell us to what extent the more polar regions of our continental plates are pressed down by the ice caps into the magma the float on.

Gaia's 3 main forces

1) Heat leakage.

2) Shading from volcanic ash.

3) Atmospheric pressure from outgassing.

The high altitude tree line will tell us what happens to atmospheric pressure during ice ages. As we already have volcanic ash measured, it should be possible to estimate heat leakage by the amount of new seafloor accreted.

Star Trek, Amok time, 1st episode 2nd season

"Kirk: I wish the breeze were cool. McCoy: Yea, <u>hot as Vulcan</u>. Now I understand what that phrase means.

Kirk: And the atmosphere is thinner than earth.

McCoy: In this climate, if the heat doesn't get you, the thin air will." [Note how Arabs mentioned it twice that heat went along with thin air. Funny how this relationship is not only backwards, but it is also repeated. Clearly someone doesn't want us to think that planetary climate is related to atmospheric thickness.]

Star Trek 1966.09.08

"Staring at us like we were turning <u>as</u> harem girls or something" [Here we see who wrote the scripts for Star Trek]

Chaisson, McMillan, Astronomy Today textbook, 7.2

[In reading the following propaganda, please consider: 1) Why would the composition of the gas bubbling out of our planet change that much? Clearly we should assume that it stayed the roughly the same until we have evidence to the contrary.

2) Venus may have 227,000 times as much atmospheric CO2 as Earth, but it only has 3.28 times as much nitrogen. Apparently, without life, the outgassed CO2 goes unconsumed.]

"**Origin of Earth's Atmosphere**. Why is our atmosphere made up of its present constituents? Why is it not composed entirely of nitrogen, say, or of carbon dioxide, like the atmospheres of Venus and Mars? <u>The origin and development of Earth's</u> <u>atmosphere was a fairly complex and lengthy process</u>.

When Earth first formed, any primary atmosphere it might have had would have consisted of the gases most common in the early solar system: hydrogen, helium, methane, ammonia, and water vapor— a far cry from the atmosphere we enjoy today. Almost all this low-density material, and especially any hydrogen or helium, escaped into space during the first halfbillion or so years after Earth was formed.

Subsequently, Earth developed a secondary atmosphere, which was outgassed (expelled) from the planet's

interior as a result of volcanic activity. Volcanic gases are rich in water vapor, methane, carbon dioxide, sulfur dioxide, and compounds containing nitrogen (such as nitrogen gas, ammonia, and nitric oxide). [a perfect propaganda sandwich, 2 in front, and 2 in behind the mention of CO2. Dry volcanic gas is actually about 95.6% CO2. And the remainder is mostly Nitrogen.] Solar ultraviolet radiation split the lighter, hydrogen-rich gases into their component atoms, allowing the hydrogen gases to escape and liberating much of the nitrogen from its bonds with other elements. As Earth's surface temperature fell, the water vapor condensed and oceans formed. Much of the carbon dioxide and sulfur dioxide became dissolved in the oceans or combined with surface rocks. [And a huge amount it must have been and this must have come out over a long time. When did it stop?]

The final major development in the story of our planet's atmosphere is known so far to have occurred only on Earth. Life appeared in the oceans more than 3.5 billion years ago, and organisms eventually began to produce atmospheric oxygen. The ozone layer formed, shielding the surface from the Sun's harmful radiation. [A quick CFC ad within some early climate change propaganda.] Eventually life spread to the land and flourished."

Chaisson, McMillan, Astronomy Today textbook, 7.2

[In reading the following please consider that the old CFC refrigerants were much more energy efficient, and that most electricity in warm places was generated by burning oil and not coal.]

"Human technology has reached the point where it has begun to produce measurable-and possibly permanent-changes to our planet. One particularly undesirable byproduct of our ingenuity is a group of chemicals known as chlorofluorocarbons (CFCs), relatively simple compounds widely used for a variety of purposes-propellant in aerosol cans, solvents in dry-cleaning products, and coolant in air conditioners and refrigerators. In the 1970s, it was discovered that, instead of quickly breaking down after use, as had previously been thought, CFCs accumulate in the atmosphere and are carried high into the stratosphere by convection. There they are broken down by sunlight releasing chlorine, which quickly reacts with ozone, turning it into oxygen. In chemical terms, the chlorine is said to act as a catalyst-it is not consumed in the reaction, so it survives to react with many more ozone molecules. A single chlorine atom can destroy up to 100,000 ozone molecules before being removed by other, less frequent chemical reactions.

Thus, even a small amount of CFCs is extraordinarily efficient at destroying atmospheric ozone, and the net result of CFC emission is a substantial increase in ultraviolet radiation levels <u>at</u> Earth's surface, with detrimental effects to most living organisms. Figure 7.4 shows a <u>vast</u> ozone "hole" over the Antarctic. The hole is a region where atmospheric circulation and low temperatures <u>conspire</u> each Antarctic spring to create a <u>vast</u> circumpolar cloud of ice crystals <u>that act to promote ozone-destroying reactions</u>, resulting in ozone levels about 50 percent below normal for the region."

[1) What about the chlorine we use in our water supply, swimming pools, and laundry bleach? Why doesn't this chlorine deplete the ozone layer like our energy efficient refrigerants.2) Low temperatures generally reduce reactions. Why would a chemical reaction be stronger over one of the two coldest parts of the planet?

3) If there actually is a lack of ozone over Antarctica, perhaps it is from the sea floor ridge surrounding the continent.]

Seawater, oxygen and CO2

The atmosphere is about 20.9% oxygen and 0.037% (400ppm)

CO2. Supposedly the oceans are 0.009% (90ppm) CO2, 28ppm
Carbon, and 0.0006 (6ppm oxygen). If this is so then:
1) There is about 67x as much CO2 in the oceans as in the atmosphere. We should be measuring oceanic CO2 levels.
2) Oxygen is about 30,000 times more abundant in the atmosphere by weight/mass than the oceans. Because water has a mass that is 400 times that of air, oxygen is about 75 times more abundant in the atmosphere than the oceans by volume.
3) As far as photosynthesis is concerned, water only 20meters deep filters out something like 90% of sunlight. So only the top 10 or 15meters of the oceans is suitable for CO2-eating plants. Thus there is much less CO2 eating plant life in the oceans than on the ground.

4) What is the mass of plankton in the oceans and what is the mass of kelp?



Climate rises faster than it falls

It should be noted that when the planet is warming, the relationship between temperature and CO2 levels is closer than when it is cooling. This is another way to see how it is soda bottle gas leakage from the inside our planet that is both warming the surface, and replenishing the atmosphere. Here on this graph, we see how there are burst of above average gas leakage that are occurring on a planet that is constantly losing a small amount of gas and heat to space. So we tend to see these rapid bursts of above average heat leakage, surface warming and atmospheric thickening. Then there are these long slow periods where heat and gas are lost to space.

24.. New Water

Fred M. Bullard, Volcanoes of the earth, Ch. 5

"A growing mass of evidence indicates that the earth's atmosphere and the waters of the oceans may have been derived from volcanic or plutonic [Igneous/volcanic] gases throughout geological time rather than from a dense primitive atmosphere which was once believed to have enveloped the earth."

Essentials of Oceanography, Alan Trujillo and Harold Thurman, Ch. 3.1

"Origin of Earth's Oceans: Where did the oceans come from? Their origin is directly linked to the origin of the atmosphere... as the Earth cooled, the water vapor released to the atmosphere during outgassing condensed and fell to Earth. Evidence suggests that by at least 4 billion years ago, most of the water vapor from outgassing had accumulated to form the first permanent oceans on Earth.

[1) If water is outgassed directly from our planet, why is Earth the

only planet in the solar system that outgases large amounts of water?

2) If Earth is the only planet with massive amounts of water and also the only planet with a massive life infection, it stands to reason that the two are related.

3) Before exploding, many volcanos erupt a cloud of steam just like a dewatering nuclear reactor. Surely this is all of the water evaporating all at once as the temperature crosses the boiling point. Surely there is no water coming up from within our planet.
4) Mars is 95% CO2, Venus is 96.5% CO2, and aside from water vapor, volcanic gas is 95.8% CO2 on Earth. How come earth alone outgases large amounts of water?]

Where does Earth's water come from?

Volcanos only output steam and lahar early in their eruption cycles. This is because the water is surface water. Once that runs out, there is no water or steam.

So, to be clear, all the water we have been discussing in connection with explosive volcanic eruptions and sea floor spreading—that water does not come from inside our planet.

As to water's components, Earth does produce free hydrogen in huge volumes, however, that gas zips into the upper atmosphere faster than a runaway helium balloon. From there, the hydrogen is rapidly lost to space and the sun.

And regarding oxygen, Earth does not outgas any elemental oxygen. Oxygen is simply too reactive to make it out unmated. Oxygen oxidizes everything that burns, and a long list of things that don't burn. For example: iron, aluminum, zinc, copper and even silver; oxidize with oxygen, especially at high temperatures.

And free oxygen is not a product of any know inorganic process here on Earth or anywhere else. Its only known source is as a byproduct of Earth's abundant plant and bacterial life.

And obviously the planet out-gasses hydro-gen in great amounts. And surely some of this hydrogen mates with oxygen on its way into space. And surely the planet's hydrosphere grows as a result of this process of escaping hydrogen mating with atmospheric oxygen produced by plants.

The only known way water forms

Living creatures put oxygen into the atmosphere and then some of the outgassed hydrogen reacts with free oxygen on its way into space. When this happens, water is produced. And this process is the only know way that water comes into existence in nature.

Got a better explanation?

Unless someone can show another explanation, we must accept this process as the way that water forms.

Did water come from space?

1) If water came from space why is it so un-evenly distributed on the other planets? Why doesn't every planet have a healthy amount?

2) Where did the space water come from, if there is no known process for creating water, except from life?

Was Earth's water always there?

If the water was always there, then why is it so un-evenly distributed on the other planets? Why doesn't every planet have a healthy amount like earth? And if Earth's water was always there, then why isn't there any water on our sister planets Mars or Venus?

How does Earth's water form today?

Why should we think that the process of water creation is any

different today than in the past? Surely we should assume that the process has not changed until we see evidence to the contrary.

Outgassing was different earlier on

In the beginning, outgassing on earth must have been in its short spike phase. At this time, Earth probably had a super thick atmosphere. Then over time, outgassing fell exponentially like an LL curve (the lower left quadrant of a circle).

Earth's hydrosphere has never been bigger

Apparently Earth's hydrosphere has been growing continuously since it first formed. And if Earth started with an exponentially thicker atmosphere (as seems only reasonable to suppose) then exponentially more of the hydrosphere formed early on.

Mars is Earth's future

Long before the sun goes out, Earth will go the way of Mars. Our planet will stop outgassing and stop being geologically active. It will then stop having an atmosphere.

Trace elements in salt deposits

Seawater is 3.48% salts, and 2.982% NaCl. How has the ratio of these salts changed over time on Earth? Can we use the levels to make inferences about the watermass accretion curve? Can we use them to make inferences about the outgassing curves for the various component gases that bubble out of our planet and other planets? Should there be a field of halology?

Where did life originate?

We hear over and over that life came from the oceans and not the other way around. To me, we have our causality backwards once again. To me, the whole life-from-water idea comes from a big misunderstanding. See, we are not talking about cellular life here. That obviously came from an aqueous environment. And we are not talking about single celled plantae or anamalia. These are all from the zoological kingdom of EUKARYOTES, organisms with cell walls that contain water, a nucleus, and DNA. This kingdom of life probably did start in an aqueous environment.

Here we are talking about "primitive" PROKARYOTES, organisms that are without a cell membrane, a nucleus and specialized organelles. Examples include iron reacting bacteria that use (igneous) basaltic rock as a source of iron. Another example is silicone reacting bacteria. Another example are the bacteria that use hydrogen sulfide in photosynthesis (instead of water) producing elemental oxygen and sulfur. Notably, this method of Photosynthesis is known to be older than the process used by algae and plants. And curiously, the ecosystem at the sea floor vents is based on hydrogen sulfide reducing bacteria that live in temperatures approaching that of molten magma.

Which prokaryotic bacteria release oxygen and what temperatures can each one tolerate? It would be great to have information on how extremophile bacterial life might have had an age as the planet cooled. Their pressure perimeters should also be determined.

<compare chemical schematic of chlorophyl with hemoglobin showing differences in bold red, and similarities in black>

Now it is widely accepted that oxygen-metabolizing, cellular life came from CO2-metabolizing cellular life, or from a common ancestor. In fact we are taught in introductory biology classes how similar the hemoglobin molecule is to the chlorophyl molecule, and how likely it is that hemoglobin and chlorophyl are related. No problems here. Perhaps we should also accept the idea that eukaryotic bacteria probably evolved from oxygen producing prokaryotic bacteria that might have evolved in an environment that was dry.

There is no reason to be fixated on the idea that life originated in the oceans. It was always just a supposition -a vaguely supported supposition - like the idea of a greenhouse effect -a supposition that over time became dogma. (actually, it was probably helped to become dogma by the same bunch of parasitic Mideast desperadoes that gave the world its flat-earth dogma and its dogmatic Mideast religions.)

The requirements of science

1) Claims are based on observable, measurable fact and other people must be able to reproduce and obtain the same facts from their observations.

2) The most logical argument rule over the oldest and most central arguments.

It's not written in stone

We never decided that all life started in the oceans. We only decided that it seemed likely given the dominance of eukaryotic life on our planet's surface. And watery eukaryotic life did probably began in a watery environment.

But before there was an aqueous environment (i.e. an earth with oceans of surface water) there do seem to have been Iron/silicone/hydrogen sulfide reducing bacteria capable of thriving in very high temperatures — like at the seafloor ridge. It seems to have been these bacterial life that produced the oxygen that mixed with the escaping hydrogen that made Earth's oceans of water that eukaryotic life originated in.

To see it another way, underground PROKARYOTIC organisms made oxygen which made the aqueous environment which their descendants ultimately evolved to use as a habitat. Basically this water habitat enabled subterranean "extremophile" life to reach Earth's aqua-sphere, where they later evolved to inhabit Earth's atmosphere.

Rock burrowing multi-cellular life

Think about the Star Trek Science fiction propaganda about absurd rock burrowing "Hortas" (episode #25, 1967.03.09). This is a blid, a blocking idea, an idea to keep people from thinking that life cold exist in rock. After all, where does the Hortas' energy come from to move/dissolve solid rock?

The absurd Hortas were to keep the world from thinking that any life could exist within the planet. And once people thought this, they discarded the truth — the idea that single-cell life could exist within the planet's rocks spreading through fissures and rifts.

Oceans of life byproduct

The oceans are oceans of life byproduct, because every single oxygen molecule was created by a CO2-eating life form.

All you need is a sulfate reducing bacteria infection

"Planets" that have sulfate reducing bacteria living on their outgassing rifts will have free oxygen being produced right where the planet releases its hydrogen sulfate. These planets will start producing water as soon as there is life on their outgassing rifts.

The easiest way to find life

Perhaps the easiest way to determine if a planet has or once had life is to simply look for evidence of water.

<kid's science book with "science bible" sticker over title>

Now we are talking science here. And in science, no idea is too sacred or too long held to be challenged. In science, we are free

to change any theory, no matter how central or long held. Anything else is a system of dogma.

Now that we have a theory for saying that life gave rise to the water on this planet, and not the other way around, some first order implications follow:

1) Extremophile sulfate reducing bacteria are known to live at over 400° C. This temperature range suggests a life form able to survive planetary collisions inside chunks of semi-molten rock. We can thus see how the destruction of one life infected planet could be a seeding mechanism for all nearby planets and probably a number of nearby star systems. Perhaps Earth was seeded in this way by alien prokaryote bacteria. All it would take is one meteorite; then the operating room would no longer be completely sterile, and the planet would have a life infection and then given enough time, complexity would evolve.

2) There is free oxygen (in ultra low levels) on Mars. Given that the only known source of free oxygen is life, it appears that there is some bacterial life on Mars.

3) There is water scattered all over our solar system and even on many comets orbiting our star. If water means oxygen, and oxygen means life, then it appears that life infections are fairly easy to catch. Either that, or these bodies all picked up water from the destruction of a body that once had life.

4) The idea that extremophiles spread life through space is perhaps unnecessary. It seems unlikely that prokaryotic life would evolve here on Earth, but not evolve everywhere else that is suitable. So perhaps prokaryotic life is not unique, or rare, or even deposited by the destruction of worlds. Perhaps prokaryotic life is ubiquitous on most planets of the appropriate scale and temperature because <u>prokaryotic life is</u> a property of matter given the right environment.

Cellular life is another story. Cellular life only evolves on planets that are of a certain mass range, and certain distance range from their star's gravity. These planets will lose their hydrogen and helium to their star (otherwise they become a gas giant like Saturn). But not their oxygen (otherwise they do not build the oceans of water necessary for cellular life to evolve). And of course, they are not to hot or too cold.

Follow the money -or-All businesses are driven by sales

With life forms, we see chemical systems that use energy from the environment to power their own reproduction. So the best place to look for the principal chemicals, the life chemicals, the chemical that gave rise to all life is probably in the sub processes that prokaryotes use to creates energy from their environment. These chemicals makes energy and reproduce when the encounter hydrogen sulfide or silicone, or iron, or something else that prokaryotes eat.

We are looking for an intersection between a prokaryote and an Earth mineral as an energy source. If we can find this, we will not only have the origin of life, but we may eventually have proof that life is a property of matter. We will also have hard-toargue-with evidence life was not created by some money-loving Mideast-favoring god as many stupid people think.

The accretion of outgassing

Most of Earth's outgassing is CO2, and nitrogen, and nearly all of these two chemicals eventually is accreted to the surface of the planet in one form or another. Some of the gas is accreted as limestone, some as water and some as buried plant matter.

So here we imagine this cycle where gas comes out of the planet, and lives in the atmosphere for a time, and then it is eventually accreted to the planet's surface.

We can't know a total volume of outgassing

Most carbonaceous rock seems to get subducted and recycled. And we have no way of knowing how much material this is.

How much gas has come out?

The accretion of oceans that are about 1/6,000th of the planet's overall mass tell us something about how much CO2 has outgassed. When we add in the planet's vast deposits of carbonaceous rock, we make an initial guesstimate, a number closer to perhaps 1/3,000th.

When we consider that the planet probably had a super-thick and somewhat Venus-like atmosphere early on, we imagine that the loss of gas to space must have been quite high. Thus we look at this 1/3,000th number as a minimum. From here we imagine that total CO2 outgassing might have been say 1/600th to 1/3,000th of Earth's mass.

Water should equal limestone

Rather, the O2 in H20 should relate to the C in CACO3

Quantify the limestone

Drill it. Date it. Let's try to quantify it by as narrow time periods and latitudes if we can. Let's estimate the relative quantity of limestone being created in each age. This will tell us how much carbon was available in each age, and that will give us an idea about the outgassing curve for our planet. In particular, it will tell us where we are on the curve. I mean, 60 million years ago, was outgassing 20% higher or 200% higher? What about 120 million years ago?

This will also give us a fairly accurate picture of the current volume of outgassing on our planet. It will be curious to compare this volume of CO2 with manmade volumes.



Reservoirs of carbon at or near Earth's surface.

This is such a distorted image. In fact, this general-education textbook should be regarded as propaganda because it hides how buried carbon in limestone and sedimentary rocks and limestone is 5-million times that of atmospheric carbon.

How fast does CO2 bubble out of magma?

We should build some pressure kilns and study the properties of gassed magma under varying conditions. What about the other gasses? Does CO2 bubble out slower than other gasses? How fast will water vapor bubble out?

25.. Gaia's sloppy thermostat

Once a planet accretes enough water

The water starts forming the planet. Combined with life, it accretes vast calcium carbonate deposits. It forms river valleys, and it forms vast oceans which eventually act as the planet's thermostat.

When we look at the ice core data, there are obviously thermostatic mechanisms at work. But apparently, these days, Earth's thermostatic mechanisms only moderate climate at the extremes. Within Gaia's huge 12°C temperature range, these same mechanisms actually seem to cause more rapid and extreme temperature fluctuations. In fact, Gaia seems to cause almost constant climate fluctuations — except during the recent 7,000-year Holocene era that is.

A stable environment is good

A slightly unstable environment is better

Now it may be somewhat counter-intuitive, but these frequent temperature fluctuations are actually a good thing — at least from the standpoint of accelerating evolution. You see, Gaia's gift to the evolution of breeding networks (species) is not stability of climate, but constant variability of climate within a survivable temperature range.

<repeating GIF of 'dead zone and new habitat', 'virgin territory' constantly shifting north south. small red line with large green line behind it.>

You see, Gaia constantly slaps the planet's breeding networks around — constantly shifting climate zones and constantly changing habitats. Every time the planet's climate changes, Gaia creates new edge habitats with new opportunities for first adapters and fast spreaders. Thus Gaia constantly forces the adaptation and drives evolution to occur faster than if conditions remained stable.

<regular coloration and albinism art>

The next time that Gaia changes Earth's climate, a whole bunch of meaningless micro-adaptations and micro-optimizations will simply die out. These species will become the failed experiments of the great and long stable Holocene climate of the past 7,000 years.

All those pretty color variations that some people say warrant species protection — many in the higher latitudes will simply die out in favor of albinism — a trait that will rapidly come to dominate many cold climate species in the next ice age. All the colored furs will go back into "the genetic closet" until the 110,000-odd-year iceage is over.

And as a point of comparison, just consider the changes that we have bred into the dog genome in the past 7,000 years

Because Gaia constantly changes the game, it repeatedly rewards adaptability over specialization. Thus it repeatedly selects for adaptability traits generally regarded as 'higher' or 'advanced'. These traits are things like a fast metabolism that lets an animal compete on speed as opposed to scale (mammals as opposed to reptiles). Programmability (memory) is another trait that helps keep these faster metabolism creatures learn to stay out of harm's way. But the ultimate game-winning trick (so far) is a learning brain (consciousness/ intelligence) that enables the animal to anticipate trouble ahead.

<drawing of man thinking of a space station sitting next to an igloo>

After all, it is this consciousness and intelligence after all, that now are allowing us to program our own genome. And our consciousness is now enabling mankind to foresee Gaia's next ice age and outsmart the process. Thus life on Earth will transcend Gaia for the first time ever.

That is if we don't have an older sibling species that "budded" before us here on Earth. And personally, I find one or more terrestrial sibling species easier to believe than extraterrestrials aliens visiting Earth and observing humanity although both types of "visitor" seem a bit far-fetched.

Plato, Laws, 782

"Shouldn't we suppose that there have been all sorts of climate changes, during which it is likely that animals have changed in many different ways?" [The Penguin version of Plato's laws only goes up to 730, while the work actually goes up past 933. Why was the work abridged? Why is no mention made of the abridgment in the Penguin version? What else is hiding in the tail end of this work and others?]

26.. The big picture on planetary cooling



Rift-heat-flow-by-distance ITWO

This curve is for something else, but it works for:

- 1) The temperature of a planet's surface.
- 2) Gas leakage from a planet's interior.
- 3) The thickness of a planet's atmosphere.
- 4) The overall geological activity of a planet.

<zoomed image of above, merging into Al Gore's ice core graph on the tail>

At the multi-billion year time scale, the cooling line/curve for our planet appears smooth and steady. But if we zoom in, it looks jagged.

A daily event for a 4.6 billion year-old planet

On a geological time scale, a 100,000 year ice age cycle is a "daily event". Our Earth has been around for 46,000 periods of 100,000 years and 46,000 days works out to 126 years. Thus our current 100,000 year ice age cycle is a "daily" event for the 126 year old "creature" that is our planet.

A lousy thermostat

Our planet's climate record shows not an equilibrium, but a temperature range under the non-conscious tyranny of a sloppy thermostatic mechanism. In fact, the thermostatic mechanism is not only sloppy, but it seems to actually aggravate the size and speed of the temperature swings within a broad temperature

band. This is Earth's lousy thermostatic mechanism that keeps our planet habitable. The failsafe cooling starts some 12°C (22°F) above the temperature where failsafe heating starts.

A magma ball with a geologically active skin

At some time after our planet formed a hard skin. Then it started cycling between periods of high and low leakage of gas and heat through that skin. Thus Earth, like all other planets, started with a molten surface and eventually will have a shell that is frozen solid like Mars—a planet with scarcely any heat leakage or outgassing from inside. Between these two states, the critical phase for the evolution of advanced life is the period between when the shell has mostly hardened, and when it has hardened completely like Mars.

The three phases of cooling in near star planets

Early: Still molten, or at least highly volcanic with lots of outgassing. This is a planet with a thick atmosphere/ insulo-sphere as thick as the brief spike in outgassing allows — like Venus.

goldilocks: Partly hardened with some outgassing and insulosphere — like Earth.

Late: Fully hardened with practically no outgassing and long-tail atmosphere — like Venus.

A much thicker early atmosphere

In the beginning, when our blob of hot magma first congealed, our planet has no hard skin. It was a ball of molten rock where gas bubbles come out in great abundance everywhere. And there was lots and lots of gas coming up because the process had just started and was exponentially higher than today. So we imagine an early atmosphere that was perhaps 10, 100 or maybe 1,000 times thicker.

Planets cool and outgas on an L-curve

Until a planet forms a hard skin, there is no back pressure on the gas. So gas bubbles up and "solar flares" everywhere. And due to all the gas, the atmosphere is very thick, like on Venus, where the atmosphere provides pressures similar to that of water 1-km deep. Thus we have a double-convection system in direct contact. This cools much more rapidly than a single-convection system that has a hard lithosphere acting as a buffer.

Once the lithosphere formed, heat and gas leakage went from short spike to long tail without much in between.

Loss of cloud albedo counteracts planetary cooling

In the past, when earth got hot, water vapor would raise the planet's albedo. This reflected much of the sun's light and lowered temperatures.

Life causes the goldilocks phase to begin earlier

CO2-eating life takes huge volumes of CO2 and turns it to oxygen and solid carbon. Then the oxygen combines with hydrogen to make water which is about 400 times denser than CO2. Thus CO2 eating life has a huge effect on atmospheric thickness and pressures — causing a planet to cool earlier than it otherwise would.

I am skeptical about temperatures

If we look at the consensus on temperatures for Jupiter-Pluto we see this nice smooth gradient that strongly implies that the sun is the most important aspect of planetary temperatures. To me this perfectly smooth gradient seems reminiscent of those maps that show the bubonic plague's march through Europe in the late 1340s. For why didn't the rat plague race up the rivers on boats? Why did it spread the way it is shown?

Mars is only -50°C than earth

Mars has a 141.4 million mile orbit while Earth has an orbit of 93 million miles. If we compare a sphere with a radius of 141.4 to one with a radius of 93, the area is 3.5 times larger. Thus So sunlight on Earth is about 3.5 times more powerful on earth than on Mars. In other words, Mars only gets 28% as much of the sun's energy as Earth by area. But Mars is on average about 50°C colder than Earth. Thus we imagine that if Mars lost all its solar energy it would be no more than 69°C colder than Earth on average. Thus the sun seems to be warming Mars by only 19°.

Now if we go back to Earth, we are 69° warmer than what we infer for Mars without any sunlight (224°K). And while some of our heat has to do with having a thicker gas insulosphere, it is the thicker atmosphere plus the sunlight that warms earth by 69°C to around 293°K.

So it seems that Earth would be about 224°K (-50°C) without any atmosphere or sunlight. And we can probably calculate how much of this is due to a thicker atmosphere. But I would guesstimate it at about 40°C warmer because of a thicker atmosphere, and about 29°C warmer because of the sunlight. This way of thinking points to an earth that would only grow 29° cooler without the sun.

Venus isn't applicable

Mars doesn't have any insulation Earth has R-10 insulation Venus has R-9,300 insulation

Under this way of looking at things, Venus looses practically no heat and the surface temperature is the temperature of an open geological rift. Mars is however applicable to this line of reasoning.

Life causes the goldilocks phase to last longer

A Gaia/Life infection also produce the free oxygen that combines with escaping hydrogen to make water. Thus a Gaia/Life infection causes oceans of Life's main byproduct (water) to accumulate. This water then (in at least one planet) exerts pressure on tectonic rifts which increases outgassing and heat release from the planet's molten middle. So without the oceans of life's byproduct, there would be less outgassing on these planets — And these planets would be cooler and have a thinner atmosphere. Thus a life Life/Gaia infection also extends the 'goldilocks middle age' where a planet can evolve complex life.

Exchanging general high pressure for localized high pressure

Water deposits are by nature localized and their pressure effect is confined to the lowest parts of the planet — say its rift valleys. In other words, when life consumes atmospheric CO2, it exchanges general high pressure for localized high pressure. And this localized high pressure tends to be right where it is needed to keep a planet geologically active.

As well, the surface of these water deposits is not at all high pressure — in fact, early on, (before the water grew too salty) the surface of the oceans were an ideal habitat for life.

When was the first ice age?

Was the first ice age responsible for the Cambrian explosion when multi-cellular life began on Earth? Was an ice age responsible for the great dying? Was one responsible for the small high metabolism, fast adapting creatures that became mammals? The first iceage probably to life on Earth. What did it do? Given that the continental shelf is a product of sea-erosion, it must be continually growing, right? Well, what about how continental uplift is countering that erosion? How fast is uplift and how fast is sea erosion?

<5 Biphasic illustrations stacked. The first is 95% top, 5% bottom. The next is 75% top, 25% bottom. The next is 50% top, 50% bottom. The next is 25% top, 75% bottom.

The next is 5% top, 95% bottom.>

There can be little doubt that Earth was warmer and had a thicker atmosphere when it first began to experience ice-ages. Then the planet started experiencing brief and shallow ice ages that perhaps did not affect the tropics at all. It is easy to imagine that over time, the ice ages grew in depth and duration, until today, the planet spends over 90% of its time in deep ice age and less than 10% of time in warm age.

Earth's volcanos are growing more extreme

Volcanos that erupt at the end of an ice age typically go longer between eruptions. They concentrate eruptive forces into short periods with long intervals in between. This seems to not only keep volcanos from 'healing', but help them to grow in size over many climate cycles. The result is that Earth has probably developed more late-ice-age volcanos as time has gone on. And these volcanos are become increasingly explosive with respect to atmospheric ash. So perhaps Earth's volcanic-ash-driven ice ages have grown dirtier and a colder over the eons, even though average outgassing levels have probably moderated a bit.

<100,000-year-temperatue-chart.jpg>

Gaia is not our friend, but something that bedevils life on Earth. In fact, it seems as if Gaia is always driving our world to temperature extremes. The only thing saving us is the planet's underlying temperature 'perimeters'. Look at the extreme temperature fluctuations during past ice ages. This is Gaia bedeviling life on Earth.

ECOSYSTEM FLUX = Variations in ecosystem territory caused by climate change.

27.. Environmentalism

Roadkill hypocrisy

Look at the millions of poor critters that die each year as road kill. That is perfectly fine because otherwise we might buy less Arab oil. Look at the strict controls on drilling for oil on public lands. That is perfectly fine because otherwise me might produce more oil ourselves and buy less Arab oil. What stupidity, what hypocrisy.

What are we protecting exactly?

From the way most environmentalists talk about habitat protection, they seem to be working under the misconception that Earth has had the same blue skied climate for millions of years.

But, in truth, all the world's pristine habitats have only existed in their current location and state for only about 7,000 years. Before that, Earth was in a dry, icy, ash filled volcanic ice age for around 110,000 years. For that period, climate was extremely unstable, and habitats were constantly on the move.

Why bother protecting habitat that will be covered in ice sheet for 110,000 years? And while the middle latitudes, near the ice sheet will not be covered in ice, habitats here will approach arctic conditions. What is the point of religiously preserving warm age habitats that will soon change?

And during ice ages, there is not enough wind to get the rainfall into the center of many continents. Then many landmass interiors become deserts. So why bother religiously saving inland habitat that is destined to becomes a desert in the next ice age?

5,500 mammal species - 10,000 bird species

Supposedly there are some 5,500 species of mammal alone. Now I submit to your judgement that there is something wrong with the way we define a species if there are 5,500 species of mammal. How on Earth do they get 5,500 species? And where is the great internet catalogue of the world's 5,500 mammalian species?

Maybe the true reason why we have 5,500 species of mammal is because it drastically increases the number of endangered species needing habitat protection. This helps the Arabs to create more nature reserves off limits to mineral extraction. This in turn hides our resources so Mideast Inc.'s resources are more valuable.

The real extinction numbers

And let's look at the absolutely tiny number of species that humans have caused to go extinct. Apparently we have only caused 1.4% of mammal and bird species to go extinct over the centuries. Did you know that this number was so tiny? Listening to the media, we get the impression that the number was more like 15% or 30%.

Boy, it seems the Arabs have tricked us again with regard to scale. We don't need to have nearly so much of our land reserved for animal habitat, off limits to the environmental horror of oil drilling.

And speaking of environmental horrors, what about the millions of poor animals that die each year as roadkill. Surely this is thousands of times more animals harmed by fenced oil wells. Perhaps the main reason oil wells are a

problem is that they compete with OPEC's oil, and the main reason why roadkill is ok is that helps sell more of OPEC's oil.

The original definition of a species

A couple decades ago, before the Mideast stepped up its science propaganda, a species was defined as a breeding network, a population of animals that were capable of producing fertile offspring. For example, Horses and donkeys are separate species because if they are bread, they normally produce a sterile mule, or a hinny. And all domestic dogs (canines) are of the same species despite their hugely varied appearance — This is because all varieties of dog can be bred to to produce fertile offspring. This is the definition of a species, not some meaningless color or size variation. There is no benefit at all to preserving coloration or shape/size variations in the world's species. That is an Arab idea.

Extinction may be forever, but...

Extinction may be forever, but how many mammalian species are there and how many have actually gone extinct due to man? Do you know? Do you have any idea what the percentage is, or are you just shooting aimlessly in the dark with your trillion dollar categorical imperatives for burdening the industry of the land of the free?

Supposedly there are currently about 5,500 species of mammal on Earth and supposedly about 1,150 of those species are "threatened". That sounds pretty dire doesn't it? About 21% of the world's mammalian species are "threatened". But what does "threatened" mean? How bad is "threatened"? Well, let me tell you that "threatened" is just another one of OPEC's bullshit terms like "proven oil reserves".

The reason I say this is that only 76 species of mammal

have gone extinct since the 1500s. In other words, only 1.3% of mammalian species have gone extinct in the last 500 years. 98.7% of all mammal species are still there. Their numbers may be severely depleted, depleted like they repeatedly become during a climate shock, but they are not extinct.

Now some of these 76 extinctions were due to habitat loss and human hunting. But the introduction of stowaways (dogs, cats, rodents, and snakes) are widely reported to have been bigger killers. And many extinctions were probably due to man as a new disease vector — Man bringing livestock and stowaway species that introduced animal diseases from other parts of the world. For example, North American squirrels (like humans) are susceptible to Georgian/Volga marmot plague (bubonic plague/ black death) because both are of the family Sciur•idae (dark•idea).

The Arabs have gotten us to go completely overboard with regard to species and habitat protection.

Biodiversity: Corn matters, owls don't

How many different "species" of owl are there? This is a particularly successful order of birds, and it will make little difference to humanity if one or two of the less successful varieties die off.

On the other hand, the genetic diversity of the corn genome is critical for the survival of our species. So let's get real careful about corn biodiversity and less careful with owl biodiversity. And let's do the same thing with all our domesticated grains and animals.

Avoid having contact with wildlife

Some people just adore wild animals. But the less contact we humans (as mammal vector) have with wildlife, the better it will be for all parties, human and animal alike. You can study animals all right, but if you go in the wild, and you come from 9or go to) some other part of the world, you should quarantine yourself for a time.

The number one cause of oak wilt

I may be wrong, but I bet the main vector for oak wilt and a number of other tree diseases is hiking boots. Wear different shoes when you hike in the wilderness. And keep put your hiking boots in plastic bags.

ECOISM = environmentalism

What a hard word to use

saying en-vi-r-me-n-ta-li-s-m seems to involve 9 different tongue placements. This is the only word we have for this meme and its length hinders discussion of the topic. So let's instead use ECOISM, and ECOIST, words conveniently blocked by the terms EGOISM and EGOIST just before the world started suffering from a wave of Mideast environmental propaganda in the mid 1960s.

Why be fastidious about air pollution?

Given that our planet's skies may soon be grayed with volcanic ash, what is the point of strict air pollution regulations? Shouldn't we be more worried about a preventing a global famine at the start of the next ice age, than embarking on a costly and futile 'crusade' to restore the Earth to some pristine state that only exists during Earth's rare blue climate summers?

Why be fastidious about ocean pollution?

The oceans have 2.8 billion times the mass of mankind. We couldn't pollute the oceans even if we tried. So there is simply no reason for treating sewage that goes into the ocean, except for

localized problems.

And there are lots of rivers that carry vast amounts of animal waste, from vast animal habitats into the ocean in concentrated river-mouth locations. There is no reason why we can't do this and save a great deal of money, the money we are currently wasting on sewage treatment. Although it wouldn't cost much spread our waste out so it does not cause any environmental problems. But there is no reason to treat the sewage.

It was all pretty much for nothing

Except for our clean-up of our rivers, lakes and fresh water sources, and the clean-up of the environment of our cities and insider air-pollution, all our environmental protections really achieved nothing at all of any consequence.

The best way to help the environment

If we have townships based transit as I explain herein, we will do away with the number one thing driving so many animal species to extinction, that of becoming road kill. You know, 1,200,000 deer die each year as road kill. How many other animals die as roadkill? Surely more wild animals meet their deaths these days as roadkill than by any other cause.

As well, shared trains are 20 to 50 times more energy efficient than cars, and they can be totally quiet if they have noise shrouds that enclose the tracks and viaducts.

And their electricity can be generated outside of our population centers. So if you all care about the environment, lets have transit oriented townships around a train station, cities of a European scale, with no cars, or car roads, except compressed air buggies that go around the ring road. These are cities with a heating/ cooling electric/ compressed air/ vacuum plaint outside of town, and zero pollution inside the town. Even the kitchen fumes go into the vacuum system.

Solar is stupid in ice ages

If the ash levels in ice cores imply perpetually gray skies, why are we bothering at all with solar energy?

Wind energy wins the stupid award

The temperature levels described by the ice cores imply a world with much less wind. So why are we building all those \$3.5 million wind energy boondoggles? Again, these \$3.5 million wind turbines produce less than \$3,500 in electricity per year. Without heavy government subsidies, that is <u>a return of less than 1/10th of 1%</u> — a return that does not even cover the cost of maintenance. And this is during a warm age.

Alternative energy = subsidized energy

You know, neither wind nor solar energy work yet, over 42 years since the Arab-created oil crisis began. By work, I mean that these two technologies still save only a tiny sliver-fraction of the oil than they take to build, ship, finance, install and maintain over their useful lifetime.

They are using the wrong type of propeller

If windmills are supposed to extract energy from the wind, how come they have such a small contact area with the air? Why don't they have broader blades like on a boat propeller?

What it means to "go solar"

When you install solar panels on your home, your supposed contribution to "the environment" is that you are supporting an

industry that one day in the future, promises to make panels that are perhaps 10 times more efficient — assuming that the next ice age has not started yet.

Habitat protection

And during the next ice age, most habitats north of New York will eventually be covered in ice sheet — while the near New York latitudes will experience drastic climate changes. Obviously this will disturb many endangered species found nowhere else on Earth. What is the point then of a hyper-allergic bureaucracy regulating oil drilling in all these places? The purpose is to Make Mideast oil and mineral imports more valuable.

Ice age sea levels

As the ice caps build, sea levels will fall as they do in every ice age. When that happens, 100% of the world's coastal areas will then be left high and dry and far above sea level. What is the point of protecting all these oil-rich beaches and coastal wetlands as if they were some eternally pristine thing we inherited from 60-million years ago?

Migratory bird habitat

What of protecting of our oil rich wetland areas because migratory birds need somewhere to nest? Migratory birds go to these places specifically because there are no other animals living there. Saying that a place is a breeding ground for migratory birds is like saying that it is the most worthless salt contaminated leftover habitat there is. Why are we protecting all these salt-soaked oil-rich places? Are we protecting habitat or keeping new oil fields from competing with OPEC?

The importance of scale in ecoism (environmentalism)

<world population growth chart>

In my youth, I was deeply saddened (indeed depressed) about the state of the environment. Like so many people, I actually thought humanity was depleting the world's resources and ruining the environment. I saw the graphs on how fast the world's population had grown over the last century, since the start of industrialization, and I knew that humanity was using hundreds of times more of almost everything. So I thought humanity was destined for a catastrophic crisis point.

The atmosphere is 10,400,000 times the mass of mankind

The oceans are 2,800,000,000 times the mass of mankind But then I came up with a question that stopped my blind acceptance of all ecoism. The question was: How big is mankind in proportion to our environment? See, I firstly compared the mass of mankind to the mass of the atmosphere and then secondly to the mass of the oceans. For the atmosphere, you will recall, the ratio is 1 to 10.4 million — and for the oceans it is 1 to 2.8 billion.

Now, when you made your decisions about the environment, did you have a clear understanding of how big mankind is in proportion to the environment? Until this presentation, very few of you probably spent any time at all comparing the true scale of humanity to the scale of the environment — yet most of you seem to support all ecoism. I would suggest that it is time to reconsider your views in light of some new and unarguable numerical evidence.

News flash: "99 Earth-like planets discovered"

What if the planet was a hundred, or even just 10 times larger than you previously thought, relative to humanity? Might you then reconsider your ideas about the depletion of our planet's resources? What if you suddenly discovered that the oceans were actually a thousand times larger than you thought in relationship to mankind? Wouldn't humanity then be pumping one thousand times less bathroom waste into the oceans? Would this cause you to reconsider some of your attitudes about ocean pollution? What if we had enough fossil fuels to last us 10,000 years at current use levels? What if we also had enough iron and copper and every other inorganic material to last us a 100,000 years at current use levels? What if we could store enough food to last humanity a century?

Now certainly we should not dump chemicals in the oceans that tend to concentrate in creatures farther up the food chain. But fish use the ocean for their organic body waste, so why can't we? How will we ever significantly pollute the oceans if they have a mass that is 2.8 billion times our mass? I mean, to achieve a 1 part per million pollution level, we would all have to put 2,800 times our weight in sewage into the ocean. And that assumes that our toilet waste never breaks down — when in fact, toilet waste almost completely breaks down in a matter of weeks.

So the billions that America spent/spends on cleaning toilet sewage for release into the oceans —that is/was simply a waste of resources. All we need are long pipes to get the sewage far enough out to sea, and an adequate dispersal system.

The world is huge and humanity is tiny — utterly insignificant in proportion. We will never deplete any nonbiological resources on this planet. We earthlings are just too puny. There is plenty of inorganic resources to go around. And even with 7 billion people, there is also plenty of land to live on and farm — and anyone who says otherwise is either innumerate or touting for Islam and Ishtar.

Scale towers over every other aspect of ecoism

The single most important factor in man's relationship to his environment is man's true scale in relationship to that environment. After all, the most basic questions are: 1) How much of the world's resources are being used by man? 2) How much are we polluting the environment.

Most Ecosim is based on innumeracy

Few people have any numerically quantified sense of the true scale of mankind in proportion to the environment and the planet.

Humanity is tiny and insignificant with a combined mass equal to around half a cubic kilometer of seawater. The planet's hydrosphere on the other hand has 1.4 billion cubic kilometers of water. How are we ever going to cause any lasting global ocean pollution?

And the atmosphere has 10.4 million times our mass. Being so utterly tiny, how are we ever going to cause any significant amount of air pollution?

Uninformed decisions of immense importance

Have you been making hugely important decisions about the environment based on innumeracy and emotion? Have you been crippling your nation's industrial base making <u>the home of the free</u> vulnerable to attack and conquest?

Habitat protection and the Mideast struggle

The idea of protecting vast swathes of the planet from mining, oil drilling, and agriculture in order to leave habitat is nonsense. It is the same sort of nonsense that led the administration of William I of England (d.1087 AD) to impose his draconian "forest laws", so that hungry Englishmen did not eat forest mean that competed with Mideast food imports. Please believe me when I say that in general, most habitat protection is mostly the land of no resources struggling to hide our goods, so it can sell us its goods

for more money.

Is the deep sea an ideal place for toxic waste?

Is the deep sea an ideal place to diffuse toxic waste? You know, if every human alive today mixed into the oceans an amount of toxic waste equal to their 2.8 times their weight, the concentration would be 1-in-1-billion.

But we don't need to dispose of even 1% of this amount of toxic waste. And the stuff we do dispose of would not be diffused. In fact, we could put it in containers, and put them in places where the sediments would bury them.

Air Pollution

Isaiah 24:5

"The earth lies polluted under its inhabitants, for they have transgressed its laws, violated the statutes and broken the eternal covenant." [This bible is from Arabia, is it not? Here we see the Arabs have talking about pollution thousands of years ago. In the old days, the cure was burning their sacramental incense/hashish as a way of purification.]

Chain Reaction Film, 1996

"We're running out of time. We have polluted and peopled this planet to the brink of extinction. We are destroying our world at a suicidal pace. We need a pollution revolution, and its not going to be easy because the world is addicted to petroleum. We have limited resources and we go to war to protect them. We need a new technology and this technology can't be sold, it must be given away, to everyone."

Propaganda: Hammond World Atlas 2003

"Environmental pollution, resource depletion, population pressure! Can we truly hope to pass the heritage entrusted to us on to successive generations?"

Natural vs. Manmade pollution

I read somewhere that the world burns about 4 cubic kilometers of oil a year. Of that, given no emission controls at all, less than 1/2 cubic km/year of material will remain the atmosphere as anything other than relatively harmless gasses like CO2 and CO. By comparison, the eruption of Tambora put 160 cubic kilometers of dust, debris and sulfuric acid into the atmosphere without any noticeable long term effect. So perhaps we have made an error of scale here and overreacted to what appears to be a manageable amount of manmade air pollution — on a global scale at least.

Air pollution doesn't last

It is important to realize that air pollutants are harmful because they are reactive, and readily combine with other things. In other words, harmful exhaust emissions don't remain in the atmosphere for long, they rapidly react away.

The 1985 Honda CRV compact got 53 mpg The 2006 Honda Fit compact got 32 mpg

Computers have more than doubled internal combustion engine efficiency. So isn't it remarkable how 30 years ago, Honda's most efficient gasoline-powered compact car got 66% better mileage?

Going into the 1990s, Congress had already enacted three separate clean air acts, each with progressively tighter standards for vehicle emissions. By the early 1990's, we were eliminating around 88% of non CO2 vehicle exhaust pollutants. Today, new cars are more than 98% clean. Why do our vehicles

need to be so clean?

The reason seems to be that computers have made engines much more efficient since the early 1990's. That would have been a disaster for OPEC, had they not lobbied America's corrupt congress for increased emissions standards that produced an even drop in fuel economy in our vehicles.

We can thank these emission controls for a substantial fall in mileage when mileage should have doubled thanks to computer aided design and computerized engines, dual overhead cams, 16 valve engines, turbochargers and the like.

85% is probably clean enough

Cleaning exhaust emissions by 50% does not lower fuel economy by very much. However, if we go past say 90%, we see a substantial drop in fuel economy. So let's make an curve where we take a typical compact car engine (say that in the Ford Festiva) and modify it so that it is 50%, 60%, 70%, 80%, 90%, 95% and 98% clean. Let's have a \$5 million prize for the most fuel efficient engine in each class, so the world will have an accurate emissions-efficiency curve. Then once we know this curve we can make intelligent policy about vehicle emissions. I bet we will say that 80% or 85% clean is clean enough given the substantial drop-off in fuel efficiency that greater exhaust cleanliness costs.

SUV's: 82% heaver but 26% lower mileage

Another way to see what is going on is in the lower emissions standards for SUVs. Honda's 3800 lb. SUV, the CRV (same name, different car) is 82% heavier than Honda's economy car, the Fit, but the Fit only gets 26% better mileage. The reason is that the SUV is allowed slightly dirtier exhaust emissions.

America's corrupt democracy

Even though new materials and computer engineering should have made our cars lighter, the Honda Fit is remarkably about 40% heavier than Honda's old 1980s economy car (the old version of the CRV). The reason for this was that because so many people were driving 3300 lb. and 5300 lb. SUVs, Congress decided (in its heavily lobbied wisdom) that all our cars needed to be safer, and this safety equipment increased the weight of our smallest cars by a whopping 40%.

And given the high correlation between vehicle weight and mileage, there was a similar drop in mileage for all the fuelefficient cars. Thus compact cars really don't get that much better mileage and many people opt to drive the SUV gas guzzlers that OPEC wants us to drive.

The next Tambora eruption

When this happens, nobody is going to care about clean air standards for vehicles, or a faint smell of coals smoke in the air.

OPEC is the world's #1 environmentalist

The people who advocate less drilling regulation are often labeled tools of the oil industry. But if you think about it, the opposite is actually the case. The oil industry actually wants more regulation. You see, if it becomes easier to drill oil wells, oil prices will fall, and the value of all the oil reserves these companies hold on their balance sheets suffer a substantial loss in value.

But the real loser from anything that makes oil drilling easier is of course the Mideast. See, the Mideast needs our oil industry burdened by environmental regulations that raise our oil production costs. This makes us unable to compete due to our own dumb laws. This way, OPEC is able to sell its oil for more.

So here we come to see how OPEC is actually the #1 natural friend of the worldwide environmental movement. Here

we come to suspect that OPEC is probably the #1 downstream sponsor of countless environmental and animal charities and congressional lobbies that include: Green•peace, the Sierra Club, the World Wildlife Foundation, the humane society, and PETA.

Seven Pillars of Wisdom by T.E. Lawrence (Lawrence of Arabia) Ch.6

"the Arabic peoples... a prolific Semitic agglomeration... great in religious thought, reasonably industrious, mercantile, politic, yet solvent rather than dominant in character."

How the Arabs compete

The Arabs don't compete on price, quality, or service, but by sabotage (saber•tagging) or the competition. They do this with "Byzantine" regulations, and they also do it with physical sabotage, judging from the incredibly coincidental timing of many recent oil 'accidents'. The recent BP spill is a fine example. It happened precisely when America was beginning to discuss offshore drilling in earnest. Are we really to believe that this was mere coincidence?

Earth science and the environment 5.3 By Thompson and Turk

"Currently, the United States depends on 25 other countries for more than half of its mineral resources. Some must be imported because we have no resources of our own. We do have reserves of others, but we consume them more rapidly than we can mine them, or we buy them more cheaply than we can mine them."

[The last alternative is probably true. However, it omits how the Arabs have us drilling for oil offshore and on the north shore of Alaska.]

Where America's mineral wealth really went

When I was a boy, America was rich and needed very few minerals from overseas. But today that is apparently no longer the case. What happened? Did we really deplete our nation's vast mineral deposits, or was it just some Arab trick? And what about how we became dependent on all sorts of resources — all at once — within just a couple decades. Is that natural? Is that the way things work? Did we really just start running out of all sorts of minerals all at once?

I say that this change is artificial. I say that Arabs Inc. lobbied America's corrupt congress to create lots of parkland offlimits to mineral extraction. I say that they carefully chose all our mineral-rich lands and lobbied to make these places off limits to mineral extraction. I say this is where America's great mineral wealth went.

Resource rich America is now finding itself without natural resources, much like China. And this is not real scarcity, but Arab-induced solvent-style scarcity, so that the land of no resources can have valuable monopolies or cartels in all sorts of key commodities. This way, the Mideast parasite can get something for nothing from its host. For example that inaccessible and otherwise worthless Afghan copper mine the Arabs recently sold the Chinese for \$3-billion.

A huge increase in parkland

Since the 1960's, a huge portion of U.S. territory has been made into parkland. This includes nearly 100% of America's swamps, or rather precious wetland habitats.

"He loved the tall stags as if he were their father."

This was said of William I of England (d.1087 AD). His

administration imposed draconian 'forest laws' that kept the hungry people of England from farming on something like 1/3 of England. This land was off limits as royal game reserves at the time.

Sections 47 and 48 of the Magna Carta (see a bit below) corrects a similar abuse. You see, the parasite has been hiding our resources for a very long time. This way they can sell them to us and get something for nothing.

Giovanni Botero, The reason of state VIII:2 (1589 AD)

"Further, the prince should not permit lands to be employed uselessly or for such things as parks. England is full of parks, to the great displeasure of the people, who complain that because of them they suffer shortages of grain and other things." [And this enables the Arabs to come in and sell their grain at famine pricing.]

Uddhava Gita 16 — A primary Hindu text

"Land that is untrodden by dear should be considered unholy land. Land that is trodden by deer but in which the wise are not heard, and their words are not worshipped, should be considered unholy land. Any lands which the wise do not dwell are truly lands without sanctity."

Leviticus 11:1

"The lord said... whatever animals have cloven hoof... you shall not eat."

[This ruled out pigs, rabbits, camels, and many wild animals. Obviously the Arabs want their host races more dependent on imported Arab grain. If we can't eat certain animals it helps keep us dependent on imported grain. Here is why all Mideast religions have food prohibitions. On top of this, the Harem spawn have no such prohibitions and can eat these things when times are getting tough.]

Jacques Le Goff-Medieval Civilization 400-1500. Ch.6.1

"...gatherers of wild honey lived off the forest and provided for the sustenance of others. These poor people liked poaching too, but game was first and foremost a product of the chase, which was reserved for the lords. Thus, from the smallest to the greatest, the lords jealously defended their rights over the riches of the forest. The forest bailiffs were always on the look out for scrounging villeins [villains, hungry people from the ville, the town]. Kings were the greatest lords of forests in their realms and energetically endeavored to remain so. For this reason the rebellious English barons imposed a special Forest Charter on King John [of England] in 1215, in addition to the political Great Charter [the Magna Carta]. When, in 1382, Philip VI of France had an inventory drawn up of the rights and resources which he wanted to constitute a dowry... he had a valuation of the forests drawn up separately. Their profits made up a third of the whole of the income from this lordship."

Magna Carta §47

"All forests which have been created in our time shall forthwith be disafforested. So shall it be done with regard to rivers which have been placed in fence in our time."

Magna Carta §48

"All evil customs concerning forests and [rabbit] warrens, foresters and warreners, sheriffs and their officers or riverbanks and their conservators shall be immediately inquired into in each county by twelve sworn knights of such country, chosen by honest men of that county, and shall within forty days after the inquest be completely and irrevocably abolished, provided always that the matter shall have been previously brought to our knowledge, or that of Our Chief Justiciary if We ourselves shall not be in England."

Montesquieu, Persian Letters, c.1721, #120

"Countries inhabited by savages are usually thinly populated because of their universal opposition to agricultural work. This unfortunate aversion is so strong that <u>when they curse or insult</u> <u>an enemy</u>, they tell him to go plow his fields. And they believe that the only pursuits which are noble and deserve their attention are hunting and fishing. But since there are often years when hunting and fishing provide very little, they are frequently ravaged by famine."

[This sort of custom plays nicely into the hands of Mideast Inc. which is always ready to provide food in exchange for animal skins, or honey, or worthless daughters for their harems. Funny how many cultures want only sons and don't want daughters at all. Funny how these customs make it so easy for the Arabs to trade a little food for 'breed mares' or sex slaves for their harems. Here is how the shape-shifting Jedi/Yehudi can manage to look like anyone. Here we see the power of carpe dei'um = seized the gods, and installing a cultural aversion to farming and food production.]

The "Great American Desert"

In the 1820s President James Monroe ordered Major Stephen H. Long to explore the Missouri and Platte rivers. This fellow mislabeled the Great Plains as a "Great American Desert", calling it a place so desolate and worthless that it was good for nothing but relocating Indians into. Funny how this area went on to be the great American breadbasket. Sometimes land is removed from production only by calling it worthless or contaminated.

Rev. Thomas Burnet - The Sacred Theory of the Earth

[This was 'the most popular geological work of the 1600s', as quoted by Stephen Jay Gould in "The Reverend Thomas' Dirty Little Planet"]

"We do not seem to inhabit the same world that our first forefathers did.... To make one man easie [live at ease], ten must work and do drudgery... The Earth doth not yield us food, but with much labor and industry... The air is often impure and infectious." [To stimulate demand for imported grain, the Arabs would also periodically introduce diseases of crops and draft animals. Then they would use the ancient media to blame nature.]

Horace, (d. 8BC), Delicta maiorum

"What does corrupting time not diminish? Our grandparents brought forth weaker heirs. we are further degenerated and soon we will beget progeny yet weaker still." [Here is some 2,000-year old Arab nature propaganda.]

Montesquieu, Persian Letters, c.1721, #112

"Why is it that the world is so thinly populated in comparison with former times? How is it that nature has managed to lose the prodigious fertility that she originally had? Could she already be in old age, and failing form lack of strength?"

Lucretius, On the Nature of the Universe c. 60 BC, 5.820

[After explaining why the earth is rightly called 'mother earth' Lucretius says:] "Then, because there must be an end to such parturition [the period where a female bears offspring], the earth ceased to bear, like a woman worn out with age. For the nature of the world as a whole has changed with age. Everything must pass through successive phases. Nothing remains forever what it was. Everything is on the move. Everything is transformed by nature and forced into new paths. One thing withers by time, decays and dwindles. Another grows strong and emerges from the unknown. So the nature of the world as a whole is altered by age. And the earth passes through successive phases too, so that the earth which used to be able to bear can no longer do so..."

[Most people don't know it but the Roman Empire was dependent on grain from the Mideast, the land of no resources for most of its existence. And before Rome, Ancient Greece was dependent on Ukrainian grain sold by the Mideast for over a century. And today the West is dependent on Mideast oil because we 'ran out of resources' from this immense planet of ours.

Phlegon, Amazing Stories, 10±

[There was an earthquake that revealed a 'giant' buried in the ground. They found a tooth that was] "over a foot long and sent it to Tiberius. They asked if he wanted the hero's body brought to him. The emperor made a wise decision about this. He neither deprived himself of learning about its size, not did he act with impiety by stealing corpses. He summoned a renowned geometer, Pulcher by name, whom he prized for his skill. He directed him to reconstruct the face in scale to the size of the tooth. Pulcher calculated what the proportions of the whole body and the face would be by the size of the tooth. Then he quickly fashioned it and brought it to the emperor. The latter declared that he was satisfied with this viewing of it, and sent the tooth back where it came from... One should not mistrust these stories, realizing how in earlier times, nature in its prime bred everything closer to the gods, but that as time wasted away, the size of the creatures wasted with it."

Marco Polo, Divisament Dou Monde Ch. 2

"In this country originate the precious stones called Balass rubies, of great beauty and value. They are dug out of the rock in mountains by tunneling to great depths as is done by miners working a vein of silver. [sounds difficult and expensive]... They are mined only for the king and by his orders. No one else can go to the mountain and dig for these gems without risking instant death. And it is forbidden under pain of death and forfeiture to export them out of the kingdom. ...This <u>he does so that these</u> <u>Balass rubies may retain their present rarity and value. If he let</u> other men mine them and export them throughout the world, there would be so many of them on the market that the price would fall and they would cease to be so precious. That is why he has imposed such a heavy penalty on anyone exporting them without authority."

<Clip from 'all the easy oil is gone' TV ad>

Given recent increases in commodity prices, many people believe that the world is running out of minerals, or at least easy to extract minerals. In truth, given the true scale of humanity in proportion to its environment, this is simply absurd. Humanity is incredibly tiny in proportion to the planet. There is simply no way we will ever run out of anything that is taken out of the ground, including petroleum. Today's scarcity in commodities only exists because the Arabs are trying to increase the value of their minerals.

Build a church on top of it

It seems that nowadays, most of the world's scarce resources are now buried under a new church, a new church of the environment. Or rather, someone has built a great new church of the environment over the richest mineral deposits. Today, huge tracts of the world's richest mineral deposits have been sanctified by the discovery of "a unique species found nowhere else on Earth". More accurately, if the embargo people pay carefully selected "scientists" of the right mentality to find "a unique species found nowhere else on Earth" — Most places will yield some animal with some variation, or some coloration found nowhere else. Thus the most fanatical naturalists, the ones with the lowest bar for determining speciation — these get lots of indirect funding from the embargo people. They also tend to be praised in the "scientific" journals and the media. The people who go against the Mideast's agenda of less and worse for the infidel outsiders tend to have woe piled upon them — all in best-friend or worst-enemy style.

"Precious wetland habitat"

How did our swamps become precious wetland habitat?

Sacred frolicking beaches

Funny how surfing, bikinis, sunbathing, shore-birds, and marine mammals became precious in the decade before the Arab oil embargo.

Byzantine bureaucracies exist to stop an economy

Look at the Byzantine oil well approval bureaucracies in our nation. Look how the government in the land of the free treats drilling a hole in the ground as a potentially serious crime against nature. So today, new oil facilities and new mines mostly require many years of carful study — Long enough to have a highly profitable commodities bubble start to finish.

Liability causes sabotage

Between the Byzantine approval bureaucracies for wells and mines, the insane multi-billion dollar environmental penalties, and the unlimited environmental liability — anyone involved with oil drilling for oil is vulnerable to sabotage. And anyone competing with Arabs Inc. will suffer sabotage in one form or another.

Why is it a felony to drill an oil well?

Today in America, drilling an oil well without the proper permits is a felony with long prison terms. What spirit could have 'possessed' our democracy to install such an OPEC-benefitting and counter-intuitive law? I submit to your judgement that this is prima facie evidence that our current American style democracy is so profoundly corrupt that it may be considered the illusion of democracy.

Let's halt offshore oil

Offshore drilling is such an expensive folly. As well, sending oil over the ocean is such a waste of energy. Let's prohibit both of these thing except at the bearing straight and to islands. And let's instead open up our onshore oil lands, where we can just scoop up any spilled oil. And let's start with inland salt-polluted false habitats that are too salty to function as real habitats.

Where are all the geothermal plants?

And how come we never hear about what a terrific thing our geothermal plants are. How they make electricity from nothing more than a deep pipe in the ground we squirt water into. They are like nuclear reactors but without the uranium. How come our make-believe democracy never tried to prospect for geothermal sites?

<Gif of OPEC 'screw em' logo, top part penetrating lower part>

Now there is an immense amount of boiling hot ground on our planet (on a human scale). It is just remarkable that nobody has figured out a way to efficiently generate electricity by drilling a hole in this boiling hot ground and using the heat to drive steam turbines. It is like having a nuclear reactor, but without the radioactive fuel. It is just a hole drilled in the ground with an injection pipe inserted into it. Strange how so many of the world's volcanic areas and hot-springs are sacred park land, off limits to geothermal energy projects.

This is doubly strange when we realize that geothermal energy is the only form of "renewable energy" that actually produces more energy than it takes to build, operate and maintain. (See Larderello Italy for the world's first geothermal power plant in 1904.)

Environment, The science behind the stories A textbook by Jay Withgott, Scott <u>Bre</u>nnan

"Geothermal power plants use the energy of naturally heated water to generate power. Rising underground water and steam are harnessed to turn turbines and create electricity. Geothermal energy is renewable in principle (its use does not affect the amount of heat produced in Earth's interior), but the power plants we build to use this energy may not all be capable of operating indefinitely. If a geothermal plant uses heated water at rate faster than the rate at which groundwater is recharged, the plant will eventually run out of water. This is occurring at The Geysers, in Napa Valley, California, where the first generator was built in 1960. In response, operators have begun injecting municipal wastewater into the ground to replenish the supply. More and more geothermal power plants throughout the world are now injecting water, after it is used, back into aquifers to help maintain pressure and thereby sustain the resource. A second reason geothermal energy may not always be renewable is that patterns of geothermal activity in Earth's crust shift naturally over time, so an area that produces hot groundwater now may not always do so."

[1) The Arabs are grasping at straws trying to find problems with geothermal energy. They hate geothermal because it actually works.

2) Oil, coal and nuclear power plants all use water to make steam to drive generators. How hard can it be to pipe some water in?

3) This plant is 57 years old and still going

4) They are grasping for straws again, the geothermal hot spots take many thousands of years to shift.

5) In late 1972, the Geysers was producing 302 megawatts from geothermal sources.

6) Way back in 1916, the Larderello geothermal plant in Italy was producing over 9 megawatts from geothermal sources.]

Hammond World Atlas, 2003

"The designers of the Alaska [oil] Pipeline [1,310km long, 1974-77] had to find ways to protect the delicate permafrost ecosystem, in which soil thaws only near the surface in the summer and would shift [move, heave] if exposed to additional heat. The pipes were laid on supports above ground and equipped with automatic cooling units. [sounds expensive] But the oil entering the well insulated pipeline at about 176°F [80°C] must not cool excessively, as it would stop flowing. After fourand-a-half weeks, it arrives at the point of Valdez at about 86°F [30°C]"

[The Alaska oil pipeline is 1,310 km long and the oil enters at 80°C and finishes at about 30°C, so it loses 1° every 26.2km. Thus we realize that we can efficiently move heat for hundreds, and even thousands of miles with minimal heat loss. Thus we realize that municipal heating and cooling plants are incredibly efficient when they use well-insulated pipes.

We also realize that a central geothermal plant might provide direct heating for towns a thousand miles away. Here we

imagine portions of Yellowstone park being sacrificed to provide unlimited energy to the northwest third of the US. Although however, it is probably a lot cheaper and easier to drill a new 3 km deep hole than to build a 300km heat pipeline on the surface.

Also, we must ponder how geothermal is like having a nuclear power plant, but without any radiation. And best of all, we will be helping to take heat away from parts of our planet that need to be cooled.]

Free heating for huge areas

I don't know how far we can efficiently pump steam and hot water, but I bet that a geothermal plant can provide free heat for at least 500km in any direction.

Environment, The science behind the stories A textbook by Jay Withgott, Scott Brennan

"The Oregon Institute of Technology heats its buildings with geothermal energy for 12-14% of the cost it would take to heat them with natural gas. Such direct use of naturally heated water is cheap and efficient, but it is feasible only in areas such as Iceland or parts of Oregon, where geothermal energy sources are available and near where heat must be transported. [The source can actually be hundreds of miles away.]

Thermal energy from water or solid earth can also be used to drive a heat pump to provide energy. Geothermal ground source heat pumps (GSHPs) use thermal energy from near-surface sources of earth and water rather than the deep geothermal heat for which utilities drill. Roughly half a million GSHPs are already used to heat U.S. residences. Compared to conventional electric heating and cooling systems, GSHPs heat spaces 50-70% more efficiently, cool them 20-40% more efficiently, and reduce electricity use by 25%-60%, and can reduce emissions by up to 72%. These pumps work because soil does not vary in temperature from season to season as much as air does. The pumps heat buildings in the winter by transferring heat from the ground into buildings: they cool buildings in the summer by transferring heat from buildings into the ground. Both types of heat transfer are accomplished by a single network of underground pipes that circulate water. Because heat is simply moved from place to place, rather them being produced using outside energy inputs, heat pumps can be highly energy efficient... [Why not have deep community wells for our heat pumps?]

At the world's largest geothermal power plants, The Geysers in northern California, generating capacity has declined by more than 50% since 1989 as steam pressure had declined, but The Geysers still provide enough electricity to supply a million residents."

What could be easier than geothermal electricity?

1) Drill say a 90cm diameter "oil well" hole somewhere that is already hot.

2) pour slurry around the a pipe and install a "patio" around it, so it can contain steam pressure.

3) hang a water injection pipe, say a 10cm pipe, in the hole.

4) Use the steam to drive a turbine.

5) There are no moving parts underground except the rotary descaling robot that is used from time to time.

6) It is like a nuclear reactor, only there is no dangerous radiation. In fact, using this sort of thermocline generator is perfectly clean.

7) It is not hard to imagine thermocline generators being used to melt ice and pump the water through insulated pipelines to the dryer parts of the world.

The geothermal gradient

The <u>ATMOSPHERIC LAPSE RATE</u> describes how temperatures fall at higher altitudes by 6°C per 1,000 meters in altitude. A similar thing happens as we go deeper within the planet. I had trouble finding good data on thermal lapse rate without doing web-searches and perhaps waking the S•myths.

Al Gore, Inconvenient Truth

"The American petroleum institute? Its fair to say that's the oil and gas lobby"

The ecology trap

The reason the world fell so easily into environmentalism is that there is no interest group specifically opposed to it. You see, our oil companies actually donate money to the very environmental lobbies that makes them uncompetitive. Then, when our environmental regulations get debated, it is a dialogue between our non-profit environmentalists and the oil companies that are some of their biggest contributors. So, no surprise, both sides are always asking for more regulation that raises the cost of drilling wells and MINing for MINimized MINerals in America.

Is ecoism a science or a religion?

Now, here is a question that the future of humanity depends on. Should our ecoism be based on fact, observable, measurable, repeatable fact, or is it a religion, a matter of faith and belief? If you believe in ecoism like people believe in Islam or Catholicism — your mind is already made up with respect to this new and nascent Mideast religion. Also, if you believe in ecoism like people believe in other Mideast religions, then no amount of purity and ritual cleansing (that the Mideast profits from) will be enough to appease the Mideast religious establishment that is running your religion.

New religion - same ancient process

Over our lifetimes, we have all witnessed Mideast Inc. creating the new religion of ecoism — a giant self-reinforcing lie it turns out. But here we have all witnessed the ancient process the Arabs use to create new religions. With this in mind, how can anyone still believe in any of the other Mideast prophets or religions?

How they do it

Mideast Inc. starts with some basic idea that we can all agree is a good thing. In the case of ecoism, a cleaner environment. Then they seize our beliefs, CARPE DIEM they call it, "seize the gods". The parasite then seizes control of the host's beliefs and hijack its ideology, turning it into a tool for influencing the behavior of their host.

Follow the money: it always leads to the true owner

Look at how all the major religions burn or used to burn Arabian frankincense incense. This is tree sap which frequently throughout history cost its weight in gold. How can you believe in any religion that ever needed money to buy piles of Arab frankincense?

You saw it in your lifetime

You witnessed the Mideast parasite spirit creating a new religion (the environmental religion) out of nowhere. You saw the Mideast fabricate a new self-serving ideology —an ideology that exits primarily to feed the land of no resources. Here is a new and obviously Mideast-made, Mideast ideology created by the same Mideast people who created all the other self-serving Mideast ideologies religious and "scientific". With this in mind, how can anyone still believe in any of the many other Mideast prophets or religions?

Cleverness, time-honed insights, and treachery

Mideast Inc. created the new ecoism religion for largely the same reasons it created all the other religions of the world. The Mideast has no resources of their own, so they must rely on their cleverness, time honed insights, and treachery to get us to give them our resources for nothing.

The CO2 Greenhouse gas theory is a religion

Everyone, please go out of you way to say that the CO2 theory is "The latest in a long string of false Mideast religions."

The church of oceanography

I used to live in the La Jolla Shores, within walking distance of Scripps Institute of Oceanography. My next-door neighbor went to school at Scripps until she was pushed out of the zoology department for not having the right views on global warming.

She said a minor scientific celebrity visited the campus and chatted with everyone about a variety of thing — including her views on global warming. In fact she said he seemed especially concerned about whether she believed in global warming. She did not believe in it and she said so to this man. After this, within a matter of months she was told that she was not making acceptable progress and told that her studies were over at that "scientific" institution.

To restate: she didn't swallow the CO2 religion, and go along "religiously" with the "official orthodoxy" of Scripps and was pushed out of her post-graduate studies in marine zoology. Apparently, there could not be any oceanographer-scientists who did not adhere to the Mideast's new climate religion disguised as hard science. These were pushed out of OPEC's new church of CO2 induced climate change.

All oceanographers and climate scientists have been carefully screened

Everyone called a "climate scientist" or "oceanographer" has been carefully pre-selected by the Arabs and its ancient process of priest vetting. Thus we can't really believe anything for sure if it is related to these fields.

Science and engineering

In around 1984, I met these three engineers from SIO-Scripps. They worked in the shop where they designed and fabricated interesting equipment for deep sea research. It was a beautiful shop with a sweeping ocean view. The institution thus had its pick of top engineers.

We talked about many things related to science, and I recall them asking me about the CO2 theory. I had first heard about the theory in high school chemistry class and recall how I thought the idea was foolish the first time I heard it, based on scale. So I said so. And they told me about how they didn't believe it either, but all the scientists did. I took this as an exaggeration, until remembering it decades later

It was no exaggeration. All the "scientists" had been carefully chosen based on their conformance to religious orthodoxy, but the Arab in charge neglected to consider the engineers, and all three of the SIO engineers I met, thought the CO2 theory was nonsense.

Ask the other scientists

Regarding the CO2 theory of climate, what percentage of the following believe in it:

- 1) Astronomers
- 2) Structural engineers
- 3) Aerospace engineers

The Scripps Institute admission application

In around 1983, the same friend as mentioned before showed me an admissions application from Scripps Institute of Oceanography. She pointed out how the admissions standards were absurdly high, and how nobody was qualified to get in. She said it was all about connections, and if she had not struck up a correspondence with her main professor/sponsor, she would never have gotten in. Is this the way science should work? Is anything coming out of such an institution truly science?

Also, I am sure that there are lots of people who have seen this sort of application from a politically powerful science institute. If you have one of these applications, please post it. And if you have ever been pushed out of oceanography, climate science, or any related field, because you did not adhere to the global warming theory, please tell the world your story.

Offshore volcanos

I met a guy from Scripps at a party once and he said something about there being a great many offshore volcanos that were generally ignored or mislabeled on all the sea charts. Is this so?

CFC's and air conditioning

Where air conditioning exists, it tends to be by far the biggest electricity user in that building. After air conditioning, in most homes comes the refrigerator. Both used CFCs. Now a little known fact is that non-CFC refrigerants are substantially less energy efficient that CFC refrigerants. So switching to non-CFC refrigerants increased worldwide electrical usage substantially. And on hot summer days, almost 100% that peak electrical capacity comes from Mideast oil.

Now, we all just went along with the scientific studies linking a hole in the ozone layer with the CFC refrigerants. But maybe Mideast Inc. fabricated up this anti-CFC religion to increase demand for oil. For the following reasons the CFC and ozone hole ideology looks like a hoax:

1) The atmosphere has 10.4 million times the mass of humanity, so the atmosphere surely must have something like 10 billion times the mass of all the CFCs ever used. Remember, we are talking about a near weightless gas here, and one that perhaps 90% of humanity didn't use.

2) Chlorofluorocarbons are big heavy molecules compared to the other components of the atmosphere. We should expect that CFC's would hug the ground instead of floating up into the upper atmosphere and staying there to cause damage. However, if we assume that CFCs are evenly distributed evenly throughout the entire atmosphere (which seems unlikely given their weight) their concentration would be around 1 in 100 billion in the ozone layer.

3) CFCs are supposedly dangerous because they said to catalyze atmospheric ozone. However, in order to do their supposed catalytic magic, the CFC molecules have to first encounter the ozone molecules in the thin atmosphere of the ozone rich layer (10 to 50 km up). This is where the man-made ozone-hole theory gets hard to swallow. You see, the ozone concentrations within the ozone layer are only around one part per million. And supposedly, if all the ozone was concentrated into a single layer of pure ozone, it would only be about 2.5 cm thick.

So let's assume that we have these 1-in-100,000,000 CFC molecules instantly catalyzing every 1-in-1,000,000 ozone molecule they encounter. That is a 1-in-10,000,000,000,000,000 event.

How often to those molecules come into contact? Once a minute? once every hour? Let's say it is once every 10 minutes. If this is so, then it would take around 18,660 years for manmade CFCs to eliminate all of Earth's atmospheric ozone assuming no ozone replenishment and straight-line depletion.

My point is that once again, we have a highly leveraged scientific sounding excuse for altering public behavior in a way that increased Mideast oil sales. Then because of this excuse, we saw absurdly rapid international agreement and regulation. Are you beginning to see someone's modus operandi here? (See also Paul Crutzen's Nobel prize winning work on ozone depletion.)

28.. OTHER IDEAS

Deserts are for prospecting

Deserts offer a truer picture of the world's geology because the planet is naked of vegetation and top soil. The first thing we should all do is map all of the world's deserts for minerals. The second thing we should be doing is sample drilling the rest of the planet to see what lies below the topsoil.

If you are going to mine a sea floor, pick an easy one

Start in a dry seafloor. If you can't do that, then try the Salton Sea or the Great Salt Lake. You are looking for the ancient bottom of a giant sediment pan, one that have been earthquake agitated a ten-4 or ten-5 times over the eons. Here is where I would drill prospect for heavy elements. We will probably find the most expensive urban land on the best gold-fields, just like we find it on the best oil-fields.

Al Gore

A lot of people were swayed by how Al Gore made global warming the main message of his presidential candidacy. They seem to have figured that if a U.S. presidential candidate made global warming his main issue, then global warming must be real. But what if Al Gore was just one of many people that the embargo people started supporting years ago?

Perhaps Mideast Inc. selected a bunch of guys like Gore, and they keep giving them campaign money as they rose in influence. These people always had generous supporters, so they could frequently out-campaign better candidates that had no money. Here we see how Mideast favorites tend to survive and we get a government full of men that can't even speak, or think effectively. (i.e. Dan Quayle, George Bush, and Al Gore).

Climate = sea level = spreading

Given that climate relates to sea level, which relates to sea floor spreading rates; the average spreading rate, if variation can be detected, might provide a crude indication of climate: One that goes back over 200 million years, to the oldest sea floor.

Deep ocean trenches with no rift

The ocean has extremely deep trenches that are not volcanic. Perhaps this shows how the sea floor ridge system is all about outgassing and having an outgassing system to feed hot gas to the planet's surface. Without an outgassing system (and a rupture in Earth's hard skin) the ocean depths can apparently dissipate heat just fine, regardless of water's boiling point.

The average continental shelf profile

Average continental shelf erosion gives us a metric for long run average climate. Here we can see what percentage of time, the Earth is in 95% ice-age, 90% ice-age, 85% ice-age, etc. This in itself is useful information. But we can also compare this data with the average for the ice ages we have ice core records on. Is Earth cooling appreciably? Are the warm ages growing less
Chlorophyll is blue-green

Chlorophyll is supposedly more bluish-green than most plants, so there must be a reason why plants are less blue and more "plant green". Perhaps the reason is that plants have experienced fairly regular evolutionary pressures to absorb as much as possible from the reddish light of ice ages. So "plant green" might be a good inverse-indicator of the average hue of Earth's skies at their most ash filled. This hue should help us make inferences about atmospheric ash levels. Also, in a Blade Runner 2049 type of orange sky, plants probably appear close to black.

Super dark kelp vs. "anemic" green cactuses

Seaweed and kelp are just so dark green due to all the chlorophyll in them, while many cactuses are so light due to their need to conserve water and their resulting lack of chlorophyll. Thus we understand how Kelp exists to exploit CO2-rich light-poor waters. On the other hand, cactuses exist to conserve water at any cost.

Kelp grows much faster on the surface

Plants are green because they absorb and use red and orange light and reflect green and light. Now the reason why water is blue is because it filters and absorbs red and orange light more readily than it does green and blue light. This results in a situation where there are practically no photo-synthesizing plants in the ocean past about 7m deep, for the simple reason that there is insufficient red-orange light.

The only exception seems to be kelp that starts out shallow water. The it spreads like bamboo into deeper water when it grow to the surface. There it uses little gas bladders to floats in the sun. And these vines grow much deeper than 7m meters. So we can surmise that they are doing the same thing that running bamboo does in a dense forest. The tall shoots that grow above the tree-line subsidize the new shoots coming up in the dark. Here is how kelp can grow from depths that are essentially without light for photo-syntheses.

Now once the brainless kelp (with abundant water and CO2) makes it to the surface, what does it do to maximize energy inputs? Of course it grows as long as it can. It grows and grows until the vines break off. And if it is 10m to the surface, an untrimmed kelp vine might be many times longer. Thus it is easy imagine that over 99.8% of the solar energy comes from vines that make it to within 2 meters of the low tide surface.

The matrix is easy to see in deep-trimmed kelp

There is, or was this company in San Diego, called Kelco. I surmise that this company had the right to cut the kelp and take it away as something valuable.

Now it is the strangest darn thing. If this stuff is valuable enough to harvest, why isn't it valuable enough to maximize the harvest. I mean, why not pull it up a few meters and then cut it. Why go around at low tide and cut the stuff below the water level? It doesn't make any sense unless the real reason for cutting the kelp is to get rid of it because long kelp connects back to petroleum. When kelp is cut below the low tide surface, it probably sees its sun energy cut by over 98% in comparison to say a 5m vine.

Thus the kelp grows much more slowly, perhaps 1% as fast, as a 25 meter vine floating on the surface. Essentially the kelp forests stop growing and start to shrink as the reproduction rate falls below the breakage rate. Thus most people never really grasp how immense and full of bio-mass kelp forests can

be. Thus most people never really grasp how oil fields are mostly kelp forests that get torn up in tsunamis.

You in southern California, how far below the average surface is the kelp near you being trimmed? Why go through the trouble of cutting the kelp vines extra short. Why shear it off underwater? Or do they pull on the vines until they break off?

Over-trimmed kelp is a great metaphor

By trimming kelp enough, the parasite can halt growth. This is a excellent metaphor for what the parasite does to the host's economies and its societies. Another term for this is cutting something to the quick.

Track kelp forest density word-wide

This alone may give us a way to predict subductions. I bet that CO2 leakage increases before a subduction and kelp density is a good indicator of this. However, seafloor CO2 sensors are probably more accurate.

Forest fire smog will aggravate the shading

At the dawn of the next ice age we will see much less rainfall worldwide. This will affect some places totally, while others not at all. But worldwide, many now wet places will totally dry out and maybe 25% of the planet's surface will burn over the subsequent decade. And this will aggravate the shading and steepen the descent into the ice age. We might partition our forests in the places that dried out at the dawn of past ice ages.

The world could probably also use track-mounted robots that are capable of turning certain types of forest into wood and mulch. Perhaps there is a chipper on tank treads with 4 mini backhoe arms each with three types of gripper and 8 interchange chainsaws (allowing operation without human involvement.) The top has a backwards slope on it so the lumber can be placed on the roof and it just slides off the back and is covered in a spray of chips. The computer recognizes the branches and cuts them accordingly.

Are you familiar with man's environmental proportions?

Do you know the true scale of mankind in proportion to the various parts of its environment? How can we make any informed environmental decisions without this all-important information? This study of ADROGAISM should be the trunk of the tree on which sits all environmental analysis and regulation.

Feeling the earth's size

Our forefathers were not at all environmental. Were they ignorant, or did they move slower and have a more realistic sense of the true scale of our planet? In the early 1800's, it took a whole summer to travel across America. Perhaps we have lost touch with the truly immense scale of our world in comparison to our own tiny footsteps.

Sometimes I like to gaze at some far away mountains that are about 20 km away. I like to hold the distance in my mind, and feel its size, imagining what it would be like to walk that distance, 20 km, and how it might take maybe 4 hours to walk that distance.

Now Earth has a circumference of 20,100 kilometers, so the planet is 1005 times the distance we were just imagining. If you go a 1005 such distances, you go around the world and come back were you stared. So I like to imagine what it would be like 'zapping' myself to those mountains; then doing it again, and again; the same distance onward to another point just as far away. I try to imagine making 1005 such zaps.

Then I turn 90 degrees in my mind's eye, and imagine

the same thing, 1005 distances. A thousand by a thousand, that makes a million, on a flat surface. Anyway, I try to imagine 1 million of these 20 km by 20 km vistas, as far as the eye can see on a hazy day: That is how big our planet is.

Now there are 7 billion of us. And if we divide our population by 1 million such squares, we have about 7,000 people per square. So that is a small town of 7,000 people for each 20km by 20km square, land and sea. 17.5 people per sq. km. of our planet's surface. Now because Earth is around 2/3 water, we have 52.5 people per square km of land.

Estimating the total energy difference

How much water is removed by ice to get sea levels 135m lower? How much energy would it take to melt this much ice? How much energy would it take to raise the sea surface and land surface by 12°C?

What is the ideal human population?

I mean, if we only had 70 million people, how would we advance and have tens of thousands of products? How would we build buildings and appliances and vehicles and maintain our rail system? And how would will effectively fight the volcanos. And certainly a breeding popular of 7 billion out evolves one with 70 million. Clearly there are advantages to scaling humanity. Besides, we may need every spare hand going forward for a while.

Is the world overpopulated now?

I used to think the world was overpopulated, but this was based on a feeling and the feeling came from the parasite's propaganda in our media. At some point, I did a calculation of farm output and caloric intake and this showed that 2 or 3 million square miles of Kansas-like field could produce enough corn to feed the entire world. I should have double-checked my work, but this is 1,000-miles by 3,000, an area of about half of the United States. Am I wrong? How much of the world's potential food output is used by the world today? If we lost 80% of this output, would that area be able to feed the world without food stores?

Animals or people

I do not know if mankind's current population exceeds the agricultural limits of an ice-age earth. If it does, I hope you will pick more people over more animals. Save a breeding population and get rid of the rest.

Contingency plans

If the ice age at some level, then we do X. If the ice age at another level, then we do Y. If the ice age at yet another level, then we do Z. We should have contingency plans, and nobody but the senate should assemble them.

To totally kill the dark side of the force

In movie myth, the dark side is mostly presented as based on an endless greed for money. It is also presented as based in hatred, such as in Star Wars myth. In truth the dark side has mostly been based on fear of death for one's people — especially death from starvation.

In order to defeat the dark side, we must as a species make sure that no matter what happens to the climate, that there will be enough food to go around. And it may be wasteful to store so much food and sock it away and make it unpalatable, but we must do this is we are going to kill Ishtar once and for all.

Grub and grave conditions

Grub was originally the eating of corpses.

Our duty to humanity = eu·man·idi

Our duty to the good side of the force, the good side of humanity's force is to make sure that mankind can never be forced by Gaia into grave conditions and the dark side.

Crisis rations

We will probably have two or three levels of preservation with declining palatability.

Yes, it is totally wasteful

Nobody will really want to eat the expiring crisis rations. So they make a good way to feed the poor and still motivate the poor to get off public assistance. The excess we will recycle into animal food or alcohol, or we will burn it as fuel, or use it as fertilizer.

The sensible way to reduce human population

1) Store enough food to last for the median life expectancy plus 30%.

2) Store enough food to last for the median life expectancy plus 50%.

3) In the new climate reality, how many people are we able to feed with relative certainty? That is the percentage that gets to breed on.

4) Priority will be given to Senators and Ubiqs. Then the rest are elected at the Centi-Nome level based on national allocations established by the UM.

5) Nations that have received large numbers of immigrants shall be deemed to be better then the rest by virtue of the fact that people wanted to go there. These should get a much higher allocation.

6) Nations that have give large numbers of immigrants shall be deemed to be worse then the rest by virtue of the fact that people wanted to leave that place. These should get a much lower allocation

7) Nations that have been the victims of systematic genocide should get higher allocations.

8) Nations that have had the highest increase in population since 1970 should get the lowest allocations.

9) This is how we should cut down humanity's size if we ever have to do so due to an ice age crisis. This is why it is so important to have enough food for everyone. So this system can be used instead of a great war. And when a BREED-ON PERCENTAGE is decided by the UM, all nations must comply on penalty of war with all of the rest.

10) Thus in 80-years, we can raise or lower human population by 1000-fold. We are going to make it. However bad things get, we will make it.

Ecoism as religion

Until you know and fully grasp the true scale of mankind in proportion its environment, all your ecoism is based on faith and feelings instead of measurements and calculations. It is just one in a long string of Mideast myths (mouths) and religions (re•leg•on=redo•ligament•big). Funny how the word religion in the Brolingo means big•ligament•reinforcement.

Shouldn't the environment be dealt with scientifically?

Please do not rely on faith in making decisions about the environment. In fact, you should do the opposite and have no faith — especially in consideration of the self-serving flat-Earth lies Mideast Inc. has been spouting about the environment. Believe only what can bee seen, measured, calculated and explained — and mistrust gut feelings and faith.

The right way to "save" the planet

Never mind saving the air quality and water quality and wetlands. These will all vanish in the next ice age. What we really should be saving is a record of our planet in its beautiful blue phase for our posterity. And let's save the planet in a record that will last 110,000 years. And don't forget to save the most mundane things for future generations, so they will know what a paradise of a planet Earth once was.

How can we have pets while people starve?

This next idea takes so few words, but it deserves a separate heading. How dare we have pets when there is so much human suffering on this planet. Let's get our priorities straight. People come first, no matter how far away or how primitive. Anything else is inhuman.

Sandbars and tsunamis

With respect to the typical salty bay protected by a sandbar: The bay's inlet indicates the diagonal direction the last tsunami drained from. The tsunami came in from the opposite diagonal.

New subject: People know not to live on sandbars, but they generally think about big storms. So what the parasite did was fund lots of cheap summer houses on our sand bars. These are for the Arid•zonians who want to come and escape their hot season. These wanted to live as close as possible to the cool ocean. Then some young people decide to live there in the winter because it is so cheap. Then because the young sexy people live there, the place becomes sexy enough to throw money at and promote with babe-watch media. Then the place became expensive. Then with all the rich people living there, the parasite is able to eliminate the smartest segment of its host society through natural disaster.

What to do with all the boondoggle windmills

Stop servicing them if the cost is greater than the electricity they produce. Then leave them up as rotting monuments to the old matrix. They are probably not even worth maintaining given the new price of oil. Let them crumble to nothingness. and rot into the ground.

Tri-coastal America

It is remarkable how the land of the free is in a place with three tsunami vulnerable coastlines.

Renaming the crust

From now on, crust should mean lithosphere, the planet's hard skin. The two words should have identical meanings.

Breaking the ice

Perhaps, in the next ice age, our descendants will break off large ice sheets to increase sea levels and to make waves and swamp a portion of the world's volcanos.

How fast has uplift occurred in various parts of the world?

Why is the seafloor higher at the rift?

The depth of earthquakes

The subducting seafloor carries the cold of the surface into the planet. Therefore, the lithosphere at the subduction zone is probably thicker than the surrounding lithosphere. Thus we see earthquakes happening deeper than the continental lithosphere is thick. Also perhaps the continental lithosphere is not actually as thick as it appears especially in agglomerated land masses like Alaska. Perhaps it is like cloisonné before grinding — but upside down.

How many active volcanos are there?

How many have erupted in the past few ice ages? In the past million years? Count them, This is how many volcanos there are. Assign each a number in sequence, starting in Antarctica, then up through South America, then up through North america and around the ring of fire. How much ash has each volcano produced in the past. How much ash has earth experience on average each year over the past million years. How much more is that than today?

The Ring of fire

I saw somewhere that it has 450 volcanos, and accounts for 90% of the planet's earthquakes

Assign numbers to all volcanos, and name the biggest

Especially know the ones irrigated via melting ice and solar evaporation, as well as the ones farthest from the sea, and farthest from sea level.

Why the gas doesn't rise via the subduction channel

The subducting plate is cooling the subduction zone and fusing it like a tongue to frozen metal. Instead, the gas tents to rise straight up through ruptures in the rock above the lower subduction zone.

Fred M. Bullard, Volcanoes of the earth Ch. ???? 8805

"The various efforts to develop a scale of intensity or scale of magnitude for volcanic eruptions, which have been described in the preceding paragraphs, although stated in terms of 'energy released' or 'eruption magnitude', <u>ultimately depend on the volume of material ejected</u>... Perhaps a new approach to the problem of assigning intensity or magnitude to volcanic eruptions is needed.

Kill the VEI

Just report how much material was ejected in kilometers A 0.7 eruption ejected 0.7 cubic km of material. A 12.4 eruption ejected 12.4 cubic kilometers of material. It is hard to imagine a better way of measuring volcanos.

How much hot air?

If we compare a volcano before and after a major eruption, surely some portion of the ejecta volume is simply gas. On highway 8 in Arizona and 395 in California I have seen chunks of volcanic ejecta filled with 1% to perhaps 20% bubble holes by volume. How high does the bubble ratio go in this ejecta?

Never mind the change in the anthill

Don't use the change in the size of the caldera in calculating the volcano's size. Use the thickness of the ash layer.

Measuring by implied subduction volume

The distance to the next volcanos down the line

How far is it from midpoint to midpoint? If it is 120-miles as with the Concepcion volcano in Lake Nicaragua, then we have a 200-mile volcano in a 6cm zone of seafloor. Thus we have a volcano with an annual ISV of 1,200cm.

Gas solubility in molten magma

We really should see how much gas the various magmas can hold under pressure and heat.

FLYOUT = solids entering the atmosphere

STAYOUT = solids remaining in the atmosphere **FALLOUT**= solids falling from the atmosphere

Bali

This lovely island is this enclave of Hindus living among Muslims. First the Muslims moved in after one disaster. Then after another disaster on your island your people moved in.

Your people should drill about 200 cores from all over the island and carbon date the organic material between the ash layers. Here is how you will find your Island's true eruption history.

The ring of fire

Think about the ring of fire as this ring of volcanos around the Pacific Ocean. Does this name seem a little dumb and inaccurate to you? Where is the ring? There is an arc, or a crescent, or more accurately a Ç. So let's call this volcanic/earthquake feature as the ARC OF FIRE.

And let's call the volcanic regions of Indonesia, the Philippines and Taiwan as the FOLD OF FIRE.

How is climate being reported?

Has there been a proliferation of new reporting sites? Do new sites, or sites under new management report temperatures that are say half a degree higher on average than the old ones? Do they tend to be in cities where it is hotter? Who exactly is reporting the CO2 levels? How many stations are there? Are the new stations all being put on concrete pads, or in parking lots?

Now you can call me a skeptic, but I would not be at all surprised if temperatures, CO2-levels and earthquake measurements were not all being monkeyed with by people friendly to OPEC.



Here is Al Gore spreading flat earth science propaganda for his Arab benefactors. This time the story is that If we burn too much coal, we will all sail off the edge and ruin the planet. The way CO2 levels have marched ahead of temperatures probably has to do with the relative difficulty of lying about temperatures in comparison to CO2 levels.



1.4 billion cubic kilometers

29.. APPENDIX OF ARAB SCIENCE PROPAGANDA

Propaganda

Jeff Goodell, Big Coal, the dirty secrete behind America's energy future. Ch.8

"IN RECENT YEARS, more words have been written about the dangers we face from a superheated climate than almost any subject other than terrorism." [If these words are propaganda then the same people are behind both things.]

As follows are some ancient Mideast propaganda that puts the Earth at the center of the universe. This is something that keeps people from being able to figure out the way the stars move. It also prevents people from figuring out how to navigate by the stars and sail around the Arab spice trade monopoly with Asia.

Propaganda

Cicero, On the nature of the Gods 2.86

"They seem to have no idea of the marvels of the Earth and sky. First we have the Earth situated at the center of the universe, and surrounded by this element of life and breath which we call 'air'. This in its turn is girdled by the immensities of the ether/ heavens, which is the very essence of the heavenly fire. From the ether/heavens has been born the innumerable shining stars. Of these, the chief one is the sun, which lights up the whole world with its brightness, being far greater and larger than the Earth. Then come the other stars in their immeasurable orders of magnitude."

[After Roman times, the Catholic Church considered it heresy to say anything but that the Earth was at the center of the universe. This was a big impediment to the ability to navigate by the stars and sail around the Arabs.]

Propaganda

Cicero, On the nature of the Gods 2.48

"Now there are two sorts of stars. One moves in constant courses [around the Earth]... the other sort moves in two ways at once [around the Earth]... Both of them reveal the rotation of the universe [around the Earth] and the circular motion of the stars [around the Earth], which implies that the universe is spherical in form [around the Earth]."

[Someone obviously didn't want the Romans thinking that the Earth was not at the center of the universe. Such ideas led to navigation by the stars. Then pretty soon, people were sailing through the open ocean around the trade monopolies of the land of no resources.]

Propaganda

Cicero, On the nature of the Gods 1.87

"Have you ever known anything like the sun or the moon or the five planets? <u>The sun completes its annual course, defining its</u> <u>motion by the two extremes of a single orbit.</u> The moon, lit by the rays of the sun, completes the same course in a month, the five planets also keep their constant orbit, some nearer the Earth, and others further away, and from the same points complete the same journeys in different periods of time." [Here is some more Arab pro•pagan•da about an earth-centric universe.]

Propaganda

Cicero, On the nature of the Gods, 2.116 "The world is a globe, and so its parts are equally balanced in all directions. All the parts of our earth similarly tend towards the middle (for in a sphere, the center is all as it were the lowest point) and there is nothing to disturb this mighty drive of weight and mass. In the same way the sea, which is above the earth, tends towards the earth's center, and so is itself shaped in conformity with the globe of the earth... As the stars move through the ether, they too preserve their spherical form by the force of their own gravity, and it is their spherical shape which holds them safely in their orbits [around the earth]. For the sphere, as I have already explained, is the shape least vulnerable to external accidents." [The underlined is the parasite's pro-pagan•da for an earth-centric universe. It is combined with some useful information that is obvious.]

Propaganda

Cicero, d. 43BC, On the nature of the Gods, 2.49

"The yearly cycle is made up of 365 daily revolutions of the sun's orbit [around the earth], with 6 hours added." [In this one work by Cicero, there are 9 mentions that put the earth at the center of the universe. Someone obviously wanted the dumb Rumi to think the earth was at the center of the universe.

Now the only other time I can recall seeing 9-point propaganda was in the so-called 'Best Picture" of 1942, where there were 9 mentions that minimized the severity of the Nazi concentration camps that were about to start murdering over 6 million disloyal yellow Jews some months later.]

Propaganda

Lucretius, On the Nature of the Universe, c. 60 BC, Bk 5.510-5.534

"There is no obvious way of accounting by a simple and straightforward hypothesis for the movements of the sun from its summer quarters to its midwinter turning point of Capricorn and back again upon its tracks to its midsummer tropic of Cancer, or of explaining how the moon is seen to cover in a month the distance on which the sun in its travels spends a full year. No simple cause, I repeat, can be assigned to these phenomena.

The first <u>possible</u> explanation that <u>suggests itself</u> is that advanced by the <u>revered authority</u> of the <u>great Democ</u>ritus. On this view, the nearer the heavenly bodies are to the Earth, [which is at the center of the universe] the less they are caught up in the <u>vortex of the heavens</u>. This rushing and impulsive energy of the vortex, it is supposed, fades out and dwindles to lower levels. So the sun, whose path lies far below the ardent constellations, gradually lags behind and drops towards their rear. Much more the moon: The more its lowlier course falls short of the sky and approaches the Earth, the less can it keep pace with the stars. The more sluggish the vortex in which it is involved, down here below the sun, the sooner it is overtaken and passed by in the cyclic march by each successive constellation. That is why the moon seems to return more rapidly than the sun to each constellation. It is they in fact that catch up faster on the moon.

Another possibility is that two crosscurrents of air blow through the sky, alternating with the seasons. One drives the sun down from the summer constellations towards the ice bound frigidity of its midwinter turning-point. They other tosses it back out of the cold and dark into the heat-baring region and the torrid stars." [Here the Arab Ministry of Truth tells an obvious lie, the classic pair of framing lies that speaks the truth with clarity. In pursuit of their prime directive, the Arabs were muddling the truth about astronomy — This to keep their host civilization(s) from sailing around their trade monopoly with Asia.]

Propaganda

Cicero (d. 43BC), On the nature of the Gods, 2.50 "Most wonderful of all are the movements of those five stars which are wrongly called 'planets', or <u>wandering</u> stars. For there is no '<u>wandering</u>' in a star which through all eternity preserves its constant progress and recession and all its other regular and measured movements. [People knew that the planets were different and that is why they called these shiny objects by a special name. And they knew they went "backwards" from time to time. It wasn't hard for the naked eye star-gazer to see that the earth was spinning and in rotation around the sun. And people must have said this.

But the Arab run ancient media said otherwise. It had this figurehead, this great man Tulius Caesaro, a man too incredible to be believed. So they split him into Julius Caesar and Tulius Cicero, both men living during the same decades.] And it is even more wonderful in these stars which are sometimes hidden and sometimes appear again: Now approach and then recede. Now precede, and then follow: move now faster and now slower. [muddle muddle muddle] And on occasion, do not move at all, but remain stationary for a time. From the diverse movements of these stars mathematicians have calculated what they call 'the Great Year'. This happens when the sun and the five stars complete their courses and return to the same relative positions which they had at the beginning. There is much disagreement about the length of the 'Great Year'. But it is certain that it must comprise a fixed and definite period. For the star which we call Saturn, and the Greeks 'The Shining One', and which is the furthest from earth, completes is orbit in about 30 years [29.42 years actually]. And in the course of this orbit it goes through a number of remarkable motions, now going forward, and then handing back again, now vanishing in the evening and appearing again at down. And through all the course of the ages, there is no change in all these motions or the times in which they are completed.

Below this star and nearer to the earth is Jupiter, which the Greeks call <u>'The Blazing One'</u>. Jupiter makes the same journey through the 12 zodiac signs in a period of 12 years [11.86 years actually] and its orbit shows diversities similar to those of Saturn.

Next, below this star is the nearer orbit of '<u>The Fiery</u> <u>One</u>', which we call Mars. This completes a similar orbit, as I believe, in 724 days [it is actually 687 days. 724 days is intentional disinformation].

Below this is the star Mercury, which the Gods call 'The Gleaming one' [note all the similar and confusing names for the "5 stars": Shining-one, Blazing-one, Fiery-one, gleaming-one and the light bearer. Also note the way Mercury and Venus are transposed. muddle muddle.] This completes its orbit through all the zodiac signs in about a year [it is actually 88 days] and is never more than one sign distant from the sun, being sometimes ahead of it and sometimes behind it. The lowest of the 5 planets and the nearest to the earth is Venus, called 'the light bearer' by the Greeks - Lucifer in Latin - when it precedes the sun [following the moon]: And when it follows the sun, Hesperus. Venus completes its orbit in a year, traversing the zodiac in a zig-zag movement as do the other four. It is never distant more than two signs of the zodiac from the sun, sometimes ahead of it, sometimes behind it. [Venus actually completes its orbit in 225 days or 0.616 years]

<u>I cannot understand this regularity of the stars, this</u> <u>harmony of time and motion in their various orbits through all</u> <u>eternity, except as the expression of reason, mind and purpose</u> <u>in the planets themselves, which we must therefore reckon as</u> <u>gods</u>. [The Christians say the same thing today.]

Those which we call the fixed stars show the same evidence of mind and purpose. They too in their daily revolution keep a constant regularity. They are not carried along by the ether [of the revolving heavens], or as part of the general movement of the sky, as is taught by many who are ignorant of physics. The nature of the ether is not such as to enable it to hold the stars in is embrace and to cause them to revolve through the power of its own motion. The ether is too subtle and translucent and too equable in its temperature to be the material setting of the stars. The fixed stars have their own sphere, remote and free from any influence of the ether. Their constant and eternal motion, wonderful and mysterious in its regularity declares the inhabiting power of a divine intelligence. If any man cannot feel this power of God when he looks upon the stars, then I doubt whether he is capable of any feeling at all." [1) Aren't the newer Mideast religions saying the same thing today? 2) In the same tract the author is trying to spread some science propaganda that keeps us from sailing around the Mideast spice trade monopoly. So who is behind our Mideast religions, constantly supporting them? 3) This is Tulius Cicero and Julius Caesar saying these things.]

Propaganda

Aristotle, d. 322BC, 351.9

[This tract starts out talking about the rather obvious concept of geological time and tsunamis. Then it talks about climate change. Note what the ancients knew about these things. Finally, it talks in depth about how people built up the land in many tsunami funnels and that this is nothing to worry about.] "the whole active [geological] process of the earth takes place so gradually and over periods of time which are so immense compared with the length of our lives, that these changes are not noticed. And before their course can be recorded from beginning to end, whole nations perish and are destroyed.

Of such destructions, the most utter and sudden are due to war. But pestilence and famine cause them too. Famines are either severe [Rapid] or gradual. In the latter case, the disappearance of a nation is not noticed because some people leave the country, while others remain. This goes on until the land is unable to maintain any inhabitants at all. So a long period of time is likely to elapse from the first departure to the last. Thus nobody remembers, and the lapse of time destroys all record even before the last inhabitants have disappeared. In the same way a nation must be supposed to lose account of the time when it first settled in a land that was changing from a marshy and watery state and becoming dry. [Like for example Manhattan] Here too, the change is gradual and lasts a long time, and men do not remember who came first, or when, or what the land was like when they came.

This has been the case with Egypt. Here it is obvious that the land is continually getting drier and that the whole country is a deposit of the Nile river. But because the neighboring peoples settled in the land gradually as the marshes dried, the lapse of time has hidden the beginning of the process. Thus, all the mouths of the Nile, with the single exception of that at Canopus, are obviously artificial and not natural. And Egypt was originally what is called Thebes, as Homer, too, shows, modern though he is in relation to such changes. For Thebes is the place that he mentions; which implies that Memphis did not yet exist, or at any rate was not as important as it is now. That this should be so is natural, since the low-lying land came to be inhabited later than the higher. For the parts that lie nearer to the place where the river is depositing the silt are necessarily marshy for a longer item since the water always lies most in the newly formed land. But in time, this land changes its character, and in its turn enjoys a period of prosperity. For these places dry up and come to be in good condition, while the places that were formerly well-tempered some day grow excessively dry and deteriorate. This happened to the land of Argos and Mycenaea in Greece. [Argos/Mycenaea suffered about a 23:1 funneling of

the wave from Santorini] In the time of the Trojan wars the Argive land was marshy and could only support a small population, whereas the land of Mycenae was in good condition (which is why Mycenae was superior). But now the opposite is the case, for the reason we have mentioned: the land of Mycenae has become completely dry and barren, while the Argive land that was formerly barren owing to the water has now become fruitful. Now the same process that has taken place in this small district must be supposed to be going on over whole countries and on a large scale.

Narrow minded [pre-decided] men suppose that these events were caused by a change in the world, and a coming to an end of the world as a whole. Hence they say that the sea is drying up and shrinking because this has been observed in more places now than before. But this is only part true. It is true that many places are now dry, that were previously covered with water. But the opposite is true too. For if they look, they will find that there are many place where the sea has invaded the land. But we must not suppose that the cause of this is that the world is in a process of becoming [coming to an end, starting a new cycle]. For it is absurd to turn the universe into in process because of small and trifling changes, when the bulk and size of the earth is surely as nothing in comparison with the whole world [universe]. Rather, we must take the cause of all these changes to be that. Just as winter follows summer, so to after some interval, some long period of time, there comes a great winter."

Propaganda

Lucretius, On the Nature of the Universe c. 60 BC, Bk 5.510 "Now let's turn to what causes the stars to move [in the sky]. First, let us suppose that the great globe of sky itself rotates [around the earth]. ...But there remains the alternative possibility that the sky is stationary, while the stars move... Which of these possibilities is true... is not easy to establish. [Note the way the Arabs frame our options between their two lies. Wherever you see two party politics they are similarly giving us their two choices. In so many European nations today the Arabs have framed our options between allowing an almost unchecked flow of Arab immigrants and a leader that looks like a fascist dictator. But really it is just a carefully framed ARAB CHOICE.]

... I have worked through the list of [all] causes that might produce stellar motions. One of these causes must certainly operate in our world [universe] and determine the movements of the constellations. <u>But to say which of them it is</u> <u>lies beyond the range of our stumbling abilities</u>. [So it is one Arab choice or the other, and nobody can say which.]

We now must consider how the Earth remains fixed in the center of the universe. The answer is that its mass gradually attenuates and dwindles away and that its lower parts are formed of another substance. And this has since the beginning of time been combined and united with the airy regions of the world which it is grafted and lives." [To paraphrase this Mideast science propaganda: Either the sky rotates and the stars remain stationary, or the sky is stationary and the stars rotate. Lucretius has worked through a list of all causes that might produce stellar movement. And one of these must certainly be true, but to say which of them it is — that lies beyond the range of our stumbling abilities. Then Lucretius moves on to ask how it is that the Earth remains fixed in the center of the universe, giving nonsense as the reason.]

Original version of 5.510

"Now let's turn to what causes the stars to move [in the sky]. First, let us suppose that the great <u>globe</u> of sky itself rotates. We must then say that the poles of the celestial sphere are held in place and hemmed in at either extremity by the external pressure of air on both of them. In addition, there must be another current of air, either flowing above in the same direction in which the flashing lights of the ageless firmament revolve, or else moving below in the reverse direction, so that it rotates the sphere of the same principle as we see rivers turning the scoops of waterwheels.

But there remains the alternative possibility that the sky is stationary, while the stars move. This may happen because swift currents of ether are shut up inside, and in their search for an outlet whirl around and around and roll their fires at large across the nigh-thundering regions of the sky. Or an external current of air from some other quarter may whirl them along int its course. Or they may creep forward of their own accord, each responsive to the call of its own food, and feel their fiery bodies in the broad pastures of the sky. Which of these possibilities is true, so far as the world is concerned, is not easy to establish. But my arguments shows what could happen throughout the universe in the various worlds formed on various patterns." **Propaganda**

Lucretius, On the Nature of the Universe c. 60 BC, Bk 5.650 [Here is some ridiculous science propaganda that attempts to hide the idea that the Earth rotates producing they cycle of day and night.] "The reason why night shrouds the Earth in universal gloom may be that the sun, exhausted by its long daily journey, has reached the utmost limits of the sky and puffed out its travel spent fires, enfeebled by an excess of air. Alternately, it may be driven to double back under the Earth by the same force that guided its globe above the Earth. Correspondingly, when Matuta [goddess of the morning light] at the determined hour diffuses her rose-red glow through the ethereal regions, and flings open the light of day, it may be the same sun, which we have pictured as doubling back under the Earth, taking possession of the sky with preliminary rays, striving to set it ablaze. Or it may be that at the determined hour there is a concentration of fires, a confluence of many particles of heat, which regularly causes the solar radiance to be born anew. So it is related that from the heights of Mount Ida [Crete, home of Zeus] at daybreak scattered fires are seen in the East coalescing as it were into a ball till they form a single sphere. There is nothing miraculous about such a confluence of fiery particles at such a regularly determined time rebuilding the sun in its splendor. In every department of nature, we see a host of phenomena recurring at a determined time."

Propaganda

Lucretius, On the Nature of the Universe c. 60 BC, Bk 5.680 [Let's now turn] "to long days coupled with short nights, and short days coupled with long nights. Various views are again held here.

It may be that the sun crosses unequal arcs of the etherial sphere around the Earth, dividing its daily orbit into a greater part and a lesser one. Thus what is subtracted from one half, it adds to the other one in its revolution [around the earth], until it comes around to that constellation in which the equinox equates the shades of night with the light of day. At the mid-point of the sun's flight before the north, wind and again before the south wind, the sky holds apart the tropics at an equal distance on either side of the sun. This follows from the position of the whole zodiac belt through which the sun creeps to complete its annual cycle, lighting the heavens and Earth with radiance cast aslant. Such is the account given by those who have plotted all the regions of the sky and marked the ordered sequence of constellations.

Or it may be that the air in certain regions is denser, so that the flickering glow of fire loiters beneath the Earth and cannot easily win through and struggle out to its rising; and that this is why the long winter nights drag on till the advent of day's flashing banner.

Or again, for the same reason, it may be that the fiery particles flow together more slowly or more quickly at alternate seasons of the year; these determine the place where the sun rises. Therefore those people who say that no single cause can be assigned to these things, seem to be telling the truth." [more propaganda that makes navigation difficult. Basically the stuff about atoms exists to get people saying "yea, Lucretius is great." Then this credibility helps the navigation propaganda work better.]

Propaganda

Star Trek, Next Generation 4th year, episode: Host

"The beta [moon] will eventually experience rising temperatures erratic tide surges and in general, the beginning of global warming." [The ever logical android character named Data spoke these words with authority. The peculiar name Data incidentally makes perfect sense once we realize that a primary purpose of this TV series (and many others) was to spread propaganda.]

Propaganda

CNN, Ricken Patel, 2014.09.21

"Scientists are normally a pretty measured bunch. But in recent months, they've been resorting to some unusual language to get our attention. One top of climatologist recently tweeted: "If even a small fraction of Arctic sea floor carbon is released [in]to the atmosphere, we're f'd." When scientists start swearing in public, it is time for everyone to start worrying.

It's not just the scientists that are raising the alarm. This Sunday, hundreds of thousands of people are taking to the streets around the world in the largest climate mobilization in history. If they weren't listening before, our leaders should turn in now. The voice of global concern for action on climate change is back, and this time, it's no longer an environmental issue, its and everybody issue.

And time is short. The world is rushing towards a series of potentially catastrophic feedback loops and tipping points in the climate system, <u>which could see the support system of life</u> <u>itself irrecoverably disrupted</u>. From this release of gigantic amounts of arctic methane gas, to the rapid carbon acidification of our oceans, to apocalyptic flooding, the continued warming of our planet is the greatest challenge our species has [ever] faced.

The stakes seem too gargantuan to grasp, but it's <u>this</u> <u>leap in consciousness that's required for our survival</u>. Our <u>civilization is built on a fragile, delicately interdependent, and</u> <u>unsustainable relationship with the natural world</u>. We can't afford to <u>underestimate the massive footprint that humans have on this</u> <u>planet</u>. One quarter of the carbon dioxide in our atmosphere came from our industries. Our oceans [with 2.8 billion times the mass of mankind] are acidifying 10 times faster than at any point in Earth's history. We are stretching the limits of this world.

But none of this is grounds for despair. The solution to the nightmare of runaway climate change is crystal clear, and beautiful. We need to shift our societies and economies off dirty energy and one to 100% clean, sustainable energy, within a generation. This goal is entirely achievable. Already, 22% of the world's electricity comes from clean energy and the sector is growing fast -- we just need to put our foot on the accelerator.

Getting to 100% clean will require <u>a massive battle</u> against the oil and coal industry and their pocket politicians whose subsidies, profits and influence are all at stake. [This is the right hand of the Arabs blaming the left hand.] But this change is possible — we now have the alternative energy technology we need to replace fossil fuels. In May Denmark published a plan to get 100% clean by 2050, at a cost of less than 20 euros per Dane per year. Countries as diverse as Norway and Uruguay are already nearly 100% clean. Even China, the world's biggest carbon emitter, is rolling out renewables faster than anywhere else on Earth.

The question is not whether we will make this <u>breakthrough</u>, but whether we do so before it is too late. The clock is ticking, <u>the increase in temperature rising steadily</u> towards the 2 degrees Celsius mark — the red line that both scientists and governments have said poses unacceptable risk of the unthinkable. [First they rounded-up a change that of perhaps half a degree, calling it 1°C. Now Patel here is saying we are rising steadily towards 2°C.]

And that is why the People's Climate March is so critical. There is a gap between the speed of action <u>our survival</u> <u>requires</u> and the action our governments are taking. The street is how we close that gap, because politicians will move faster when people move them. Most large-scale social change has been spurred by movements, from ending slavery to giving women the right to vote. Saving ourselves by shifting our societies to 100% clean energy will require one of the largest most diverse, and most sustained movements we've ever seen.

On Sunday, that movement will step forward. A new cast of characters in an <u>unprecedentedly</u> broad coalition and cross section of society will take to the street. Climate change has gone beyond ecoism, it's now about the economy, jobs, justice, family, security. <u>It is about the survival of everything we love</u>.

The UN Climate Summit happening two days after the march is an opportunity to build momentum, no more. The Paris summit next year is when we need our leaders to sign a new global agreement. If we learned one thing from the 2009 Copenhagen summit, it's that one global summit will never be a panacea.

But <u>the thud of peoples boots</u> marching across the planet together with 130 leaders meeting to discuss a collective response to this crisis <u>heralds a fresh momentum</u> for the road ahead. Even before the mobilization has happened, political leaders are responding to it. Some are even joining the march.

In the final analysis, the question is whether we human beings are capable of being wise, farsighted, and unified enough to pass <u>this test of survival</u>. Many civilizations have fallen to the consequences of outstripping their environments. But our civilization is the first truly global one, with the power to end [all] human life. One way or another, we may be the last civilization. For the sake of our children and their children, we must find the hope, wisdom and unity to save it."

Propaganda

Silent Running film 1972

"It calls back a time when there were flowers all over the earth... and there were valleys... and there were planes of tall green grass that you could lie down in... that you could go to sleep in... and there were blue skies and there was fresh air and there were things growing all over the place... not just in some domed enclosures blasted some millions of miles into space."

Propaganda

Seneca, On Earthquakes:

[After an earthquake near Mt. Vesuvius, we read the following about the Arab jaws-of-death real estate schemes of Pompey and Herculaneum in Campania near Naples=Neo•polis. Here we see the voice of the force that helped so many of the world's current capitols develop in Jaws of death tsunami funnels. Seneca died in 65AD and Vesuvius erupted in 79AD killing every living thing in and around Pompeii. Note how the start sounds

like Realtor marketing talk.]

"1. News has reached me that Pompeii, <u>Campania's most</u> renown [famous and prestigious] <u>city</u> has been devastate by an earthquake that also shook all the neighboring areas. <u>This town</u> is on a lovely bay, set back some way from the open ocean, and bounded on one side by the shores of Surrentum [Sorrento] and Stabiae, and on the other by those of Herculaneum. ... This earthquake... caused widespread damage in Campania, which has never been safe from such disasters, but has always escaped damage ... Part of the town of Herculaneum has collapsed, and the buildings that are left are far from stable. ... Naples lost many private homes, but no public buildings...

We need to find comfort for the distressed and <u>absolve</u> <u>them from their terrible fear</u>. For what can any man consider sufficiently safe if the very world is shaken and its most solid parts are made to sway?...

[Next the Arabs say that because Pompeii was struck by an earthquake it is actually less likely to suffer another one.]

Let us, therefore show a brave spirit in the face of <u>this</u> disaster, which simply could not have been predicted or avoided. And let's now close our ears to those who have disowned Campania, saying that they will never go back again — those now looking for a new place to live after this misfortune. For who can assure them that this place or that one will be less vulnerable to earthquakes.

All places are subject to the same lot, and if they have not yet suffered an earthquake, it is possible [more likely] that they will. Take this spot on which you stand so confidently right now: Perhaps today, or tonight it will split apart. What makes you think that those places that have already been wasted by Fortune's strength, or those that are propped up by their own ruins, have better conditions? For we are in error if we believe that any part of the world enjoys a exemption or immunity from this peril. All places are subject to the same laws. Nothing was created by Nature to be permanent. Different things fall at different times, and just as in great cities first one house needs shoring, and then another - so in this world of ours, one part suffers an earthquake first and then another. [Here is a famous ancient 'wise man', the Roman emperor's #1 old wise man. named Seneca. Here he says it is silly to abandon Pompeii and Herculaneum, the Mideast's main luxury master-plannedcommunities for rich Romans. Apparently the Arabs were "hell bent" on selling lots as fast as they could.]

Tyre was notorious for collapsing houses. And Asia all at once lost 12 cities. Last year, Achaea and Macedonia fell victim to the same disastrous force, whatever it is, that now attacked Campania. Fate goes the rounds and returns to any place it has long passed by. Some districts it troubles seldom, some it troubles regularly. Nothing does it allow to be exempt and free from harm. Not only we humans, who are both a shortlived and mortal things, but cities, regions of the Earth, and coastlines of the sea are the slaves of fate too.

Despite this, we assure ourselves that Fortune's blessings will last forever. We believe that happiness, whose constancy is the most fickle of all human affairs and swiftest to flee, will have weight and permanence in the case of some person. And as men assure themselves that all things will last forever. It does not occur to them that the very ground on which we stand is not secure. For the fault in Campania or Achaea is not to be found only there but wherever there is ground. The Earth does not stay together well, and for several reasons it separates, not disintegrating as a whole but collapsing in its parts. ...

2. <u>What am I doing? I had promised comfort against</u> infrequent dangers, and here I am proclaiming dangers to be feared all around.What greater folly is there than fearing the swaying of the Earth or the sudden collapse of mountains or the incursions of the sea as it is cast beyond the shore, when death is present on all sides and rushes upon us from every quarter?..."

Propaganda

Lucretius, On the Nature of the Universe c. 60 BC

[As follows is some obvious disinformation about where metals come from, how they are extracted and how they are refined. Here the Arabs are advising the ignorant people of their host society to go start forest fires to find their gold/silver/iron/tin/lead/ petroleum, whatever. Also note how many times 'Lucretius' mentions starting forest fires. When you see stupid things repeated, it is a fairly certain indicator of disinformation and propaganda.]

"We next come to the discovery of copper, gold, iron, weighty silver and useful lead. [lead is more toxic than useful] This occurred when mountain fires have consumed huge forests in a blaze. The blaze may have been started by a stroke of lightning, or by men who had employed fire to scare their enemies in some wood-land war, or were tempted by the fertility of the country to enlarge their farm or grazing lands and make the wilds useful. Or they may have wished to kill the forest beasts and profit by their spoils; for hunting by means of snare and fire developed earlier than fencing around a glade with nets and driving the game with dogs. Let us take it, then, that for one reason or another, no matter what, a fierce forest fire, roaring menacing, has devoured a forest down to the roots and roasted the Earth with a penetrative fire. Out of the melted veins there would flow into hollows on the Earth's surface a convergent stream of silver, gold, copper and lead. Afterwards, when men saw these lying solidified on the Earth and flashing with glittering color, they would be tempted by their attractive luster and polish to pick them up. They would notice that each lump was molded into a shape like that of the bed from which it had been lifted. Then it would enter their minds that these substances, when liquefied by heat, could run into any mold or shape of any object they might desire, and could also be drawn out by hammering into pointed tips of any slenderness and sharpness. [This is disinformation about making weapons and tools. Iron implements so created in this way will be brittle and tend to break in combat and use, unlike the flexible laminated Damascus steel weapons the Arabs sold for a fortune.] Here was a means by which they could equip themselves with weapons, chop down forests, hew timber and plane it into smooth planks and pierce holes in it by boring, punching or drillings. At first, they tried this with silver, gold and stubborn bronze. But this would not work. These metals would give under the strain, lacking strength to stand up to such exacting tasks. So Bronze was more highly prized, and gold with its quickly blunted edge was despised as useless. Now it is bronze that is despised, while gold has succeeded to the highest honors. So the cycle of years has brought about a reversal of fortune. What once was prized is afterwards held to be cheap. In its place, something else emerges from being unknown, and is each day more and more coveted, and as its merits are detected, blossoms into glory and is acclaimed by mankind with extravagant praises.

At this point, [my muse] Memmius, you should find it easy to puzzle out for yourself how men discovered the properties of iron. The earliest weapons were hands, nails and teeth. next came stones and branches wrenched from trees, and fire and flame as soon as these were discovered. Then men learned to use tough bronze and iron. Actually the use of bronze was discovered before that of iron, because it is more easily handled and in more plentiful supply. With bronze they tilled the soil. With bronze they whipped up the clashing waves of war and death, made spoils of [plundered] flock and field and scattered a withering seed [the amaranth or Semitic seed]. Before their armaments all else, naked and unarmed fell an easy prey. Then by slow degrees the iron sword came to the fore, the bronze sickle fell into disrepute, the plowman began to cleave the Earth with iron and on the darkling field of battle, the odds were made even."

Propaganda

Orphan quote

[Here is some of our Arab parasite's propaganda on the climate cycle. Here we see their lame explanation for how ice age climate shifts arise from astronomical events. The main problem with this idea is of course that all 7 of the ice ages that we know about were all of varying lengths from 85,000 to 120,000 years. This tract came from a 1 or 2 volume encyclopedia for high school libraries.]

"This past glacial retreat is but one of many in the past several million years, with an alternation of warm and cold periods apparently related to a 100,000-year periodicity in the amount of incoming solar radiation causing the alternating warm and cold intervals. Systematic changes in the amount of incoming solar radiation, caused by variations in Earth's orbital parameters around the Sun, are known as Milankovitch cycles, after Milutin Milankovitch (1879-1958), a Serbian scientist who first clearly elucidated the relationship between the astronomical variation of the Earth orbiting the Sun and the climate cycles on Earth. These changes can affect many Earth systems, causing glaciations, global warming, and changes in the patterns of climate and sedimentation. Milankovitch's main scientific work was published by the Royal Academy of Serbia in 1941, during World War II. [Really?] He calculated that the effects of orbital eccentricity, wobble, and tilt combine every 40,000 years to change the amount of incoming solar radiation, lowering temperatures and causing increased snowfall at higher latitudes. His results have been widely used to interpret the climate variations, especially in the Pleistocene record of ice ages, and also in the older rock record.

Astronomical effects influence the amount of incoming solar radiation; minor variations in the path of the Earth in its orbit around the Sun and the inclination or tilt of its axis cause variations in the amount of solar energy reaching the top of the atmosphere. These variations are thought to be responsible for the advance and retreat of the Northern and Southern Hemisphere ice sheets in the past few million years. In the past two million years alone, the Earth has seen the ice sheets advance and retreat approximately 20 times. The climate record as deduced from ice-core records from Greenland and isotopic tracer studies from deep ocean, lake, and cave sediments suggest that ice builds up gradually over periods of about 100,000 years, then retreats rapidly over periods of decades to a few thousand years. These patterns result from the cumulative effects of different astronomical phenomena.

Several movements are involved in changing the amount of incoming solar radiation. The Earth rotates around the Sun following an elliptical orbit, and the shape of this elliptical orbit is known as its eccentricity. The eccentricity changes cyclically with time with a period of 100,000 years [Really? Why? What causes this?], alternately bringing the Earth closer to and farther from the Sun in the summer and in winter. This 100,000-year cycle is about the same as the general pattern of glaciers advancing and retreating every 100,000 years in the past 2 million years, suggesting that this is the main cause of variations within the present-day ice age. Presently the Earth's orbit is in a period of low eccentricity (± 3%), and this yields a seasonal change in solar energy of ±7 percent. When the eccentricity is at its peak ($\pm 9\%$), seasonality reaches ± 20 percent. In addition, a more eccentric orbit changes the length of seasons in each hemisphere by changing the length of time between the vernal and autumnal equinoxes.

The Earth's axis is presently tilting by 23.5°N/S away from the orbital plane, and the tilt varies between 21.5°N/S and 24.5°N/S. The tilt, also known as obliquity, changes by plus or minus 1.5°N/S from a tile of 23°N/S every 41,000 years. When the tilt is greater, there is greater seasonal variation in temperature. For small tilts winters would ten do be milder and summers cooler. This would lead to more glaciation."

Orphan quote

Major Volcanic Eruptions and Climate Change

"Some of the larger, more explosive volcanic eruptions that the planet has witnessed in the past few hundred years have ejected large amounts of ash and finer particles called aerosols into the atmosphere and stratosphere, and it may take years for these particles to settle down to Earth. They get distributed about the planet by high-level winds, and they block some of the Sun's rays, which lowers global temperatures. This happens because particles and aerosol gases in the upper atmosphere tend to scatter sunlight back to space, lowering the amount of incoming solar energy. In contrast, particles that get injected only into the lower atmosphere absorb sunlight and contribute to greenhouse warming. [Why on earth would particles reflect heat in the upper atmosphere is the proof?]

A side effect is that the extra particles in the atmosphere also produce more spectacular sunsets and rises as does extra pollution in the atmosphere. These effects were readily observed after the 1991 eruption of Mt. Pinatubo in the Philippines, which spewed more than 172 billion cubic feet (5 billion cubic meters) of ash and aerosols into the atmosphere, causing global cooling for two years after the eruption. Even more spectacularly the 1815 eruption of Tambora in Indonesia caused three days of total darkness for approximately 300 miles (500km) from the volcano, and it initiated the famous "year without a summer" in Europe, because the ash from this eruption lowered global temperatures by more than a degree.

The amounts of gases and small airborne particles released by large volcanic eruptions such as Pinatubo, and even Tambora, are dwarfed by the amount of material placed into the atmosphere during some of Earth's most massive eruptions, known as flood basalt events. No flood basalts have been formed on Earth for <u>several tens of millions of years</u>, which is a good thing, since their eruption may be associated with severe changes in climate.

Scattered around the globe are numerous anomalously thick accumulations of dark lava, variously known as flood basalts, traps, or large igneous provinces. These vast outpourings of lava have different ages and represent the largest known volcanic episodes on the planet Earth in the past several hundred million years. These deposits include continental flood basalt provinces, anomalously thick and topographically high sea floor known as ocean plateaus, and some volcanic rifted passive margins. During eruptions of these vast piles of volcanic rock, the Earth moved more material and energy from its interior in extremely short periods than during the entire intervals between the massive volcanic events [excluding new sea floor of course]. Such large amounts of volcanism also released large amounts of volcanic gasses into the atmosphere, with serious implications for global temperatures and climate, and may have contributed to some global mass extinctions. Many are associated with periods of global cooling where volcanic gases reduce the amount of incoming solar radiation and thereby bring on volcanic

winters."

Propaganda

Travis Hudson, Living with Earth, 10.1

[Earth in the Cretaceous was warm because it was younger] "What was the cause of the unusually warm climates of the Cretaceous period? Among the significant factors that may have contributed was an enhancement of the greenhouse effect due to an increase in the amount of carbon dioxide in the atmosphere.

Where did the additional CO2 that contributed to the Cretaceous warming come from? Many geologists suggest that the probable source was volcanic activity. Carbon Dioxide is one of the gases emitted during volcanism, and there is not considerable geological evidence that the Middle Cretaceous was a time when there was an unusually high rate of volcanic activity. Several huge oceanic lava plateaus were produced on the floor of the western Pacific during this span. These vast features were associated with hot spots that may have been produced by large mantle plumes. Massive outpourings of lava over millions of years would have been accompanies by the release of huge quantities of CO2, which in turn would have enhanced the atmospheric greenhouse effect. Thus the warmth that characterized the Cretaceous may have had its origins deep in Earth's mantle. [Strange how there is no mention of either the seafloor ridge or explosive volcanos.]

This example serves to illustrate the interrelationships among parts of the Earth system. Materials, and processes that at first might seem to be completely unrelated turn out to be linked. Here you have seen how processes originating deep in Earth's interior are connected directly or indirectly to the atmosphere, the oceans, and the biosphere."

Propaganda orphan quote How fast can Climate Change

"Understanding how fast climate can shift from a warm period to a cold, or cold to a warm, is difficult. The record of climate indicators is incomplete and difficult to interpret. <u>Only 18,000</u> years ago, the planet was in the midst of a major glacial interval, [what does that mean? Why not say that 18,000 years ago, Earth was at its ice age minimum temperature.] and since then global average temperatures have risen 16°F (10°C) and are still rising, perhaps at a recently accelerated rate from human contributions to the atmosphere. [Or perhaps not.] Still, recent climate work is revealing that there are some abrupt transitions in the slow warming, in which there are major shifts in some component of the climate, where the shift may happen on scales of <u>10 years or</u> fewer [less, foreigner English].

One of these abrupt transitions seems to affect the circulation pattern of the North Atlantic Ocean, where the ocean currents formed one of two different stable patterns or modes, with abrupt transitions occurring when one mode switches to the other. In the present pattern, the warm waters of the Gulf Stream come out of the Gulf of Mexico and flow along the eastern seaboard of the United States, part of the British Isles, to the Norwegian Sea. This warm current is largely responsible for the mild climate of the British Isles and northern Europe. In the second mode, the northern extension of the Gulf Stream is weakened by the reduction in salinity of surface waters from sources at high latitudes in the North Atlantic. The fresher water has a source in increased melting from polar ice shelf, Greenland, and northern glaciers. With less salt, seawater is less dense and less able to sink during normal wintertime cooling.

Studies of past switches in the circulation modes of the

North Atlantic reveal that the transitions from one mode of circulation to the other can occur over a period of only five to 10 years..." [Important propaganda points are frequently repeated]

Propaganda

Aristotle d. 322BC, 353.27

"the sea is drying up and shrinking, and will end by being some day entirely dried up."

Propaganda

Aristotle d. 322BC, 356.8

"It follows that if the universe is eternal, the same must be true of the sea. Anybody who thinks like Demo-critus that the sea is diminishing, and will disappear in the end reminds us of Aesop's fables — all the rage with the ["Greek"] boatmen, but not for serious inquirers." [Apparently our Mideast parasite has been talking about sea levels for a long time.

Propaganda

Hammond World Atlas 2003 ISBN 0-7607-5361-X

"Concentrations of greenhouse gases in the atmosphere have risen in recent years, raising average global temperatures by about 1.25°F —over both land and sea. Mountain glaciers are melting all over the world (total glacier volume in the Alps has already decreased by half). Artic [SIC] Ice has become almost 40 percent thinner over the past 30 years. [This is obviously untrue]

Using sophisticated pattern-recognition techniques, climatologists have attempted to determine the extent to which these trends are actually attributable to anthropogenic emissions and to identify other possible causes (such as fluctuations in the sun). Their findings indicate that, at the very least, the accelerated warming trend observed since 1970 is largely a man-made phenomenon.

Scientists warned as early at the late nineteenth century [they mean the late 1900s, no the late 1800s], on the basis of simple computations that increasing concentrations of carbon dioxide in the atmosphere would lead to global warming. Today, the world's climate can be simulated with the aid of powerful computers, which make it possible both to reconstruct past climate patterns and to project scenarios for the future. If concentrations of greenhouse gases in the atmosphere continue to rise at the current pace, we can expect global temperatures to rise by between 2.7 and 9.9 degrees F [1.5 and 5.5°C] over the next hundred years. [again obviously untrue] Should this happen, the earth will be warmer that it has been at any time during the past 100,000 year. One consequence would be a rise in sea level of between 20 and 90 centimeters, which would persist for centuries even if the warming trend were halted. [Here the dangers of rising sea levels seem oddly understated. Perhaps another Atlantic/Atlantis disaster is a more important objective than selling a bit more oil.] Warming would also lead to changes in precipitation patterns and thus possibly drought and flooding, endangering many existing ecosystems in the process. Lowlying coastal regions would be threatened by flooding caused by storms, and several island nations in the Pacific would disappear beneath the sea. [How come nobody ever mentions tsunamis when talking about global warming?]

In an effort to slow the process of global warming, most of the nations participating in the international conference in Kyoto, Japan in 1997 signed a Climate Treaty that obliges industrial nations to reduce emission of greenhouse gasses to fiver percent below 1990 levels by the year 2012. [mostly by burning more Arab oil instead of non-Arab coal]. The treaty is not yet in force, as only a few nations have ratified it, and it represents, at best, only a first small step toward effective climate protection."

Propaganda

Hammond World Atlas 2003 ISBN 0-7607-5361-X

"Two major themes have dominated discussion with regard to global sustainability and the threat — or reality — of global warming as a consequence of a man-made green house effect. The joint resolution of nearly all industrialized countries (<u>enacted 1992</u>, without the U.S.) calling for reduction of the burning of oil, natural gas, and coal to the 1990 level by the year 2005 has born little fruit this far." [note the foreigner English]

Propaganda

From Black Gold, the Story of oil in our lives Ch. 8

"<u>Often coal companies go in for strip mining</u>, because it is cheaper and easier than traditional mining. Instead of sinking deep shafts to reach the coal beds, <u>they use giant bulldozers to</u> <u>knock down forests</u>, <u>scrape away the soil</u>, and <u>level</u> <u>mountaintops</u> to reach coal beds closer to the surface.

...<u>According to Greenpeace, a leading organization dedicated to</u> preserving the natural environment, coal is 'the dirtiest fuel there is' Coal is jam-packed with poisons such as lead, arsenic, and mercury, a silver-colored metal. When released into the air through burning, mercury drifts back to Earth as particles of fine dust. Eventually, these particles accumulate in the bodies of animals, fish, and the humans who eat them. Mercury also finds its way into grains, fruits, and vegetables. <u>Carbon dioxide</u> emitted by burning coal is, of course the chief greenhouse gas."

Propaganda

Fred M. Bullard, Volcanoes of the earth, Ch.18

[Note how Bullard=pull•ard isn't actually saying the following, but summarizing someone else. Also note how hard it is to follow what is being said about global warming.] "It will be of interest to inquire into the manner in which dust in the atmosphere results in lower temperatures. Dr. Humphreys, a physicist long associated with the U.S. Weather Bureau [propaganda often dwells on credentials] considered the problem, and the following discussion is based on his work. Dust particles in the atmosphere absorb some solar radiation, but they also reflect and scatter the sun's rays. The dust particles (as is true of rocks in general) have a greater coefficient of absorption for terrestrial radiations than for solar radiations. [The bros who speak English very well, frequently don't know about uncountable nouns like infrastructure, data and .] This means that the dust particles absorb more earth-radiated heat than sunradiated heat. So the net effect of the dust, so far as absorbed heat is concerned, would be to slightly increase rather than decrease temperature. [This is what the layman sees] However, reflection and scattering are both important and work in different ways. The amount of reflection and scattering depends on the wave length [wavelength, foreigner English] of the rays and the size of the dust particles. If the waves lengths [wavelength] are small compared to the size of the particles, more reflection and scattering will result. Humphreys calculated the average diameter of the particles, from the optical effects, as 1.85 microns (.00185mm), which is greater than the wave length of solar radiation. On the other hand, the wave length of terrestrial radiation (cooling of the earth by radiation of absorbed heat) is six or seven times the diameter of the particles and would pass through dusty air with little loss. Thus, the dust particles act as a screen which prevents heat from reaching the surface of the earth, but let it escape freely." [In reality the ash causes the planet to lighten and reflect more of the sun's energy back into space, while increasing atmospheric insulation not at all. It is rather like shifting from clear to white plastic on your greenhouse. Less light enters the greenhouse, while the same

Propaganda

Fred M. Bullard, Volcanoes of the earth, Ch.17

"Early estimates of the volume of ejecta in the 1815 eruption of Tambora were as high as 150 cubic kilometers, but more recent studies place the amount at 100 cubic kilometers to as low as 30 cubic kilometers (Van Padang 1951). Likewise, early estimates of the volume of ejecta in the 1835 eruption of Conseguina, Nicaragua were in excess of 100 cubic kilometers, but, as noted earlier... this figure has been sharply reduced."

[Elsewhere herein I explain how we have good reason to believe that the first estimate of 3 million dead at the Nazi death camp Treblinka (by Vasily Grossman) were accurate. Then over later decades we see a chorus of "respected authorities" casting doubt and minimizing that number to the bare minimum possible, around 900,000 people murdered.

The thing is that an encrypted Nazi message was intercepted saying that 713,000 people were brought to Treblinka in 1942 alone. The thing is that new and much bigger crematoriums opened at at Treblinka in the "summer of '42" just like at Auschwitz. The thing is that they operated for just about as long as they did at Auschwitz. So those 713,000 arrivals account for 6 of the 19 months the camp was open and with bigger crematoriums in operation. So instead of 900,000 dead we extrapolate to 2,850,000 dead in the newer and bigger crematoriums alone.

I have seen similar "controversies" about the mortality in many wars, famines plagues and the like. Here with volcanos we see the process used once again, "respected authorities" coming back decades later and revising history to minimizing the magnitude of a disaster that Arabs Inc. wants to keep under cover.]

The science of disaster minimization

Let's take all the biggest wars, famines, plagues, tsunamis, earthquakes, and volcanos. Starting in year one, let's chart the reports of the death tolls over time. Is there a consistent tendency to minimize the mortality? Does the minimization follow a consistent step-down pattern for certain types of mortality? Which types of mortality go up? I bet the mortality outside the Mideast consistently goes up, while the mortality inside the Mideast consistently goes down.

There is nothing more powerful than an idea whose time has come

Continental drift was proposed by Frank B Taylor in a pamphlet printed in 1910, and again in 1912 by Howard B. Baker. However, Alfred Wegener is recognized for the discovery. A similar thing happened with Charles Darwin's theory of evolution. There were two other men who were proposing largely the same thing at a little bit earlier.

When I see this sort of situation, I imagine the Arabs abiding by a sort of prime directive. When one man proposes something, they whack/stop him one way or another. When many people propose something, they don't bother trying to stop it, because it is as unstoppable as an idea whose time as come.

How much carbon is in various fossil fuels

Petroleum/ oil is 80% carbon Lignite or brown coal is 73% carbon Bituminous or soft coal is 85% carbon Anthracite is the hardest coal and over 90% carbon. Peat is 60% carbon

Not that it really matters any more, but the only reason why oil releases less carbon is that it takes the least energy to extract and transport to where it is used. But what about shipping oil all the way from the Persian Gulf? Surely that must use a great deal of oil. For this reason, perhaps Pennsylvania coal shipped by energy-efficient rail to New York releases less carbon than Arab oil shipped halfway around the world. I mean, bulldozers don't use much energy. And railroads certainly don't.

Propaganda

Earth science and the environment 15.6 Textbook by Thompson and Turk

[The continental shelf is from sea erosion, not depositing of sediments. Here we see 11 mentions of how the continental shelve formed from deposits of sediments.]

"The Continental Shelf on all continents, streams and rivers <u>deposit sediment</u> on coastal deltas, like the Mississippi River Delta. Then, ocean currents <u>redistribute the sediment</u> along the coast, <u>depositing</u> it both on the thin margin of continental crust and on oceanic crust close to the continent. The <u>sediment</u> forms a shallow, gently sloping, submarine surface called a continental shelf on the edge of the continent. <u>As sediment accumulates on a continental shelf, the edge of the continent sinks isostatically because of the added weight.</u> [rubbish] This effect keeps the shelf slightly below sea level.

Over millions of years, <u>thick layers of sediment</u> <u>accumulated</u> on the passive east coast of North America, forming a broad continental shelf along the entire coast. The depth of the shelf increases gradually from the shore to about <u>200 meters at the outer shelf edge</u>. The average inclination of the continental shelf is about 0.1°...

In some places, <u>a supply of sediment</u> may be lacking, either because <u>no rivers bring sand, silt, or clay to the shelf</u> or because ocean currents by pass that area...

At the outer edge of a shelf, the sea floor suddenly steepens to an average slope of about 4° or 5° as it falls away from 200 meters [3rd mention in this book suggesting how the continental break is 200m down.] to about 5 kilometers in depth. This steep region of the sea floor averages about 50 kilometers wide and is called the continental slope. It is a surface formed of <u>sediment accumulation</u>, much like the shelf. Its steeper angle is due primarily to thinning of continental crust where it nears the junction with oceanic crust. Seismic profiler exploration shows that the <u>sedimentary layering</u> is commonly disrupted where sediment has slumped and slid down the steep incline."

Propaganda

Orphan quotes

[From a high school level encyclopedia on the the physical world] "With the exception of a few seepages or [quicksand] springs, most petroleum deposits are located underground. They are contained, together with [salty] brine and gas, in porous, sponge like layers of rock, such as limestone and sandstone, that can be tapped only by drilling. Most deposits are contained in a trap that encloses a petroleum reservoir, preventing the petroleum from escaping. Gas, oil, and water within the trap form three distinct layers. With the gas at the top and the water at the bottom. The upper boundary of a reservoir trap is known as cap rock. It is always impermeable. The lower boundary is called the oil-water contact.

<u>Most of the world's [old and deep] oil deposits occur in</u> <u>a type of trap known as an anticline—an arching fold of stratified</u> <u>rock</u>. A deposit may also be trapped by a fault—a fracture in Earth's crust—when a porous layer has become hemmed in by nonporous layers. <u>The formations called salt domes are often</u> <u>associated with petroleum deposits</u>. [Note the connection of oil with salt] They consist of intrusive <u>bodies of rock salt</u> that have forced their way through <u>the overlying sedimentary rock</u>, forming a dome ...

Every step of the oil-drilling process is closely supervised by specially trained petroleum engineers and monitored by advanced computer systems... [This sounds expensive]

When a drill bit becomes worn, it must be replaced by a new one. The drill pipe is pulled out of the ground, unscrewed length by length, and stacked on the ground. The worn bit is removed from the hole and is replaced with a new bit. It goes back into the hole, followed, on length at a time, by the drill pipe. Drilling continues night and day. Three crews of five workers each are needed, each crew working for eight hours. <u>All that</u> effort, of course, may be wasted; only 1 of 10 test holes actually yields natural gas...

Most oil is <u>recovered</u> by drilling through rock into various traps. It is an expensive procedure, causing the price of oil to vary according to the depth at which it is found and the <u>hardness</u> and thickness of the <u>rock</u> that must be drilled to reach it. <u>A single well can cost several million dollars</u> [or at least that is the reality the Arabs have carefully created]. Drillers therefore need to be reasonably sure that oil is under the spot where they erect their rigging [one excuse leads to another in a big selfreinforcing lie.] A geologic prospector helps obtain this information.

Geologists study Earth [foreigner English] to determine which areas are likely to be petroliferous, or petroleum-bearing. Surveys of various kinds are made, and regions are mapped using aerial photography. Devices such as gravity meters, magnetometers, and seismographs are also employed to locate oil-bearing rock formations <u>deep underground</u>. [sounds expensive] Gravity meters measure differences in the pull of gravity at <u>the surface of Earth</u>. [foreigner English] Porous rocks tend to decrease gravitational pull, so a low reading on a gravity meter can indicate the presence of oil-bearing rocks. Different kinds of underground rocks also affect Earth's magnetic field, which can be measured on a magnetometer. Seismographs, used primarily for measuring and locating earthquakes, can also be helpful in locating oil domes or pockets <u>under Earth</u>. [foreigner English]

Geophysicists create miniature earthquakes by setting off charges of dynamite, and then using portable seismographs to determine the speed at which echoes return through each kind of rock. Scientists can then chart underground <u>rock formations</u> to determine which areas are worth drilling...

A steel framework tower called a derrick is then erected. The derrick, which is used for raising and lowering drilling equipment out of and into the well, may be as tall as a 17story building." [sounds expensive]

Oil is not evenly distributed throughout the world. Those countries fortunate enough to have rich oil deposits [like the Arabs] often become quite prosperous."

The petroleum in the United States and abroad is being consumed far faster than it is being formed. <u>The natural</u> <u>petroleum-making process takes thousands of years</u>. [I thought the Arab party line was that it took millions of years.] In practical terms, petroleum must be considered a non-renewable resource. [My bet is that petroleum forms in 200-1,000 years.]

The DOE [the corrupt US Department of Energy] predicts that world oil consumption will increase by 1.9 percent each year between 2005 and 2025. <u>Although no one is certain</u> just when the planet's proven oil reserves will be exhausted, many experts predict that at the present rate of consumption, the pace of oil depletion may soon overtake the discovery of new <u>supplies</u>. By 2005, global petroleum demand has pushed production capacity to their limits.

At present, the total world oil reserves are estimated at

about 1 trillion barrels. Of this amount, <u>Saudi Arabia is the world</u> <u>leader in petroleum supply</u>, with more than 200 billion barrels, followed by Canada, with about 176 billion barrels. The United States ranks 16th on the list, with slightly more than 22 billion barrels. [Were these words written by the friends or the enemies of the land of the free?]

Many observers have noted that conservation would help stretch <u>Earth's steadily dwindling oil supply</u>. Certain petroleum products can be derived from coal and natural gas, but <u>clean burning, renewable alternate sources</u> may be the answer to the world's long-term energy needs."

Propaganda

The Apple dictionary definition of boondoggle

"work or activity that is wasteful or pointless but gives the appearance of having value: writing off the cold fusion phenomenon as a boondoggle best buried in literature." [It appears that someone is threatened by the idea of cold fusion. It seems impossible, but it also seems as if the Arabs are afraid of it.]

Propaganda

Economics book, How markets fail, ch. 9

"In the fall of 2004, a team of surveyors from the US government's Minerals Management Service, which is part of the Department of the Interior, set out to count the number of bowhead whales in the Beaufort Sea, northeast of Alaska's Prudhoe Bay. Some of the ocean is permanently covered with ice; parts of it are revealed in the summer months, when the icecap retreats. During their flights across the open water in search of whales, the researchers came upon the floating carcasses of four polar bears. The animals appear to have drowned while they were attempting to swim to land that was more than a hundred miles away. ...

Since the 1950s, average temperatures in the region have increased by two or three degrees centigrade, and the summer limit of the icecap has shifted will to the north, taking it beyond the edge of the continental shelf, which is about forty miles offshore. In 2004, the ice had retreated about 160 miles to the north... [this can't be true.]

The researchers were shocked. During surveys carried out in the same area between 1986 and 2003, few bears had been seen in the open waters, and not a single drowning had been documented. But in September 2004, more than ten bears had been spotted swimming, on top of the four that had perished. ...

The drowned bears made headlines about the world, heightening public worries about global warming. Pressure for an aggressive policy response increased in 2006, with the release of Al Gore's documentary, An Inconvenient Truth, which included animated footage of a polar bear struggling to pull itself onto a block of ice. 'It's not a political issue' — Gore said of climate change — 'its a moral issue. These developments presented a challenge to orthodox economists, particularly in the US, who for years had been downplaying the need for rapid steps to avert an environmental catastrophe.

An even bigger threat to their <u>complacency</u> came in October 2006, when <u>Sir</u> Nicholas Stern, a <u>respected</u> English <u>scholar</u> who had previously served as <u>chief economist at the</u> <u>World Bank</u>, issued an <u>official report</u> on the economics of global warming, which raised the specter of 'major disruptions to economic and social activity, later this century and in the next, on a scale similar to those associated with the great wars and the economic depression of the first half of the 20th century.'

Citing the increased risks of flooding, droughts, famines, and forced migrations on a massive scale, Stern

warned that climate change 'threatens the most basic elements of life for people around the world — access to water, food production, health, and use of land and the environment.' He called for immediate and coordinated policy action, including the imposition of hefty taxes on the burning of carbon [a tax on coal, oil sands and oil shale really] and a major commitment to investing in [energy wasting] alternative energy sources; he dismissed the wait-and-see attitude favored by many economists. 'Climate change presents a unique challenge for economics'. Stern concluded, 'It is the greatest and widestranging market failure ever seen'.

Until the publication of the Stern Report, most people had regarded global warming as a scientific problem, a political problem, or an ethical problem. It is all of these things, but <u>at</u> <u>root</u> it is an economic problem. 250 years ago, the stock of CO2 in the atmosphere was equivalent to about 280 PPM. Today, the level is about 430PPM, and by 2050, if current trends persist, it will be about 550PPM. When the gas builds up in the atmosphere, it acts like a greenhouse, trapping heat. In terms of average global temperatures, the ten warmest years on record all occurred between 1995 and 2007. The most important source of rising CO2 levels is the emissions of power plants, factories, motor vehicles, and other man-made burners of carbon [fossil] fuels."

Propaganda

James Lovelock, Gaia, 1972, Ch. 1

"The theory of Gaia has developed to the stage where it can now be demonstrated, and with the aid of numerical models and computers, that a diverse chain of predators and prey is a more stable and stronger ecosystem than a single self contained species [like man], or <u>a small group of very limited mix</u>. [like man and a few animal species.]"

Propaganda

2013 Andromeda Strain Film

Korean: [I was] "thinking about messenger theory again. **Dr. Stone:** The idea that Andromeda might be a coded message from the future? You think its lethal qualities are accidental, not intentional?

Korean: No-no, I agree that Andromeda was designed to kill humans.

Now I realize that this is highly speculative, but maybe the message, if there is one, is in the casing. Maybe it is the casing.

Dr. Stone: Mm-hm.

Korean: Now each molecule of the black material is cemented by one of two bonding agents, potassium or rubidium.

They serve no structural purpose and alternate in a seemingly random manner.

Why go to such trouble? Is it random, two agents? Why not three or four?

Keene: Because its binary, its a binary code. Each sequence is approximately 200 molecules long, But if you look, there's a pattern within the larger pattern.

Korean: 8

Keene: Patterns of 8. In a typical binary computer code, each 8-bit sequence would stand for a letter.

Dr. Stone: Computer, treat molecular sequences as binary code and search for key.

Keene: Why would our enemies send us a message?

[What a brilliant idea — coding a molecular message into a self-replicating life form. Now there is a message that will live for a long time! Maybe the idea of listening for transmissions from space is stupid because they are so ephemeral. Maybe life infections that live for a tens of millions of years are a better way to send out your one-way message into the universe.] **Dr. Stone:** Well maybe they didn't. Maybe somebody else did. Ok, I know this is going to sound fantastic, but let's say that [army general] Mancheck wasn't lying about the <u>wormhole</u>, and that in fact, it was the source of Andromeda.

<u>Wormholes</u>, as we understand them, are theoretical connections between distance and time, right? What if Andromeda was sent to us by our [own] future? **Charlene:** Ok, I think somebody's been working too hard and drinking way to much coffee.

[Translation: drinking lots of coffee and working hard gives people crazy ideas. Better you infidels take it easy.] **Keene:** Why send something back that could destroy your own past?

White woman: It would be <u>a move of absolute desperation</u>. Charlene: <u>A wake up call</u>, <u>a cry for help</u>. They couldn't beat <u>Andromeda</u>.

Keene: And we can? Come on, future technology must be superior to ours.

Dr. Stone: All right, maybe it's not about technology. Maybe they lack something that we have, that we still have.

White woman: Something to do with PH. Korean man: Resources... Natural resources.

Keene: <u>Something we used up or destroyed</u>, some fossil fuels, or some species

of plant or animal life in the rainforest. Charlene: And the answer is?

Keene: Ok, if I'm sending a message back to some <u>lab-coated</u> <u>geek</u> in the past, I'd keep it simple. Yeah, I'd use the basic American computer code for documents in the Roman alphabet. **Korean man:** ASCII

Dr. Stone: Computer, approach pattern as ASCII code and translate.

Computer displays: '739528 Bacillus Infernus' Charlene: What the hell is Bacillus Infernus?

White Woman: Bacterium from hell?

Charlene: What's that number?

Keene: I did some work on this once. It's an <u>extremely rare</u> member

of the Archaea genus, found only one place on the planet,

at the bottom of the sea, nearly 3 kilometers deep next to the thermal vents.

The bacterium thrive under the most extreme conditions imaginable, including very acidic PH. It practices

chemosynthesis to survive. In fact, its main food source is the sulfur-based effluent from the vents themselves. [extremely rare bacteria makes it seem as if these vents are just a few dots here and there on the seafloor. This hides what the seafloor ridge really is.]

Charlene: The chemical composition of Andromeda is based on sulfur. I bet infernus looks at Andromeda the same way a pit bull would look at a big juicy steak.

[Here the parasite has a placement for pit bulls, connecting them with 'big juicy steaks'. This cleverly raises the standing of the pit-bulls among some, while telling others that they should eat their beef rare and unsafely. In a multi-year crisis, these pit-bulls keep mating, and go feral, and many develop a taste for human flesh. What a nightmare that will be for us infidels, packs of feral pit-bulls roaming our streets and attacking our people.]

Korean man: The plan to mine those vents of their mineral deposits is going to be very destructive. It's kind of underwater strip mining. Maybe that's why they needed to send a message from the future. The bacterium no longer exists there because we destroyed it." [The parasite hates our mines. These it always calls strip mines. They parasite also wants to encourage species protection, and the idea that even bacteria matter.]

30.. APPENDIX: SCIENTISTS AND SWINDLERS

Paul Lucier, Scientists and Swindlers, Ch. 8

"exposure to air of petroleum resulted in the formation of asphaltum"

Paul Lucier, Scientists and Swindlers, Ch. 1

"According to Gesner, asphaltum occurred in 'abundance' along 'the whole <u>coast'</u> of South America, Mexico and Texas, not to mention Cuba, with a vein of no less than 144 feet thick in perpendicular thickness', or Trinidad's 'Pitch Lake' "

Paul Lucier, Scientists and Swindlers, Ch. 10

"Once California petroleum reached the surface, it thickened from evaporation; the hot sun literally baked it." [into asphaltum = tar]

Paul Lucier, Scientists and Swindlers, Ch. 8

" 'Whence [from where], then, comes the oil[?]' Lesley considered Hunt's in situ theory the best. 'Gelatinous sea organisms, both animal and vegetable [like kelp], seem to have constituted the principal, if not the sole apparatus for generating petroleum'."

Benjamin Silliman Jr.'s Report on the Rock Oil, or Petroleum

from Venango Co., Pennsylvania (1855) "Gentlemen: I herewith offer you the results of my somewhat extended <u>researches</u> upon the Rock Oil, or Petroleum, from Venango County, Pennsylvania, <u>which you had requested me to examine</u> with reference to its value for economical purposes." [This report, according to Lucier, is the most famous petroleum consulting report ever written.

Benjamin Silliman Jr. (1816-1885) was a chemist and graduate of Yale. His father Benjamin Silliman Sr. was the editor and founder of the American Journal of Science. Note the foreigner English.]

Paul Lucier, Scientists and Swindlers, Ch. 7

"[Benjamin] Silliman [Jr., one of the most influential petroleum geologists from the late 1800s] asserted that petroleum was 'uniformly regarded as a product of vegetable decomposition', but he acknowledged that there was no consensus about whether this decomposition had been effected by fermentation only, or by the aid of and elevated temperature, and distilled by heated vapor.' " [The means of decomposition is unimportant, the means of preservation is key. Why didn't bacteria eat the oil as they will do if the oil becomes churned with water?]

Paul Lucier, Scientists and Swindlers, Ch. 7

"In May 1859, Drake... made preparations for boring near an oil spring on an island in the middle of [low lying] Oil Creek just below Titusville. By early August they had finally managed to set up a derrick and a newly acquired steam engine. Average less than three feet a day, a relatively slow rate, they had gone down only 70 feet or so by the end of the month. On Sunday, 28 August 1859, <u>a day when there would be no work</u>, Uncle Billy went to check the well, and there, in the pipe, was petroleum."

Paul Lucier, Scientists and Swindlers, Ch. 8

"In March, a third strike, the Crossley well (located about half a mile down the creek from Drake's) came in with 75 barrels a day... By the summer of 1860, Gale estimated 'several hundreds of wells' had been started along Oil Creek and the Allegheny

River.

But Oil Creek was not the only region to be hit 'with a furor in excitement, or a mania in speculation. In neighboring Ohio, western Virginia, and Canada West (present day Ontario), wells were going down (as the practice of boring was described). In the summer of 1860, the geologist John Strong Newberry <u>made a reconnaissance</u> of oil operators <u>around Mecca</u> [Rather, around <u>the</u> Mecca. Note the foreigner English] in northeastern Ohio. He counted 200 wells completed or in progress. By November, there were 600 or 700.

One reason for these rapid developments was the comparatively low cost of entry in the business, starting with the land. Gale reckoned only a quarter acre was required for a well, much less than the 20 or 30 acres needed in coal mining, although he suspected that all one really had to have was enough room to squeeze in a derrick. It was not uncommon for wells to be bored within 50 feet of one another, a practice driven as much by land speculation as by geography...

<u>The basic tools and techniques for oil boring were</u> likewise relatively inexpensive and readily transferrable from the <u>artesian and brine well business</u>. 'The drilling tools and other mining apparatus used by salt miners, in a more modified and simply form, furnished all that was requisite'."

Paul Lucier, Scientists and Swindlers, Ch. 8

"Hunt explained that coal's composition (carbon, hydrogen, and oxygen) was distinct from petroleum's (carbon and hydrogen)...

Coal and petroleum formed under completely different conditions. The former was composed of freshwater or terrestrial plants, whereas <u>petroleum... was produced from the</u> <u>decomposition of marine plants or animals</u>. And because petroleum contained no oxygen. Hunt thought the chemical conversion must have taken place in deep water. In short, petroleum was not a displaced product of distillation, but rather it formed in situ." [Although salt could have kept the oil from being "oxidized" by bacteria.]

Deciding between Hunt's in situ theory and the more popular distillation theories [That is theories plural. The Arabs generally try to offer a range of plausible sounding but incorrect theories. Then they are extremely vocal about these so they look popular, and look like a consensus reality. Having a range of variants helps their range of though look more legitimate. We see a similar Arab-chosen range of thought for both Alternative energy and Christianity. Same manipulation process at work.] meant coming to grips with [wrong words] petroleum's fundamental characteristic: it was [is] liquid. Unlike such stratigraphically stationary minerals as coal, petroleum moved through the subsurface, after it was formed. Hence the place where it was found by well borers was not necessarily, or not likely, the location of its origin. Hunt noted that petroleum could move vertically via fissures as well as horizontally via the pores within a rock layer. In the later case, petroleum migrated to a stratum's highest point, for example, the crest of an anticline. By this logic, Hunt became the first geologist to explain the anticlinal theory of petroleum accumulation. Hunt, however, did not emphasize petroleum's horizontal migrations (later he would), because in 1860, the more pressing and practical problem concerned vertical migration.

Oil springs were generally considered indications of petroleum at depth. [This was mostly due to a steady Arab propaganda campaign] Drake, for instance, had located his well near an oil spring. But surface indications were not an 'infallible indication of success', observed Eaton. 'Only a short period of time was required', commented two oil historians in 1870 'to prove the fallibility of the first surface indications'. The reason lay not in any disconnect between surface and subsurface but in the very fact that there was communication. Oil springs meant leaky fissures [in the formation trapping the oil]

Finding sealed fissures was the challenge, and in 1860 borers and geologists alike began to realize this. Both groups were able to identify and predict the depth of 'oil horizons' limestones and sandstones associated with petroleum — but not the precise location of fissures. Andrews had a theory that applied to the 'great uplift' in southern Ohio and western Virginia, and Hunt had one for the 'break' in Enniskillen. But <u>along Oil</u> <u>Creek, wells struck oil along the 'bottom lands' of the valley, not in the hills. Pennsylvania petroleum seemed to accumulate in places where rocks had been thrown down, not up.</u>

[Regardless] In all the oil regions, wells tended to cluster wherever and whenever a strike was made [like in a gold rush]. Despite their oft-remarked autonomy, adjacent wells had a powerful commercial appeal (as opposed to a scientific or practical rationale). <u>As a result, they drove land speculation. And land was a surer way to make money than oil</u>. [Just like in the California gold rush of 10 years earlier, the people making the real money on the black gold-rush were not the mineral extractors themselves, but the Arab front-men that were selling the land to drill on.] The rate of success boring along Oil Creek was low. 'As the season advances', Gale observed in the summer of 1860, 'instances of failure multiply'. He reckoned that not more than one in five wells struck oil, and he could only name 20 that were pumping. <u>Around Mecca, Newberry counted</u> about a dozen wells (out of 200) that struck oil.

The low rate of success emboldened some independent-minded explorers. [So if you stage a gold-rush, make sure that enough money is returned to maintain everyone's interest in being a copycat.] According to two well-respected journalists, not a few borers 'scouted at theory' [rejected existing theory with scorn]. But 'this same class of skeptics', the [Arabfriendly] journalists were tickled to relate, was usually among the first to procure leases adjacent to a paying well. [From the time when the area was settled by Europeans, the Arabs had most of the low-lying oil lands in Titusville, Seneca, Endeavor, Mecca and many other places tied up tightly. They also made sure that their oil services contractors made a mess of the surface and ground water, so farmers were reluctant to lease their land to drillers. As soon as someone was about to drill somewhere else that might have oil, the Arabs distracted him with a sure thing a lease next to a paying well. If this didn't work, then there would be an accident, or the guy would get whacked.] Nonetheless, skeptics were common and audacious enough to warrant watching [and sometimes whacking]. 'With precipitation they dig [drill] almost anywhere as though the chance was about the same in one place as in another. And off, a dozen miles from the place where oil is found, men will be heard to say, the prospect is as good in their town as anywhere else, and so they begin to drill'. Gale referred to the unorthodox prospects as 'country wells'. They functioned as a challenge to predominant theories and practices as well as an antidote to [the] clustering [that we Arabs were struggling for].

Precipitous diggings [drillers] were also a sure sign that oil fever was spreading [on an ancient coastline where most of the oil had long been corrupted by water and ice.] 'Excitement is king now' Gale proclaimed. Even Rogers in far off Scotland could bear witness to the 'petroleum fever', which had reached 'as high a pitch as ever did the 'gold fever'. A tide of [Arab under-my-thumbsmen] speculators and operators began to set in', observed Eaton, 'which would have overpowered that of California'." [It was an even bigger gold rush than happened 10 years earlier in California, with the same people selling the expensive tools, running the gambling and brothels, and staging make-believe strikes in Placervilles far from where the gold actually is. It was just the same in Titusville, far from the present day coastlines of our nation. Also, it should be pondered how the California gold rush must have worn out most of the gold rush verve in the US.]

Paul Lucier, Scientists and Swindlers, Ch. 8

[Note the foreigner English underlined.]

"In the late 1860, drillers began extending their wells to depths of 400 or 500 feet. [The first well hit oil at 70 feet, and then 11 years later they were drilling to 500 feet. And then they drilled deeper and deeper wells. But this was just part of the Arab deception to give the impression that oil was getting harder and harder to find.] Perhaps it was a practical move in response to a 'dry hole' or a sudden drop in a pumping well's production, but in any event, digging deeper was less costly than starting anew.

[The Arabs probably got in place ahead of time as drill rig suppliers and drilling contractors. And they could have easily created this financial reality simply by subsidizing drill rig rental rates, while keeping transportation expensive and leaving assembly prices to the market. Thus people might as well drill as deep as they could. Thus it probably was much cheaper to just keep on drilling once you got your rig started. So everyone drilled as deep as they could and the public was fed a steady diet of deeper wells propaganda such as in the 1978? TV mini series The Captains and the Kings.]

A slightly different rationale was provided by two journalists: 'About this time, some reflective operator expressed the opinion that, as the supply of oil seemed to come from great depths below the earth's surface, deeper wells would reach the main reservoir [mother load] or source of supply and [vastly] greater quantities [would thus be] obtained. The theory so opportunely stated, was soon put to a practical test.

The first flowing well was struck near the Kanawha River in Western Virginia in October 1860. Several other large wells, some yielding 300 or 400 barrels per day, followed in January, February, and March of 1861. But then the Civil War completely disrupted production. Bands of Confederate guerrillas [lead by Arabs] burned derricks and <u>terrorized</u> <u>operators</u>, and as late as the spring of 1865, when the war was all but over, West Virginia prospects were still regarded as very risky. [Because the Arabs have always terrorizing any outsider competitors they could get away with terrorizing.]

Deep drilling came to Oil Creek in April 1861, when Henry Rouse decided to extend his 150-foot pumping well. He had gone down more than 300 feet when suddenly gas rushed up the hole. A nearby steam engine ignited it, and fire began to spew 'with terrible fury' over the derrick. Then 'the well exploded with a shock like that of an earthquake'...

The burning well claimed the lives of at least 18 <u>persons</u> [people], including Rouse, and took five days to extinguish... Never before had has come rushing out of a well, or, for that matter, had oil. Wells had gurgled and hissed and sputtered for a while, but the Burning well was notorious for its fury. Gas through oil sixty feet high, and the well gushed thousands of barrels for days on end. 'Here was a new feature in oil production', Eaton flatly announced.

Dry holes soon became the test for deep-seated sources, and drillers with nothing to lose but their time and effort began going down 500 feet or more. In June 1861, the Funk well struck oil and flowed 250 barrels a day, 'to the astonishment of all oil-borers' along the creek. Two months later the Phillips well cane in with 2,000 barrels a day, and in September the Empire well flowed 'at a modest rate' of 3,000 barrels daily. By October 1861, the huge Phillips well no.2 was gushing 3,000-4,000 barrels a day. These 'leviathans' were soon followed by others — Noble (2,500), Caldwell (800-1,000), Maple Shade (1,000-1,500), Jersey (500), [and] Coquette (1,500). According to J.Peter Lesley, the quantities were astonishing'. The Earth literally spouts oil as a whale spouts brine.

By the end of 1861, Oil Creek was famous for its flowing wells... <u>but more famous still were the farms on which</u> they clustered. The Egbert [egg•br•te] farm for example, embraced the Maple Shade, Jersey, and Coquette wells. The twelve-acre Blood farm had 13 flowing wells; by 1864, it had 30. As one observer wryly put it, 'these wells were unequally distributed along the Creek'.

Flowing wells made few people very rich, and a great many others were very poor. [They Arabs had probably drilled wells all over the area for "brine". They probably had nearly all of the good oil lands. These they gave to friendlies. Such is an Arab gold rush.]

During the winter of 1861-1862m Oil Creek produced somewhere between 8,000 and 20,000 barrels a day. According to one observer, it was truly too much of a good thing. Oil prices plummeted. By June 1862, a barrel cost only \$2.00 [In 1859, coal oil was selling for \$1.50/gallon, or \$63/barrel]. The wood barrels were worth more than the oil inside. Thousands of barrels of oil literally flowed into the creek for it was worthless to gather and store it all. 'A panic seized the smaller institutions', Eaton lamented. Pumps and derricks were abandoned and let to rust and rot. Petroleum had gone bust by the summer of 1862.

What little drilling continued was confined to sites adjacent to flowing wells. In this regard, flowing wells did not change the pattern of petroleum development. <u>Wells continued</u> to be located on bottom lands of the creek, but the cluster of derricks became tighter and more wasteful. According to an 1862 estimate, 31 wells produced 20,000 barrels a day, of which three-quarters flowed back onto the ground or into the creek. [Today, 150 years later, can we detect any environmental harm at all from this great oil spill?] Samuel Downer, the Kerosene manufacturer, was dismayed.

'See here', Mr. Downer, 'don't you know you are wasting a hundred barrels an hour here?'

'Yes', said the interested party addressed, 'but what am I to do with it? You won't give five cents a barrel for it; and I can stand a loss of \$5 an hour rather than let you have it at that price.

[My guess is that the Arabs running the oil transportation cart-tel, and the Standard Oil refining cartel jacked up transportation and refinery charges so high that the people in Titusville couldn't give their oil away.]

Flowing wells made the degradation even worse because they were deep. To lift the heavy tool stings, they needed coal-fired steam engines—noisy, smelly, and dirty. Coal was shipped from Pittsburg along muddied roads and waterways. Any trees on an oil property were cut down and used for building derricks and engine houses. Lesley recoiled at the transformation of Oil Creek:

The once quiet, beautiful valley became a noisy den, a hideous desert. Derricks, scaffolds, and pumping gear took the places occupied by the tall forest trees or blooming orchards... nothing was heard but the clanking of the pumps, the blowing of some new well in its first <u>energy</u>, [The output of a well follows a curve that looks like the lower left quadrant of a circle], the shouting of drivers urging miserable mules and horses through the nauseous mud [mixed with crude oil] dragging empty barrels to the wells, or full ones down to the stream, a stinking bog of mud <u>and salt</u> mingled with oil." [Thus to lease your land to oil drillers was to destroy its value. Thus land for oil wells was rather expensive.]

Paul Lucier, Scientists and Swindlers, Ch. 8

"In an 1863 Harper's Magazine article, Rogers presented a new theory of petroleum. In typical Rogers style, he began by praising the immense scale of the 'great petroleum tract' of North America. It encompassed 50,000 square miles, from Canada to Kentucky and from western Pennsylvania to eastern Ohio"

Paul Lucier, Scientists and Swindlers, Ch. 8

"Lesley scoffed [at someone else's theory of where oil came from.] The strata of western Pennsylvania exhibited an 'almost unchanged horizontal posture'. Likewise he rejected Roger's distillation theory [where oil is supposed to come from the natural distillation of coal]. 'The oil is never found ', he asserted, 'in any connection with coal beds, or even with coal slates or bituminous shales'. The juxtaposition of the oil regions and the great Appalachian coal field was a geographic deception."

Paul Lucier, Scientists and Swindlers, Ch. 8

"From the perspective of coal oil companies, petroleum was not such an inexpensive or easy substitute. These companies were certainly aware of the surplus production, but some obstacles blocked the path to petroleum. First it needed to be transported from wells to <u>manufacturies</u>, most of which were located near western coal mines or in East Coast cities. At best, transportation was seasonal. In winter, Oil Creek was frozen; in summer, it had too little water; in spring it flooded. <u>When</u> <u>navigation</u> [by horse drawn wagon] was possible, crashes and fires were common. Overland, roads were execrable [often cursed], and in the rain, they were impassible. As Joshua Merrill, superintendent of Downer's Kerosene oil works outside of Boston, explained, although petroleum might be 'very cheap' at a flowing well, getting some to the pant [refinery] was 'very costly'. [The Arabs made sure of this.]

The second obstacle was technological—turning petroleum into marketable products. In theory, the process was straight forward. Petroleum, as all scientific and practical chemists knew, contained several volatile fractions. By heating petroleum in a wrought-iron still, various distillates could be run off. Lighter fractions were suitable for burning in common lamps; heavier ones served as lubricants."

Paul Lucier, Scientists and Swindlers, Ch. 8

"the discovery of petroleum prostrated the whole [coal oil] business, and threatened its projectors [projectors?] with overwhelming loss, from which they were happily rescued by converting their [coal] oil factories into refineries, which was done with very little trouble."

Paul Lucier, Scientists and Swindlers, Ch. 8

"Throughout 1863 the oil regions of Pennsylvania and elsewhere were relatively gloomy places. <u>A small number of big wells</u> glutted the market. Oil prices remained low and stable. <u>Incentives to bore new wells vanished</u>. The attention of most Oil Creek inhabitants, like much of the nation, focused on the Civil war.

The petroleum market began to improve in 1864. At the start of the year, a barrel fetched \$3 to \$4 at the well. In July the price had rocketed to \$13. By year's end, following a string of Union victories, the reelection of President Abraham Lincoln, and continued inflation due to the war, prices settled in the range of \$10 to \$12 a barrel. At the same time, production steadily declined from a peak of 3 million barrels in 1862 to fewer than 2 million in 1864. The combination of high prices and low supply produced a burst of renewed interest in oil production. Operators began cleaning out old wells and started looking for

new locations. By the summer of 1864, an oil boom was underway.

The oil boom was far larger in terms of people, places, prices, and press coverage that the [gold] rush [that occurred] after Drake's strike. <u>Historians have often depicted it as a frenzy of land and stock speculation, and, accordingly, the pattern of development has been described as random, widely dispersed, and irrational."</u>

Paul Lucier, Scientists and Swindlers, Ch. 8

[Does this sound like the .com bubble? Maybe both were brought about by the same people.]

"Striking a flowing well was a newsworthy event. 'The trouble now', complained William Wright, 'is that... the successes are blazed <u>abroad</u> by telegraph, newspaper, and private epistle[s] [epistles=letters]; while the failures are <u>glozed</u> over [glossed over], or at best only touched upon, as if they were matters of which the public must be kept in profound ignorance. The ceaseless sensationalism beguiled [deceived, tricked] the public into believing oil was easy to find. [This is how the Arabs manipulate our supposedly free press.]

Oil companies also made it easy to invest. Low-budget stock sold for as little as 25 cents a share, 'which had the effect of attracting and entirely new class of speculators', noted one reporter. 'The cook and chambermaid who had only \$10 to invest, had now the opportunity of becoming rich. The stock was rapidly <u>taken</u>, and, in most cases, doubled in value within a week. Yet few or none of these had a single well in operation. [or genuine income, they were all bought on promise like the dot com companies.] Philadelphia, the largest oil stock exchange, was struck by the fever most violently. On average 600,000 shares traded monthly during the first part of 1865.

'Making [creating] stock companies', remarked a jaded jobber, was a 'very common practice'. 'A number of gentlemen get together, and agree to form a company. Somebody is sent to Oil creek to buy some land: it may have oil or not: that is immaterial. It is sufficient that they own so many acres on Oil creek. The company is then formed, and the acres which cost them \$100,000, are turned in at a nominal value of \$500,000, or \$1-million, and stock issued representing a capital of that amount'. Wright drastically discounted most petroleum ventures. 'Most persons [people] have come to believe that a certain amount of training, of experience, as well as natural capacity, is requisite to employment in any situation requiring knowledge, skill, and judgement. Not so with many of the oil companies. The typical company was capitalized at \$250,000 to \$500,000, although many were valued at \$1-million. These sums reflected inflated property prices, which constituted most of the assets, no matter how small the acreage. Individuals could not afford to buy land in Petrolia [Oil creek]; it was held by companies or original owners, who refused to part with their farms. Some companies could not afford land. Their property consisted solely of fractions of an interest, from 1/3 to 1/32 in an oil well, which might be flowing, pumping, going down, getting started, or none of the above.

Regardless of capital or property, all companies operated at the level of the individual well, the 'unit' of trade in the early oil industry. A company usually succeeded or failed depending on whether its well struck oil. <u>And even if a well did</u> flow, it did not do so for long, perhaps a year or two, and all the while, the flow diminished. Hence the existence of any oil company was correspondingly short, a transient affair that heightened the sense of a rush.

Like all mining booms [gold rushes], fast money was the modus operandi in the oil business. That is not to say that striking oil was unimportant, but <u>bags of cash were made</u>

speculating in land and stock. Critics constantly admonished [warned and advised] readers. 'The unwary', sighed one, were 'fleeced to an unmerciful extent. Eaton offered more pastoral reflections: "In stock companies as in other things, there is the good and the evil—the true and the false'."

Paul Lucier, Scientists and Swindlers, Ch. 9

[This is supposedly a poem. But clearly it is about how the Arabs controlled the competition in the 1860s in Pennsylvania. Also, the harem bros like think of themselves as poets. Note the underlined sections.]

"Famous Oil Firms.. There's Ketch'em & Cheat'em, and Lure'em & Beat'em And Swindle'em all in a row Then Coax'em & Lead'em and Leech'em & Bleed'em And Guzzle'em, Sink'em & Co. There's Gull'em & Skinner and "Gammon & Sinner R.Askal, Oily & son With Sponge'em & Fleece'em and Strip'em & Grease'em And Take'em-in Brothers & Run Chorus: Oh! oh! Oily firms pay, in Pennsylvania Just so ... There's Watch'em & Nab'em and Knock'em & Grab'em [Getting whacked is related to the school of hard knocks] And Lather & Shave'em well too [using a barber's razor to give them an infection.] There's Force'em & Tie'em and Pump'em & Dry'em, And Wheedle & Soap'em in view. There's Pate'em & Core'em and Grind'em & Bore'em [The pate is the top of the head.] And Pinch'em good, Scrape'em & Friend. With Done'em & Brown'em and Finish & Drown'em And thus I might go to the end."

Paul Lucier, Scientists and Swindlers, Ch. 9

"Bogus companies and fancy [worthless] stock were the evil twins of the boom...Wright reckoned <u>petroleum was one giant</u> <u>swindling operation</u>... The 'machinery of deception' had several parts, but the principal one was information. High-speed presses cranked out heaps of 'windy' prospectuses, 'lying' reports, 'worthless' guidebooks, newspapers, 'puffs', and 'long-winded' histories"

Paul Lucier, Scientists and Swindlers, Ch. 9

[the managers of most of the oil startups] "had no firsthand knowledge of oil wells or an earthly idea of what made a good prospect[ing site]. They needed advice, which made them vulnerable...

To escape the machinations [of the Meccans], one needed a trustworthy expert, and in Petrolia there was no shortage of handsome individuals styling themselves as experts. For a price, anyone could buy one. Newly formed companies in Philadelphia, New York City, or Boston were especially eager to do so. They usually sent a representative to the oil regions to buy <u>lands</u> or take leases, to investigate properties and wells, and to consult an expert. Whether that person was competent and honest was another matter." [The Arabs can deal with both dishonest and incompetent people. It is the competent and honest ones that they are unable to deal with.]

Paul Lucier, Scientists and Swindlers, Ch. 9

"The Telegraph was key to fast-flowing information, and not surprisingly, a useful swindling tool. Whenever a strike was made...Lines would soon be run to the well, which meant information flowed in both directions. Drillers could be forewarned of inquisitive visitors, and advantage to someone like Peter who might wish to 'enhance' a well's production. Pipes were sometimes run from oil tanks back to a <u>wells</u> so that a sort of 'perpetual motion' was achieved. Barrels of oil could be poured down holes only to be pumped back up in front of unsuspecting investors. Finally, Peter often spilled a barrel or two to create a 'good' surface indication."

Paul Lucier, Scientists and Swindlers, Ch. 9

"Of all the slick tricks, none produced more laughs and more denunciations that the sale of worthless lands... wild-cat lands in... places... where oil has never been heard of, which have obtained a [huge] fictitious value... through the representations and efforts of unscrupulous and irresponsible parties"

Paul Lucier, Scientists and Swindlers, Ch. 9

"Persons claiming to possess special powers to locate underground waters or minerals had been around for Millennia."

Paul Lucier, Scientists and Swindlers, Ch. 9

"Unlike swindlers... self-described civil and mining engineers offered their professional services in print. Through advertisements and endorsements in newspapers, journals, and pamphlets, they spelled out their technical training, job experience, and competence in surveying and map making. At the back of F.W. <u>Beers's</u> Atlas of the Oil Region of Pennsylvania (1865), the best-known and most highly regarded among the many oil atlases, Beers, a civil engineer, printed the trade cards of many fellow engineers... For a fee... engineers... [would] examine oil properties, write reports, and oversea the actual boring and working of oil wells." [This seems to have been a Br=haremi friendly publication and only Arab friendly engineers could list here.]

Paul Lucier, Scientists and Swindlers, Ch. 9

"Judging from Petrolia [stock] prospectuses, men of science played no role in the oil boom. Stocks and properties sold easily; local oil finders supplied the expertise, and, if science were needed, extracts could be pulled from published sources. Consulting geologists were apparently too slow and too costly. In the time it took to arrange an engagement, an oil company could organize and start a well. In 1865, boring cost \$4,000 to \$6,000; geologists charged \$500 (plus expenses) for a survey and written report. On paper and on the ground, geologists were missing."

Paul Lucier, Scientists and Swindlers, Ch. 9

"Lesquereux, during the Slippery Rock [New York] survey, discovered among the coal beds a specimen of Fucoides Caudagalli, a Devonian seaweed, which suggested a possible role for marine vegetation in coal genesis"

Paul Lucier, Scientists and Swindlers, Ch. 9

"petroleum always tends to rise to the surface... Petroleum could theoretically occur in any stratum in which the liquid was stopped in its vertical rise."

[This is really only applicable to old oil. New oil near the surface does not do this so much. The place to find the remnants of old oil is in anticlines. The place to find abundant new oil is at the seashore. The place to find somewhat old oil is in an recent seashore. In all cases it is best to look for dry places that do not experience much salt-leaching rainfall.]

Paul Lucier, Scientists and Swindlers, Ch. 10

"Benjamin Silliman Jr. ... went out to California as a consultant and found a fabulous wealth of oil." "California was know to have bitumen. Usually it was found oozing out of the rocks as semisolid tar or in very thick asphaltum pools, which were intermixed with sand and water. During the 1853 Pacific Railroad Survey, Blake, had examined the coast between San Francisco and San Diego and reported that 'there are numerous places in the Coast Mountains... where bitumen exudes from the ground and spreads in great quantities over the surface. These places are known as Tar Springs, and are most numerous in the vicinity of Los Angeles... Thomas Antisell... had covered much the same ground as Blake as the geologist-chemist appointed to the 1855 Pacific Railroad survey. Antisell concluded that 'bitumen was par excellence the mineral of southern California, being found in almost every county south of San Francisco.

Such an exalted resource did not go unnoticed by the [California geological] survey. Whitney sent Brewer to investigate the bitumen. Not surprisingly, Brewer found the amounts impressive. But the question before the was not one of quantity, but quality: what to make of it? Whitney sent samples from La Brea and other springs to Frank Storer, the 'highly skillful' Boston chemist and Antisell's nemesis. After running a series of experiments, Storer informed Whitney that 'the answer to this question was in the negative... The asphaltum cannot be profitably used for the manufacture of burning or lubricating oil. There was too much water intermixed; the asphaltum frothed when heated...

Silliman arrived in Santa Barbara on 26 June and spent three days exploring the springs around San Buenaventura... [he found] at least 20 natural oil-wells, some of the largest size. The oil is struggling to the surface at every available point, and is running away down the rivers for miles and miles. ... As a ranch [the Ojai] is a splendid estate, but its value is its almost fabulous wealth in the best of oil. On 4 July Silliman went by stagecoach to Los Angeles where he spent several days investigating other oil springs, including La Brea...

he also found numerous places of 'hardened asphaltum' indications, he thought, of former oil springs. Here was 'a remarkable and almost unrivaled source of supply', he enthused. The only limitation to the amount of oil was 'the number of artesian wells'."

Paul Lucier, Scientists and Swindlers, Ch. 10

"Once California petroleum reached the surface, it thickened from evaporation; the hot sun literally baked it."

Paul Lucier, Scientists and Swindlers, Ch. 1o

"Silliman thought petroleum was 'by no means necessarily connected with any particular geological period'. Here was the familiar argument of process over product. Woody material of any age, under the right chemical conditions, might be transformed into petroleum. Silliman noted that in the eastern United States and Canada, petroleum was found in Silurian [439-409 mya.] and Devonian [409-363 mya.] rocks, but in southern California, petroleum was 'certainly no more ancient than the cretaceous' [146-65mya]. According to Whitney's survey, California had no Silurian or Devonian rocks. <u>Silliman concluded</u> that California petroleum was the youngest in North America."

Paul Lucier, Scientists and Swindlers, Ch. 10

"Silliman's report began with a geological overview of California oil, the scale of which was 'unlike what is seen upon the eastern side of the continent'. <u>There were 'natural wells of petroleum</u> and tar' 40 feet in diameter, and hillsides were covered 'often for hundreds of acres, with hardened asphaltum'. Silliman mentioned 16 'oil outcrops"

Paul Lucier, Scientists and Swindlers, Ch. 10

Paul Lucier, Scientists and Swindlers, Ch. 10

"Silliman did not mention any theory of anticlines. On the contrary, he thought the best place to bore wells was in valleys, at the base of hills, or along hillsides, not on top."

Paul Lucier, Scientists and Swindlers, Ch. 10

"California oil...'was of such extraordinary purity', observed Hodge, that it burned in a kerosene lamp like Pennsylvania refined oil." [This is because it was so recent and uncorrupted by bacteria]

Paul Lucier, Scientists and Swindlers, Ch. 10

"The natural association of petroleum with asphaltum was 'wellnigh universal', except in Pennsylvania"

Paul Lucier, Scientists and Swindlers, Ch. 10

"When we pass...'to a deposit rich in the remains of the higher marine animals, in which cetacean bones are frequently met, [we] find an oil comparatively rich in nitrogen. In this sense, California crude was whale oil" [Really anything that might get caught in front of a tsunami.]

coal

Note the foreigner English underlined

Paul Lucier, Scientists and Swindlers

"Gesner's...detailed descriptions of the coal fields...Ten seams, from one to three yards thick, were being mined and the coal was being exported. At the Joggins, Gesner counted eight seams from <u>half a foot</u> [6 inches] to three feet thick, perfectly exposed from the cliff top to the beach."

Paul Lucier, Scientists and Swindlers Ch. 1

"coal was difficult to trace, however; the <u>seam</u> lay covered <u>by</u> <u>sandstones</u> or loose soils, and the strata were very nearly <u>horizontal</u>."

Paul Lucier, Scientists and Swindlers, Ch. 1

"the great New Brunswick coal field, 'From all the observations I have been able to make, is now known to embrace an area of 7,500 square miles"

Paul Lucier, Scientists and Swindlers, Ch. 1

"Along two miles of coast, they measured a section of sandstone, shale, and coal strata amounting to more than 2,000 feet of deposition. They counted 19 coal seams, some as much as 4 feet thick and seventeen vertical trees."

Marco Polo, Ch.3

"Let me tell you next of stones that burn like logs. It is a fact hat throughout the province of Cathay there is a sort of black stone, which is dug out of veins in the hillsides and burns like logs. These stones keep a fire going better than wood. I assure you that, if you put them on the fire in the evening and see that they are well alight, they will continue to burn all night, so that you will find them still glowing in the morning. They do not give off flames, except a little when they are first kindled, just as charcoal does, and once they have caught fire, they give out great heat. And you must know that these stones are burnt throughout the province of China." [The footnote adds: It is surprising that a Venetian should regard coal as a curiosity at a time when Londoners were already complaining of the smog caused by 'sea coal' from Tyne.] [Since Roman times at least, the Arabs have struggled to make all nations put their underground minerals were under the control of government. Then they would corrupt the government and get it to lease, or better yet sell, a monopoly to one company that they secretly managed, like say Mexico's Pemex. Then this government company would of course discover little oil and offer little competition to Arab sales of oil.]

"Nova Scotia's minerals did not belong to the people. The Duke of York had acquired a crown lease in 1827 to all Nova Scotian mines and minerals. He then granted sole rights under this lease [a monopoly] to a group of London capitalists, who formed the General Mining Association (GMA). The reservation of all mines and minerals to the GMA, Gesner concluded, had 'retarded discoveries by the inhabitants, and checked the kind of inquiry which has been beneficial to neighboring colonies.'

In Nova Scotia, coal was the principal mineral, but it was the one most 'retarded' from reaching its full potential. The GMA had opened only two collieries [coal mines]: one in Pictou (Albion Mines) and the other in Cape Breton (Sydney Mines). There were certainly other coal fields, as Gesner had shown, but the GMA refused to mine them. [Because the Arabs were running it way back in the 1830s, angling for a world that was scheduled to become dependent on their oil some 140 years later] Throughout the 1830s and 1840s, Gesner steadfastly opposed the GMA. 'The Mining Association possesses and entire monopoly which prevented every kind of mining enterprise in the province..."

Paul Lucier, Scientists and Swindlers

"Nova Scotia might not seem the obvious place to begin a history of American coal, but it is a natural one. Since at least the 18th century, observers had commented on the <u>splendid</u> <u>exposures</u> of coal along its <u>coasts</u>, especially in Joggins on Chignecto Bay, an arm of the Bay of Fundy. Beginning in the 1830s, Nova Scotia was the largest producer of coal in British North America and a major exporter to the United States. The seaboard cities like Boston and New York, Nova Scotia's coal was closer, easier to transport, and hence better priced than Pennsylvania's."

[And all this was produced by an Arab-run monopoly that was able to network with Arab-run shipping companies and undercut the cost of American coal.]

Paul Lucier, Scientists and Swindlers, Ch. 1

"Coal usually occurred in basins... As evidence, he presented fossils, all the 'usual coal plants', identical to those from the Joggins on the opposite shore of the Bay of Fundy. He had also unearthed fish [fossilized fish from the coal.]"

Paul Lucier, Scientists and Swindlers, Ch. 2

[When talking about expert witnesses called in an 1850s civil trial against a potential coal miner, none had any real credentials, although they called one another doctor. We read that:] "All were members of the American Association or the Advancement of Science, the American Philosophical Society, and the Academy of Natural Sciences." [Rest assured, all of these were run by the Arabs, as was the National Geographic Society. And today, this sort of association is still generally run by the Arabs, along with the Sierra Club, Greenpeace, and most other enviro-charities.]

Paul Lucier, Scientists and Swindlers, Ch. 2

[Here is a guide on how to answer questions about the origin of fossil fuels when required.]

"Table 2.4. Cross-Examination of James Percival Q. What is your opinion of the origin and geology of coal [fossil fuels]? A. I decline to answer that question.

Q. Are not fossil vegetables [fossilized plants] very abundant in the vicinity of coal mines and touching the coal?

A. I decline to answer the question.

Q. Do not metallic veins run and ramify in all directions, and does coal ever occur in this manner?

A. I decline answering, as I cannot do so from personal observation.

- Q. Of what is asphaltum composed
- A. That being a chemical question, I decline to answer it.
- Q. What is the difference between coal and asphaltum?
- A. That being a chemical question, I decline to answer it.

...In general, <u>the attorney's blunt questioning disclosed</u> a tightly knit scientific community acutely aware of the standards of behavior for its members."

Paul Lucier, Scientists and Swindlers, Ch. 2

"Whether testifying in court or consulting for a company, [or appearing in the media], it was crucial for the man of science to appear impartial. During the trial, the expert witnesses exhibited a defiant rectitude. When asked about a possible conflict, Percival responded indignantly that he 'had no interest whatever in the result... Ellet echoed the sentiment: 'I have no interest, direct or remote, in this cause... In short, neither money nor interest swayed these men of science from their proper relation to one another or toward their science.

When the attorneys elicited [tried to elicit, draw out by trickery. Foreigner English] the opinion of each witness about the competence of his fellow experts, the men of science [who lacked real credentials] again com•ported [together•carried] themselves in accordance with an unarticulated yet wellunderstood, standard of behavior. They were very careful not to denigrate each other. Instead, they commented effusively on their colleagues' high authority', or 'very high authority'. Ellet, for example, considered Robb 'a gentleman of great scientific attainments'. Jackson mentioned that he often recommended Taylor as a consultant when he could not go himself. Taylor though Jackson..." [And this same process is at work in many research "science" institutions today.]

Paul Lucier, Scientists and Swindlers, Ch. 3

"Coal was unequivocally of vegetable origin... 'fossil combustibles from the vegetable kingdom.' ... The plants, mostly ferns, firs, and palms, indicated a hot, moist climate, not a dry, temperate one, as then existed in northern Europe. The few shells that had been found came from marine species." [I suspect that coal fields come from great everglades-like areas drying out as sea levels retreat in an ice age. If there are jumbled coal fields, we should map them so we understand better how oil fields form.]

Paul Lucier, Scientists and Swindlers, Ch. 3

[This is about one of America's many coal fields] "The most distinctive feature of the Appalachian bituminous coal field was its size, nearly 900 miles long, 200 miles wide [180,000 sq.mi, or 482,000 sq.km], and covering parts of seven states... Carefully tracing the coal seams...from basin to basin, they showed how the beds maintained the same order and over a remarkable extent, the same thickness. Rogers described 'uniform sheets of material [coal] regularly and widely extended across the North American continent. The best example was located near Pittsburg, where the 'great' Pittsburgh coal seam, sometimes 12-14 feet thick, outcropped." [If we assume a nearthe-surface coal seam only 4m thick, then we have 1,928 cubic kilometers of coal. This is about 4,000 time current US coal consumption. And this is a conservative estimate of only one of America's coal fields.]

Paul Lucier, Scientists and Swindlers, Ch. 3

"American coal meant a massive continental-sized marsh.

Rogers then sketched 'an amazing picture' of this ancient marsh. In a flat lying region about 150-200 miles wide, bordered on one side by a shallow, open sea and on the other by a hot, wet forest of tall trees of various species, especially Sigillaria, grew an extensive morass or marshy savannah clothed in spongy matting of Stigmaria [roots in coal]."

Paul Lucier, Scientists and Swindlers, Ch. 3

"Bakewell pointed to a layer of fireclay [ultra-fine-particulate pottery clay] beneath every coal seam and to upright trees found in coal fields. The fireclay was the soil in which the freshwater plants grew. As to the [upright] trees, Bakewell thought it impossible for long trunks to remain vertical after being uprooted by torrential rivers. 'We are therefore certain' Bakewell argued, that the plants composing coal had 'grown in the situation where [they] stood. This explanation came to be known as the 'in situ or peat-bog theory', because peat bogs were considered to be extant analogies to ancient coal marshes. The theory was largely discarded by English geologists [the ones that the Arabs didn't whack], but it was supported by the French geologist Alexandre Brongniart and was well known to Americans because [Benjamin] Silliman Sr. chose Bakewell's Geology as his textbook."

[1) What a matrix name: Our•ob•art Bake•well.

2) Here I imagine a sort of everglades at the mouth of a tropical Amazon. Sea levels retreat and then 10 to 50 feet of salty biomatter dry out. Then the stuff gets covered with river outflow, then there is big freeze and the ice packs everything down. Then when the thaw comes, everything gets covered in more sand.
3) The upright trees were growing in the swamp.]

Paul Lucier, Scientists and Swindlers, Ch. 4

"According to Charles Jackson, American geologist's ability to discover, describe, and develop mineral resources had created a problem. Smatterers in science were capitalizing on their success by soliciting commissions as mining engineers. These so-called surveyors, who 'know nothing about mines or minerals or the art of tracing a vein over irregular ground', contributed directly, and unfortunately often, to the disappointment and loss attendant to so many mining ventures..." [This reminds one of how Arabs guides will pretend to be loyal but lead invaders into the desert. See Xenophon's Persian Expedition. It is really the same process at work.]

Paul Lucier, Scientists and Swindlers, Ch. 4

"Consultants worked diligently to maintain their credibility in the face of what they took to be continual efforts on the part of capitalists to exploit them. Reports tailored to the wishes of a company... or even the perception of such... could unravel a consultant's reputation." [Here is an Arab guide-book on how to be an Arab guide in the effort to find oil or anything else.]

Paul Lucier, Scientists and Swindlers, Ch. 4

J.D. Whitney, The Metallic Wealth of the United States 1854 "The facility with which the public allows itself to be deceived, in regard to everything connected with mining [including fossil fuels]... is remarkable. The machinery [of]... the swindling speculation is... simple. The locality is selected, and visited by some very distinguished scientific geologist, who for a sufficient consideration will write a sufficiently flattering report, and demonstrate the absolute certainty of <u>the</u> success. The value of the mine is fixed at an enormous sum, and divided into one or even two hundred thousand shares. The company is organized, and the stock brought into the market. Every means possible is then taken to inflate its value...

As soon as a sufficient quantity of the stock has been thus disposed of, and the getters-up of the scheme have pocketed the proceeds of their skillful maneuvering, the natural results follow:...

The property which a few days before was quoted at hundreds of thousands can now hardly be given away. The unfortunate victims having nothing left as the tangible evidence of the brilliant dividends promised but the elegantly engraved stock certificates, and the equally valuable reports by which they were deluded." [Doesn't this sound like the dot-com bubble?]

Propaganda

Jeff Goodell, Big Coal, the dirty secrete behind America's energy future. Introduction

"About half the electricity we consume comes from coal — we burn more than a billion tons of it a year. [half a cubic kilometer.] usually in big, aging power plants that churn out <u>amazing</u> <u>quantities of power</u>, profit, and pollution. ... And the rise of the Internet — a global network of electrons — has only increased the industry's power and influence. [Here the Arab propaganda implies that the internet increases energy consumption because it uses electricity. In fact using the internet to communicate is more than 100 times more energy efficient than physically traveling somewhere.] We may not like to admit it, but <u>our shiny</u> white iPod is propped up by dirty black rocks. [Note how coal is called dirty black rocks. Also, using a computer is vastly more energy efficient than driving there. This is why the Arabs hate computers, and the internet.]

We've been hooked on coal for almost 150 years now, and like a Bowery junkie, we keep telling ourselves it's time to come clean, without ever actually doing it. [Note how the Arabs are characterizing our use of coal as an addiction. They hate the coal that competes with their oil.] We stopped burning coal in our homes in the 1930s, in locomotives in the 1940s, and by the 1950s it seemed that coal was on its way out for electricity generation too. Nuclear power was the great dream of the post-World War II era, but the near-meltdown of the Three Mile Island nuclear plant in 1979 put an end to that [This happened right at the start of the 1979-80 echo embargo. What are the odds it was not Arab sabotage?] Then [clean burning but earthquake firestorm causing] natural gas overtook coal as the fuel of choice. If coal was our industrial smack, natural gas was our methadone. it was clean, easy to transport, and nearly as cheap as coal. [most of the talk about energy addiction comes from the people who gave the world the hashishin/ assassin, men addicted to opiated hashish, dogs who would do whatever their masters commanded- to get their fix.] Virtually every power plant built in America between 1975 and 2002 was gas fired. Almost everybody in the energy world presumed that the natural gas era would soon give way to even cleaner sources of power generation - wind, solar, biofules, hydrogen, perhaps someday solar panels on the moon. [None of the preceding will ever replace oil and coal. But geothermal power easily can. Why is geothermal never mentioned?] As for all the old coal plants [competing with OPEC.], they would be dismantled, repowered, or left to rust in the fields.

But like many revolutions, this one hasn't progressed quite as planned. Energy-wise, the fundamental problem in the world today is that <u>the earth's reserves of fossil fuels are finite</u>, <u>but our appetite for them is not</u>. [They are finite true, but there is enough to last many thousands of years.] The issue is not simply that there are more people in the world, consuming more fossil fuels, but that as economies grow and people in developing nations are lifted out of poverty, they buy cars and refrigerators and develop an appetite for gas, oil, and coal. Between 1950 and 2000, as the world population grew by roughly 140%, fossil fuel consumption increased by almost 400%. By 2030, the world's demand for energy is projected to more than double, with most of that energy coming from fossil fuels. [If people lived in well-insulated townships, and used the rail-based transit system I explain herein, then mankind could slash energy use by over 95%]

Of course, every barrel of oil we pump out of the ground, every cubic foot of natural gas we consume, and every ton of coal we burn <u>further depletes reserves</u>. For a while, our <u>day of reckoning was put off by the fact that technological</u> <u>innovation outpaced consumption: the more fossil fuels we</u> <u>burned, the better we became at finding more, lulling us into a</u> <u>false belief that the world's reserves of fossil fuels are eternal</u>. But that delusion can't last forever. In fact, there are increasing signs that it won't last much longer. [Again, this is Arab propaganda in support of high oil prices. Reader: please try to learn to recognize this sort of propaganda.

OPEC's] Oil is the most critical fossil fuel for modern economies, underlying everything from transportation to manufacturing. In 2005, the world consumed more than 82 million barrels of oil each day [5.75 cubic km/yr], about 30% of which came from the Middle East. The world is not going to run out of oil anytime soon, but it might run out of cheap, easy-to-get oil. As that happens, prices are likely to spike, fundamentally disrupting major parts of the world's economy. You don't have to buy into the apocalyptic scenarios that some doomsayers predict — the collapse of industrial society, widespread famine — to see that the end of cheap oil is going to inspire panic and economic chaos as the world scrambles to find a replacement energy source."

Propaganda

Jeff Goodell, Big Coal, the dirty secrete behind America's energy future. Introduction

[foreigner English alert, coal is an uncountable noun like dirt, wood, metal, etc. Also, here we see the Arabs wildly understating the amount of coal in the world at a mere 500cubic km.]

"There <u>are</u> an estimated 1 trillion tons [500 cubic km] of recoverable coal in the world, by far the largest reserves of fossil fuel left on the planet. And despite the [Arab induced] run-up in coal prices in 2004 and 2005, coal is still inexpensive compared to other fuels. In a world starved for energy, the importance of this simple fact cannot be underestimated: the world needs cheap power, and and coal can provide it.

America is literally built upon thick seams of coal. Just as Saudi Arabia dominates the global oil market because of the geological good luck of having more than 20% of the world's oil reserves, the United States is a big advocate for coal because it has the geological good luck of having more than 25% of the world's recoverable coal reserves — about 270 billion tons buried within its borders. As coal industry executives never tire of pointing out, this is enough coal to fuel America at the current rate of consumption for about 250 years."

[I recall seeing that over 16% of the territory of the lower 48 states was coalfield. If we take this as 6-million square miles, then we have about 1-million square miles or about 2.7 million square kilometers. If we assume that the average coal field has seams totaling 4.6m thick then we have a volume that is 12.5 million square kilometers by 1-meter deep. This is the same 12,500 cubic kilometers. And if world coal reserves are four times this level, then world coal reserves are about 50,000 cubic kilometers. This is 100 times the amount of recoverable coal

that Goodell talks about and about 100,000 times US coal annual coal consumption as quoted by Goodell.]

Propaganda

Jeff Goodell, Big Coal, the dirty secrete behind America's energy future. Introduction

"Alternative energy guru Amory Lovins estimates that by the time you mine the coal, haul it to the power plant, burn it, and send the electricity out over the wires to the incandescent bulb in your home, only 3% of the energy contained in a ton of coal is transformed into light. [Most of this is due to the great inefficiency of incandescent lighting.] In fact, just the energy wasted by coal plants in America would be enough to power the entire Japanese economy. In effect, America's vast reserve of coal is like a giant carbon anchor slowing down the nation's transition to new [alternative] sources of energy [the main ingredient of which is Arab oil.] And because coal is the dirtiest and most carbonintensive of all fossil fuels - coal plants are responsible for nearly 40% of US emissions of carbon dioxide, the main greenhouse gas - a commitment to coal is tantamount to a denial of a whole host of environmental and public health issues., including global warming." [Boy the Arabs hate our coal use.]

Useful information: Hammond World Atlas 2003 ISBN 0-7607-5361-X

"Brown coal deposits are usually not deep in the earth, and are therefore mined almost exclusively in open pits. In the Rhenish brown-coal fields (photo), huge bucket-wheel excavators remove covering layers of sediment and mine the underlying coal. These machines can move more than 200,000 cubic meters of material a day."

Gustavus Meyers, History of the Great American Fortunes, 3.6

[In reading the following, just bear in mind that the first oil well was drilled in 1859, and that oil industry was tiny in the 1860s and quite small in the 1870s and 1880s. Meanwhile, the railroads were huge and immensely powerful. As well, the railroads were very aggressive in throwing their monopoly power around at this time. What leverage could Rockefeller have had to make demands on the railroads? This idea is Arab propaganda.

The secret rates granted to Standard Oil are probably true. The question is: why on earth did the railroad companies grant them if they weren't run by the Arabs? And why didn't the railroads try to take over the oil industry the way they took over the coal industry?]

"The wars between the railroad magnates assumed many forms, not the least of which was the cutting of freight rates. [There were no price wars for farm produce, coal, or factory widgets. Why was there only a price war for oil? And why was there only a 'secret' price war based on secret rebates that only came out years later?] Each railroad <u>desperately</u> sought to wrench away traffic from the others by offering better inducements. [Not true. this only seems to have occurred for oil.] In this cutthroat competition, a coterie [a small group living co-terri, or with the earthlings] of young men in the oil business, led by John D. Rockefeller, saw their <u>fertile chance</u>.

The drilling and the refining of oil, although in their comparative infancy, had already reached great proportions. [not true in proportion to the value of the railroads] Each railroad was eager to get the largest share of the traffic of transporting oil [True, but only due to Arab management] Rockefeller, ruminating in his small refinery at Cleveland, Ohio, had conceived the revolutionary idea of getting a monopoly on the production and distribution of oil, obliterating the middleman, and systematizing and centralizing the whole business.

Then and there was the modern trust born; and from the very inception of the Standard Oil company [today,155-years] later this company still exists as the Exxon], Rockefeller and his associates tenaciously pursued their design with a combined ability and unscrupulousness such as had never before been known since the rise of capitalism. One railroad after another was persuaded or forced into granting them secret rates and rebates against which it was impossible to compete. [forced? how? why did the railroads do this? Is there any record of how Exxon achieved such leverage over the railroads?] The railroad magnates-William H. Vanderbilt, for instance-were taken into the fold of the Standard Oil Company by being made stock holders. [This is a nonsense idea. It would not work with monopolist or cartel railroads. They would make more money gouging for freight and keeping 100% of the money, than they would make on their sliver ownership of the oil company.] With these secret rates, the Standard Oil Company was enabled to crush out absolutely a myriad of competitors and middlemen, and control the petroleum trade not only of the United States, but of almost the entire world. [How exactly?] Such fabulous profits accumulated that in the course of 40-years [1862-1902], after one unending career of industrial construction on the one hand, and crime on the other, the Standard Oil Company was easily able to become owners [the owner] of prodigious [immense] railroad and other systems, and completely supplant [supersede] the scions [descendants] of the magnates whom three or four decades before they had wheedled [coaxed] or browbeaten [intimidated] into favoring them with discriminations [secret rebates].

[Translation: The effects of this great industrial transition were clearly visible by 1877 [only 18 year after the first oil well was drilled], so much so that two years later, Vanderbilt, more prophetically than he realized, told the Hepburn Committee that 'if this thing keeps up the oil people will own the [rail]roads'."

31.. ASTRO-GENESIS

Cicero d. 43BC: On the nature of the Gods 2.118

"The philosophers of our school believe that in the end... the whole universe will be consumed in flame... From this divine fire, a new universe will then be born and rise again in splendor." [This obvious idea has been supported by the Arab media for thousands of years.]

Plutarch, d. 120AD, On the Contradictions of the Stoics, 44 "beyond the world there is an infinite vacuum, and that this infinity has neither beginning, middle, nor end." [Another obvious idea that has been supported by the Arab media for thousands of years.]

Plotinus, d. 270AD, 3.1.1

"We hold that the ordered universe, in its material mass, has existed forever and will forever endure.

Lucretius, On the Nature of the Universe, c. 60BC, 1.1000 "The universe has nothing outside of it to limit it. There is therefore a limitless abyss of space, such that even the dazzling flashes of lighting cannot cross it in their course, racing through an interminable tract of time. Nor can they even shorten the distance still to be covered. So vast is the scope that lies open to things far and wide without limit in any dimension."

<nebular accretion illustration>

We are told that the planets in our solar system coalesced from a cloud of dust that was orbiting the sun. There is however a big

<universe age and gravity curve>

The universe was almost infinitely smaller in the first moments after the big bang. So in the first few moments of the universe, 'lateral' gravitational forces between objects as they were flying away from the origin point(s) was almost infinitely stronger.

The tendency of matter to draw together and clump because of this high early lateral gravity was almost infinitely greater than what we observe now in today's immense universe. All clumps anywhere near other clumps were drawn together. Thus they agglomerated into larger clumps or spheres of hot molten matter, all hurtling away from the point of the origin. Here we see a universe where all the matter immediately around stars gets sucked into stars in the first moments after the big bang. So where do planets or proto-planet dust clouds come from?

Today, the universe exists on the long tail and interstellar space is nothing short of astronomically immense. If our sun were a millimeter across, the solar system excluding Pluto would be 42 meters across. And the nearest star would be 17 kilometers away. Again for emphasis: if our sun was 1mm across, the nearest star would be 17km away. Except for these tiny objects, the interstellar space in and around our solar system is almost a total void.

So how did our sun get that dust cloud early on? And shouldn't the sun's gravity have drawn in all that dust in the first few moments of the universe, when everything was much closer together?

Today, our supposedly 12-billion year old mature universe is on the long tail of a gravity interaction curve. We have almost no gravitational interaction between stars like at the beginning of the universe. Nowadays, the universe is just different, with immense distances between its component parts.

But if we look at the short spike in gravity that existed in the moments after the big bang, the universe had immense "lateral" gravitational attractions. And there was immense gravity between stars and immense gravity working on all the stuff in between stars. Here we imagine an early universe that should have rapidly turned into clumps and vacuum. So, again, where did the cloud of dust around our sun come from? And how come there is practically no residual dust from that cloud?

And what about the hot center of our planet? how did that get hot? The cloud of dust people say that it was made hot by the friction imparted by the impacts between those debris particles. Nonsense. Heat is a huge theory-killing problem with the nebular accretion theory.

Why do we believe this dust cloud theory except to explain away the fact that the universe is 14 billion years old and the solar system 6 billion years old? The cloud of dust people say that it took 8 billion years for the solar system to coalesce and that is why the solar system is so young. Again, nonsense.

Essentially the problems with the current nebular accretion theory of solar system formation are 4 fold: 1) Space is mostly a vacuum. Where did the cloud of dust come from?

2) How come there was an 8-billion year time lag?3) How did a cloud of fast cooling small particles produce hot planetary cores?

4) Where did all the left-over dust go in our solar system?

The impact theory of planetary formation

Here is an alternate explanation for where planets come from. In a universe of clumps (stars) and emptiness, the only source of planet matter must be stars, or more precisely collisions between stars. And if the planets are going to remain in existence for any length of time, it is probably collisions between binary stars that become solitary stars. This is because the gravitational dynamics of multi-star systems rapidly consume and absorb all the smaller clumps in orbit around them.

Now, when stars collide, they generally explode (like a super-nova) as a result of the high pressure gas that was inspired or instilled in them when the universe was young, small, hot, high gravity, and "high pressure". In today's old, cold, low gravity, and "low pressure" universe, all stars and large planets are like shaken bottles of soda water. Shoot them with a bullet, or strike them with another slow moving bottle of soda, and they explode due to the great pressure differential that has slowly come to exist in the old universe. And when they explode, they spray out a good amount of hot liquid material. Then this spray often re-forms into a new star with a bunch of debris (planets and moons) in orbit around them.

And just as in big-bangs, we imagine lateral gravity in stellar explosions to be exponentially greater in the moments after the explosion. So the lateral gravity clumping might have been 60% or 80% over before the first APO•HELION=away-from•sun.

So let's imagine a star collision between our sun's PRESUN some 4 to 10 Billion years ago with either a sister star, or a large body from yet another stellar collision. Here we imagine hot molten material sprayed out in every direction, but mostly the material stayed within the orbit of the current solar system — which wasn't there yet. And thus nearly all the material quickly fell right back in to the newly re-formed star before the surrounding space had time to cool.

Both clumping and reabsorption were on the short spike after the collision. These were both happening exponentially faster, but on different curves. So we imagine that in the first hundred hours, thousands of these clumps (some planet but mostly asteroid sized clumps) fell back into the sun. And later, the clumps spiraled back into the sun because their inertial energy was below solar gravity at any orbit. In the first million years, thousands more clumps fell back into the sun. This reabsorption process happened super fast at first, and then fell like an LL exponent curve.

And of course, there were also a great many objects that were thrown from the collision with escape velocity. Except in the early days of the universe these objects are generally thrown off to fly "forever" through interstellar space. However in the early days of the universe, they were quite likely to impact another star and cause another solar system.

Primary gravity being orders of magnitude stronger than secondary gravity, it worked orders of magnitude faster on the clumps in orbit around the sun, pulling them back into the sun But primary gravity was not the only survival hurdle for the clumps in orbit in our early solar system. Secondary gravity, (or inertia) thousands or millions of times less powerful than primary gravity also began to work, immediately but slowly on the clumps that were not sucked-in by primary gravity.

Secondary gravity plays on Z-vector motion, and it works by multiplying Z energy/movement at the lower inflection point. Thus in each revolution the orbit grows more elongated towards the "drain". Clumps in perpendicular orbits (aligned with the plane of the ecliptic, the plane of the solar system) have no Z movement so they remain unaffected. But slowly and inexorably all the other planar clumps suffered increasingly elongated elliptical orbits until one day their ellipse became so long that it became a parabola and these objects were sucked into their secondary gravity source.

The further the body is from perpendicular to the secondary gravitational/inertial vector, the faster the body gets sucked away. And secondary gravity had its own LL curve playing out over hundreds of millions of stellar years. Thus, only

the most perpendicular planets with just the right velocity stayed in orbit. All the other planets lost orbit in one way or another over time.

Saturn's rings

These are what is left of a very thick atmosphere that was all pulled away, except the ring part that currently or once pointed towards the source of secondary gravity.

Stars and planets explode on sufficient impact

Mars, next to and "down wind" from the asteroid belt has the 4 largest topographic features in the solar system. It is widely thought that these features are the result of 2 punch through collisions. And on Earth the greater Hawaiian islands as well as Sao Tome and Principe are over "hot spots" that do sort of look like the result of either a pair of punch in objects, or a single punch through object.

These were probably the result of relatively tiny objects. Larger sized objects probably cause planets to explode just like a shaken bottle of soda water shot with a bullet And still larger objects probably cause stars to explode as well.

What it means to be an active star or planet

It is very important to realize that all active stars and planets are active because they are outgassing. And when they suffer a large impact all the trapped energy from that outgassing, the energy powering a star, or the energy keeping a planet geologically active tends to get released all at once. In the case of a star this is an immense amount of energy, a zillion hydrogen bombs all at once, or perhaps over a few days.

The spray from exploding planets and stars

1) Our plant is 99% liquid and 1% solid shell.

2) Many smaller asteroids are shaped like liquid spray frozen in a gravity-free environment.

When planets collide with a big enough object, the event causes this explosion of outgassing in hot liquid magma. The gas is under extreme pressure and when a planet blows apart from a collision like this, there is a sudden rush of gas and a spray of hot liquid. This

certainly doesn't produce a bunch of dirt clods like with the mythical planet Aldaron from Star Wars.(Al•dar•on = the•gift•big = the•sacrifice•big). The result is a spray of hot liquid, most of which rapid re-congeals into a bunch of asteroids and moonsized objects — before they reach their apo•hellion = away•sun.

Characterizing collisions of stars as a spray of hot liquid is however probably inaccurate, because the material is surrounded by a shell of super hot, and super high pressure gas, which might include a massive amount of water vapor if the planet had oceans.

Thus when stars collide, there is probably a huge primary explosion from the out-gas. Then this gas simultaneously undergoes a fusion reaction. When this happens the result may be what we call a supernova.

Planets mean that the star they orbited suffered a collision This is what planets mean.

Moons mean that the solar system they are in suffered a planetary collision.

This is what moons mean.

How exploded material finds an orbit

The ejecta from a collision gets blown out, but it does not achieve escape velocity from the new combined object it was

blown from. So it comes back. And this is almost never perfectly aligned with the vector of secondary gravity, so space is almost always sloped. Therefore the object does not hurdle back directly into its source, bur comes back in an arc. This arc turns into an orbit in the direction opposite to the slope of space.

Pendulums & how planets come to roundish orbits

In some museums they have these 2-story or 3-story heavyweight pendulums on a gimbal. Then let's make a perfectly arced dish and mark it with precise marks. Then let's pull the pendulum back and let go with a sideways push. Let's use video to track the movements. How does the pendulum come to a round orbit?

The nemesis object that detonated the PRESUN

On one hand we imagine a smallish nemesis object that was big enough and fast enough to detonate the Presun. On the other hand we imagine another star-sized chunk being hurled from the solar system but passing close enough to the sun that the two form a temporary co-orbit eventually merging and exploding due to the outgassing. Ultimately however it comes down to probability, and we expect thousands of times more small chunks of stars from collisions than stars themselves.

Like the nuclear fission of uranium-235

When stars collide and go supernova it normally throws off a vast number of high velocity objects that can potentially collide with other stars and repeat the process. If the galaxy is big enough, then there is no "critical mass" and one explosion does not cause a chain reaction. However, if the galaxy is small enough then it will cause a chain reaction. Thus in small enough galaxies, one star explosion gives rise to many, all rather like the nuclear fission of uranium-235. And this process unfolds over perhaps hundreds of millions of years, on a wave front, rather than milli-seconds like an Atom bomb, but the process is similar or metaphorical.

GALACTIC BANGS

Let's imagine an old universe of drawn-in and shrunken galaxies. Let's imagine a stellar collision of sufficient size to cause a supernova of its trapped hydrogen. And let's imagine that this wave front spreads like a wave of destruction — a debris front that detonates star after star, once it gets started.

Once there is a supernova, and if space is small enough, then each supernova triggers many more, resulting in this chain reaction supernova throughout a galaxy, namely a galactic bang.

Due to the greater density of stars, galactic bangs are much more likely to start at the center of a galaxy, and then spread like a wave front outwards to the periphery. Basically a galactic bang is this chain reaction where a bunch of stars explode and the debris causes their neighbors to explode. Thus all the stars in shrinking galaxies just blow up starting at the center.

And because all the galaxies are from a drawing in of space arising out of a great field of randomly scattered matter, they tend to all be roughly synchronized and of the same size. If the galaxy blows up too early, then that galaxy blows up all by itself. If the galaxy is late then it tends to get bombarded with the debris from the other galaxies and blow up. Then in the next iteration of the universe, the process repeats itself.

Galaxies all the same size

Once we account for the age of the light reaching our planet are all the galaxies are roughly the same size and the same distance apart? Here we see how the universe draws back in on itself in a zillion galaxies.

The meta bang process

1) Stars and planets are under pressure and explode on impact. With stars this causes a supernova.

2) Supernovas tend to cause other supernovas if the universe is small enough, old enough, and drawn-in enough.

3) As the universe gets old enough, and it its various galaxies grow small enough, there tend to be chain reactions of supernovas in all galaxies. Then galaxies tend to undergo bangs.

4) The resulting debris front from one galactic bang tends to spread as a wave front through the universe, detonating other stars and causing galactic bangs in other galaxies. This then regenerates the universe in a great distributed meta-bang.
5) Once there is a great sea of matter hurling in all different directions, the matter starts drawing in on itself again into galaxies and the process repeats itself.

6) It is perhaps the case that the bang process somehow "pulverizes" much matter, thus creating much hydrogen to repeat the process again.

The red shift

They said, "These are not the droids you are looking for", and we believed them — stupid us. If you are approaching the recipient of your wave emission, your frequency increases. Sounds become higher pitched, and light becomes more red hued. The rad shift actually describes a universe that is contracting in every direction, not one that is expanding.

Deceleration and condensation

simultaneously with the deceleration in the initial impetus, sections of the mist of space (stars) are consolidating into galaxy-scale droplets. To me, this process is more than half done, as evidenced by the fact that galactic volume is only a sliver fraction of total volume.

The universe is ending

I see a universe that is ending the period where small, low mass "mist" objects like stars and planets exist — objects that are small enough to sustain life. As time goes on, the universe will become more a place of giant galaxy spheres, their collisions and amalgamations. But don't worry, this will little doubt a billion or more years to happen.

I don't believe in a single big bang

I use the word <u>believe</u> on purpose here. I use it because this ancient idea is just another unprovable religion touted by the Arabs. Here I point to their anti-intellectual sitcom TV show with an oil well in the catchy music video at the start of every episode. Any time the Arabs are pretending to be your people and hinting "this way, this way", you can probably assume your people are being herded towards a cliff or a brick wall — and you would be well advised to go in another direction.

A great place to look for Arab science lies

The Big Bang Theory TV show is a great place to look for science lies. Anything this sitcom shows or implies as real probably isn't real. And the best example of this is the name of the TV show, Big Bang Theory. Next is probably the field of "theoretical physics".

Synchronized little bangs

Little bangs occurring at the galaxy level, or the galaxy network

level seem more reasonable to me. I imagine all the galaxies banging more or less in a synchronous manner in great waves. I see chain-reactions in one mature galaxy creating a great wave of debris that causes a similar chain reaction in a nearby mature galaxy. These are all galaxies that are in the late stage of galactic withdrawal — when the galaxies are much smaller, and thus much more vulnerable to chain reaction.

I see the explosion/bang of one galaxy hurtling immense amounts of material to other nearby galaxies and detonating them uranium-235 style. I also see the densest, and hence oldest parts of the universe detonating the rest in a number of simultaneous wave fronts spreading throughout the universe. Thus there isn't a big bang from a single point, but from a sort distributed and mostly-synchronized big bang. Once one galaxy (or group of galaxies) undergoes fission, the reaction spreads throughout most of the nearby universe over some billions of years.

Then, once the galactic bangs are over, there is a recontraction of the material — and then the process repeats itself.

Galactic formation

Now let's explore the principals of secondary gravity (in bangs) that drive the way clumps/of matter (in this case stars) agglomerated and grew big and gravitationally influential in the early universe.

Essentially, the big stars being thrown form a bang got bigger because they had more gravity to pull in other objects from space. The more matter they had, the more matter they could draw in and collide with and agglomerated with. So for star formation, as for so many other things, the big get/got bigger.

Now stars in orbit around other stars tended to get bigger than solitary stars because these stars moved more. And as they moved they swept up and merged with objects from a larger part of space than if they just stood still relative to the other stuff being hurled away from the point of the origin.

The clumps that orbited other clumps as part of a big group, say as a proto-galaxy became biggest. These clumps swept immense regions of space, causing much soaking up and merging. As time went on these galaxies tended to contract, leaving not much in between them — few stars and little dark matter.

A Grand Unifying Theory

1) The biggest galaxies that sweep through the most space grow biggest.

2) Big stars experience more and more time and gravity, and get bigger.

3) Big evolutionary networks (populous species) tend to out evolve less populous species.

- 4) Big cities tend to grow faster.
- 5) Big companies tend to get bigger.

6) Big fruits high up attracted the biggest animals these plants spread their seeds more widely and hence out evolved the plants with a small fruits (at least before the advent of flight).

The primary organizing principle of nature seems to be almost a vacuous truism in some ways. It is quite simply that THE BIG GET BIGGER, or MORE IS MORE. And more must generally be more, or better, or more powerful, or more agglomerative, or more survivable, or stronger, or smarter; or there is no growth, no evolution away from the decay of erosion, corrosion, and chaos. Scale must build. If scale does not build, then there is no network and no increasing organization, and chaos then rules whatever system we are talking about. So for all organizing system, more must be more, or they are not organizing and building, but decaying and falling into chaos. 1) Bigger stars must have gotten bigger or the universe would be a homogenous if not somewhat lumpy soup.

2) Bigger groups of stars must get bigger or there would be no star groups or galaxies.

3) Complexity must out-survive simplicity or there is no evolution towards complexity.

4) Bigger breeding populations must evolve faster than smaller ones, or there is little benefit of species scaling their populations.5) Popular genetic traits must grow more popular or there can be no evolution with a species.

6) Popular species must grow more popular or there can be no evolution between species.

7) Popular ideologies must become more popular or new ideologies can't supplant old ideologies.

8) Bigger economies must out evolve smaller economies or there would be no economic reason for people to live together in communities.

There are many more examples, and thinking of these examples is one of the most useful and fruitful ways to learn about how the universe fundamentally works. But basically, the more interactive stuff you get in a clump, pile, heap, breeding population, star, galaxy, economy, etc., the greater the network effect and the faster time occurs for that clump of stuff. And the inverse is also true: The less there is gathered together, the less time there is. And if you have no piles of stuff, time essentially ceases to function. This relationship between scale and time is, I firmly believe, the heart of the grand unifying theory, or the first rule of self-organization.

Al·br·te Ein·stone

Now the cosmos that the iconic-looking Albert Einstein describes seems to me like so much of our parasite's garbage programming — Namely that it seems to have its causality subverted. Einstein says that time is a property of motion and that if you travel fast enough, time slows down. According to Einstein, this why Voyager 1's transmission signal was some 7% slower per kilometer than Voyager 2's.

An alternate explanation is that time simply occurs faster when it is occurring as part of a larger network of matter, such as exists closer to a galaxy, star, or planet. This is also why the Halo at the center of our galaxy has the oldest stars, and the spiral arms the youngest stars. Time simply happened faster at the center of the galaxy.

Thus I believe that simply moving away from the center of such a network causes time to slow down. And it is similar to the lower interaction levels and slower business activity that occur outside of the biggest cities. Time doesn't slow down because you drive from New York into the countryside really fast, time slows down when you move away from the time nexus of the big city.

So if we flip the causality of Einstein's relativity theory (sacred, canonized as it is), we get not only a profound simplification in physics, but a congruence that suggests a grand unifying principle for all science and economics. We get something that is probably the cornerstone of all universal organizing principals: That larger networks experience greater time and as a result out-grow other networks that are experiencing less time. It is basically an aspect of Metcalfe's law: The value/ power/ speed/ adaptability of a network increases roughly in proportion to the square of its size. Except this is about the speed of time for participants in one of those Metcalfe's networks.

Things move a lot slower out in the countryside

An outcome of this line of thinking is that intergalactic space far

from any matter experiences almost no time. In these far off regions, all activity slows down, perhaps even the movement of light.

Here we imagine that interstellar distances, and indeed the very size of the universe, are therefore exaggerated perhaps profoundly exaggerated. And this size-exaggeration is even greater when measured from a TIME–FAST part of the universe, such as exists a mere 93 million miles from a star.

This explains how the nearest star can be 405,000 sun diameters away from our sun. The distance is perhaps greatly exaggerated by how slowly times moves in these intergalactic regions. Is it 10 times slower, 100 times slower, 10,000 times slower? Here, not only do I not know the answer, but I think the question is unknowable and untestable.

An outcome of this line of thinking is that the age of the universe is lumpy. At the centers of galaxies, the universe is much older, whereas in inter-galactic areas, far from any matter, space is much younger.

Does hue variation describe galactic rotation rates? Do hues vary in the center of galaxies we view from the top?

Gravity and acceleration

Now we all accept the idea that gravitational attraction is related to distance. It is just the interpretation, or the interpretive matrix, the unprovable part that I say is wrong. I say that time itself moves faster closer to (and within the center of) space bodies. I also say that objects are simply drawn into regions of space where time is occurring faster. I say that gravity is the spacial manifestation of differential time rates. Once we make that leap, gravity makes much more sense — it is then a network property of matter.

So again, time does not slow because you travel fast (as Einstein says), time slows because there is no other matter out there in space to produce time through a network effect. Here anyway is why Gravity resembles acceleration so closely. It matters little whether you double the distance traveled or half the time spent, the acceleration remains the same.

Spok's law

Whenever the ever logical Mr. Spok, or his many re-incarnations says something scientific, it is the Arabs spreading science propaganda.

Star Trek, Next Generation TV show, episode 124

[Here is the ever logical android named Data. Funny how the Spok is saying something that pretty much directly contradicts what I say. Some lies tell the truth with great clarity.] "A highly respected scientist considered a visionary. He advanced several time-related theories. One regarding the relationship between time and gravity was quite intriguing. But neither that theory nor any other received wide acceptance."

Is heat from time/gravity differentials?

If the centers of clumps of matter experience faster time than the surface, it would suggest where most of our planet's heat comes from. Also, perhaps this time differential is actually where most of the sun's heat comes from — and not from the secondary fusion reaction of outgassed hydrogen that we observe the sun's surface. Also, perhaps the Earth's "solid" core is not actually solid but the point where gravity (and time) cross an X=1 point and spikes, thus distorting/scattering the transmission of earthquake waves.

What heats our planet?

What is the cumulative insulating effect of 40 kilometers of rock on Earth? Perhaps 40,000 meters of rock provides nearly a

nearly infinite insulation effect. If not, then there must be a heat source inside our planet. This source has been conjectured to be either from

1) Tidal/frictional forces resulting from the sun deforming our planet as it rotates. or

2) radiogenic heating, from the decay of radioactive material. To me, frictional forces seems too weak, and

radioactive decay can't possibly match the planet's cooling curve. So if something is actually warming our planet from the inside — my theory is that differential time is the furnace of our planet and indeed all large bodies including stars. To me, the flows and fares on the surface of our star are from outgassing and fusion on the surface.

The clocks on our oldest probes

How much do they vary? Do they vary consistently? Do probes in closer to the sun show faster time? Do probes far from the sun show slower time?

How much does time vary over our little patch of space. Here we will extrapolate to the universal, the way we do with so many other aspects of Astronomy.

Time defines space

Without time, there is no space. Maybe what we perceive as space is is reason, I believe that both the size and age of the universe mostly time. Maybe whether it is a light-year or 100 depends on how fast your clock is spinning. And even if we could estimate them, what meaning would the

Now if time comes from large accumulations of matter, and space is defined by time, what then are the massive distances between the stars? These interstellar distances, and the distances at the edge of the solar system to some extent, are probably where an exaggeration of the scale of space occurs.

A simultaneously expanding and contracting universe

It seems to me, that on a galactic level, the universe is contracting in relatively simultaneous 'local' or galaxy-scale gravitational contractions, while the space between the galaxies remains the same size. However, I do not deny the possibility that the total volume of space between the galaxies of the universe may also be expanding, or at least it may appear to be expanding due to the increasing lack of matter and distance to matter.

The center of the universe

To my mind, if the universe has a center, it should be where inter-galactic distances are greatest and galaxies are the smallest. Is there a uniform gradient in this ratio? If so then it "slopes" towards the center. If a single gradient occurs across the observable universe, this infers a single big bang and an actual universe larger than the observable universe. If numerous massive pockets of old galaxies exist, then we imagine a universe of many bangs.

Galaxies oriented in every direction

As galaxies contract, there is no force that makes them contract in one orientation or another, except the presence of secondary gravity. This causes galactic discs in random directions.

Stephen Hawking and Alexander the Great

Funny how Stephen Hawking, is sort-of billed as the world's most brilliant scientist, yet he can't actually speak for himself. He is a modern day A•lex•ander, a man incapable of saying anything by himself, the perfect front-man able to say whatever his masters program his communicator to say. Mr. Hawking certainly seems like a classic A•LEXIC=no•words figurehead like Al Core, Dan Quayle, and George Bush Jr.

Let's test Stephen Hawking

Let's park his chair against a random section of wall and let's write some questions on paper and show them to this great scientist that only became famous after he became mostly paralyzed. Let's make sure there are no video cameras or transmitters on him, and let's make sure to jam all forms of radio communication. Is Steven Hawk•ing real?

Iconic people tend to be figureheads

Isn't it strange how the personifications of both genius and evil, (Einstein, Hawking and Hitler) have such iconic appearances?

What time do we use?

When measuring the universe, do we use Earth time? Do we use the near "absolute zero" time of interstellar space in an old universe? Do we use the near infinitely fast time occurring near the biggest stars at the center of our galaxies?

Also, ambient interstellar time probably didn't start out quite as totally flat as it is today. As the universe expanded, the amount of time occurring in interstellar space decreased to next to nothing, this has exaggerated our perception of both time and the distances involved in today's older universe. So here we realize our understanding of the size and age of our universe is probably heavily distorted (magnified) in at least two ways. For this reason, I believe that both the size and age of the universe are not simply unmeasurable, but even impossible to estimate. And even if we could estimate them, what meaning would the quantification of time have? What meaning does today's slow time have. What meaning does our speed of time have. Besides, how well do we understand millions of years, let alone billions of years?

The universe is just plain different

In the initial universe, time happened faster. Today, events happen much slower, or not at all, because of the immense distances relative to the slow time in the present universe. The middle aged universe is simply different. Also many types gravitational events only happen when the universe is small and dense. For example, the initial sweeping clean of space into a near total vacuum. Another example is the contagious supernova phenomena. Nowadays, in today's still-large galaxies, supernovas don't create chain reactions because the great distances remaining in all the galaxies.

Gravitational events must have happened exponentially faster as we go back in time and approach the moment of the beginning. And with respect to a big bang (which may have been distributed as a sort of synchronicity of many bangs), perhaps these should be viewed as a near infinite acceleration of time when the universe (or whatever part of it) was approaching a state of infinite smallness and nearly infinite mass filled-ness.

The red shift

Perhaps everything happened faster as we go back in astronomical time to the big bang. Perhaps time everywhere occurred faster, and perhaps this is why we observe the red shift in old starlight.

Are the age and size of the universe are meaningless

Perhaps the age and size of the universe have no meaning because all time and distance are relative.

Relativity as a blurd term

Funny how Al-br One-cup's theory is called relativity. What a blurd of a term that is. It prevents us from having another theory of the relativity of time.

Time accelerates at the start and finish

Imagine an exponent curve, a pair of parabolas shaped like the bottom half of circle, but with tall spikes and long tails. Here is how time works on the galactic level. In the beginning and the end of that patch of universe, time runs extremely fast, millions of times faster. In the middle, it slows down to a crawl, and at the end it again runs millions of times faster.

The gravity flatness of the universe

Today the universe is probably 99.99% gravity neutral by volume. And I bet that over 99.99% of the time, the universe is over 99% gravity neutral. So the bangs spreads like 4th of July fireworks and this tends to detonate many other collapsing galaxies causing them to bang. Then there is a great long lull period.

Time on a PEAKWAVE

Imagine a sign-wave, but on created by a series of circlebottoms, or maybe ellipse bottoms. Perhaps this is the way the universe experiences time as a series of peaks, one big bang after another.

Time and mass

Perhaps the variable atomic masses of the elements are really just a variable reaction to time. Time may have less impact when the nucleus is smaller. Therefore gravity has a weaker effect or rather, gravitational reactivity is lower.

Stars and outgassing

Why doesn't all the hydrogen in a star experience a chain reaction and explode? Thus it would appear that the hydrogen is trapped within other material that prevents this from happening. From this standpoint, stars start to look like nothing more that large super-high-pressure planets So perhaps stars outgas in someway like planets do. Here we imagine that due to their immense size, density and pressures, stars hold orders of magnitude more gas by volume than do planets. But the hydrogen doesn't undergo fusion until it gets to the surface.

So solar flares start looking like a form of outgassing, like on Earth. Immense gas bubbles come out of a star — and as they comes out they undergo fusion. The resulting heat propelling the material high into the sun's "atmosphere."

Also, if time differentials are the engine of Earth's heat, then they are also probably the true engine of stellar heat as well. If this is the case, then a star's surface fusion might only be responsible for a small fraction of the star's heat.

Red giant, then black giant

If time is a network property of matter, and more matter = more local time, then big stars get older faster than small stars. We thus imagine giant fast-time stars that fully outgas and simply go red from lack of gas.

The super compressed matter black-hole theory is super sensational, but it is entirely theoretical and without any evidence. Super giant stars aging into darkness and running out of gas for the lamp seem much more believable.

Is all star heat from fusion?

Are we sure of this? I mean, maybe the fusion is a secondary thing that happens in a hot enough place. Maybe the heat in most stars is due to leakage from a temporal gradient — after all, most of our own planet's heat is from within. Why should stars be any different? Maybe we have overestimated the amount of energy generated by nuclear fusion.

The rarity of the biggest stars

Star sizes exist on a bell curve. Very small ones and very big

ones are rare. Most are in the middle of the size distribution. On top of this, in the biggest stars time goes so very fast, so they don't live very long.

The biggest stars are black

They have had so much time, that they are done, all gassed out. Nothing to glow with any more. Now they are big and hot and dark. And all that junk about black holes is garbage programming to entertain the people in their mental matrix cocoons.

Nukes and time particles

Perhaps nuclear chain reactions also release a burst of "time particles," resulting in a localized time acceleration. Perhaps this is the true source of their heat and by extension atmospheric pressure. Also, perhaps we will be able to identify time particles from nuclear explosions. Perhaps we have already observed them, giving them another name.

What caused this coincidence?

We have these two co-directional planar phenomena related to stellar gravity or stellar movement and inertia — The Antarctic ridge ring and the plane of the ecliptic. Is this the residual effects of early impetus, from when the universe began? Or is it from late impetus, and nearby multi-star systems? Or is it from both? I have insufficient information to decide and I can't justify the risk of using the relevant search terms or libraries.

Unmanned space missions are are much cheaper

It is hugely wasteful to send freight along on inefficient manned space missions. The people, their inertial limitations, their life support equipment, and provisions for their re-entry waste huge amounts of fuel. Also, even relatively sensitive materials can be designed and reinforced to tolerate an order of magnitude more acceleration than people can. Therefore, the space effort should be divided into manned and unmanned missions.

Reusable spaceships are a folly

For pretty much all space equipment, it costs much more money getting the stuff into space than the rocket shell is worth. Then we waste money collecting, re-commissioning, and moving the spacecraft again. On top of this, there is no mass production and the predictability that arises from mass production. A far better approach is to mass produce small craft, which we will use once and throw away. This may sound wasteful, but it is not. Also it should be noted that the US built 20 space shuttles for 135 missions between 1981 and 2011. This is only 6.75 missions per shuttle. These stupid boondoggles were hardly re-used at all.

Space rail-guns

It is sometimes said that you can't beat a rocked. I disagree. I think that rocket rail-guns are the most efficient way to put cargo into space.

Instead of using say 75% the rocket's fuel to get a rocket moving upward at say 500kph, we should use a catapult or rail-gun, and reduce the size and cost of our rockets significantly.

Imagine giant vertical rail guns, built as international efforts, on the equator, for our unmanned rockets. And Judging from the USS Gerald Ford, MAGTUBE (= electromagnetic tube) catapults are better than steam catapults. These are excavated as deeply as practical and also have a long tethered 'barrel," or "space needle" projecting above ground. They shoot standardized space canisters of perhaps 3m in diameter. These will be synchronized to fire just as they leave the "muzzle."

NASA or KNISA

The acronym NASA certainly looks a great deal like Gr. KNISA = the smoke of burnt sacrifices, whether from incense or barbecued animals, or anything really that is sacrificed to the 'gods' of the Mideast by being burned, buried, or wasted. Perhaps NASA's name says it all. Gr. KNISA is incidentally pronounced the same as NICE, how the hash of spices in the incense made one feel.

Also, as far as I am concerned, a trip to Mars is stupid right now given the state of mankind here on Earth. It seems to be our parasite's distraction and something we should hold off on until we have solved all our pressing earthly problems.

Rock older than 1 billion years

It is notable that there is little rock on Earth that is older than a billion years. The consensus explanation is that Earth's surface is constantly being recycled. However, nowhere do we find substantial amounts of continental lithosphere in the process of being subducted and reabsorbed. In fact, most continental lithosphere is sial (silica alumina), which is lighter than the sima (silica magnesium) rock it floats on. Thus it is generally only sea floor lithosphere that is reabsorbed. The continents seem to only build and grow in elevation (uplift). We therefore might want to be careful dating the planet by a few very old rock formations as these may be extraterrestrial in origin—even if they show fossilized evidence of life.

The odd age distribution of Earth rocks

Here it is worth commenting on how Earth rocks do not follow a smooth age distribution continuum. Instead, some 95% of Earth rock is less than 1 billion years old. While only a tiny fraction is older than this, and up to 4 billion years old.

This leads us to ask if the oldest rocks from both the Earth and its moon might have come from somewhere else like Bullet — which might not have been from our solar system, but from a more central, faster and older part of the galaxy.

Ort cloud

The objects in the Ort cloud do not fit in with the plane of the solar system. They appear to be temporary residents loosely orbiting our solar system until they get tugged out the next time our solar system experiences higher secondary gravity. It is also notable that none of these objects has an orbit that is more than 40 degrees out of the plane of the solar system. Perhaps once they reach 40 degrees, the number of additional orbits they have in the solar system (even with weak secondary gravity) becomes very small.

Coplanar solar systems

The reason why we can see planets in other solar systems is interesting to ponder. I think it is because many (or all?) the nearby stars have co-planar solar systems for the same reason we do. So when we look out in the direction of galactic 'horizontal' we see stars with light that briefly dims once every so often, as planets pass in front of and block their starlight. So not only do these systems have planets, but they are co-planar with our star system.

A terminology correction

Spiral galaxies should be called 'phasic galaxies' and the "plane of the ecliptic" should be called the "plane of the solar system."

Our solar system orbits and bobs

I find this idea hard to believe, but, supposedly our solar system orbits the galaxy every 250 million years or so. Supposedly it also moving or bobbing up and down relative to the galactic plane. If this is so, it must be due to the variable gravity of other stars in nearby multi-star systems. If this very important idea and rather foundational idea is to be believed, then we should have clear evidence of its existence.

Smack in the center of the universe

Copernicus taught us that we are not at the center of things, yet Edwin Hubble put us back in the center. This is unlikely and improbable. Unless we are off-center by some measure, we must only be seeing the limit of our own perceptual ability.

Does Outgassing rule?

It seems that planets and stars cool and age more as a result of declining outgassing than of hard shell formation per se.

Parallel universes are absurd

We have no reason at all to believe in such a thing.

The Terren solar system

Earth and Mars formed from the same debris wave

Earth has an axial tilt of 23.5°, Mars 25.2°.
 A Mars and Earth both have orbital velocities of about 24 kilometers per second around the sun.
 Mars rotates once every 1.02 Earth days.

Bodies with a density over 3g/cm

-	-
Mercury	5.4 (can't hold water)
Venus	5.2 (can't hold water)
Earth	5.5 has water
Earth's moon	3.3 (can't hold water)
Mars	3.9 has water
Jupiter's moon lo	3.5 (can't hold water)
Jupiter's moon Europa	3.0 has water

Bodies with a mass under 2g/cm

	•
Jupiter	1.33 unk.
Jupiter's moon Ganymede	1.94 has water
Jupiter's moon Callisto	1.83 has water
Saturn	0.69 unk.
Saturn's moon titan	1.88 has water
Saturn's moon Rhea	1.24 has water
Saturn's moon Dione	1.5 has water
Saturn's moon Tethys	1.0 has water
Saturn's moon lapetus	1.0 has water
Uranus	1.32 unk.
Neptune	1.64 unk.
Pluto	2.0 unk.

Difference #2 - Rotation speed

The inner planets tend to rotate slower than the outer planets.

Mercury	58.6-days
Venus	243-days
Earth	1-day
Earth's moon	27.3-days
Mars	1.02-days
Jupiter	9.8 hours
Saturn	10.6-hours
Uranus	17-hours
Neptune	18.4-hours
Pluto	6.4-days

Two sorts of bodies in the solar system

Both the density gap and the slower rotation speeds could be explained by a collision and a loss of much outgassing. Here we note that stony iron meteorites have a density of 5g/cm, and stony meteorites have a density of around 3.5g/cm. It appears that the inner planets formed as a result of a collision between a planet and either another planet, or a moon.

13 oddities of our solar system

1) A planet seems to be missing in the asteroid belt between Mars and Jupiter. This is the natural location for a planet. Instead we have an asteroid belt.

2) Mercury exists in an orbit that is not supposed to have a planet.

3) All planets orbit within 3.5° of the plane of the solar system except Mercury which is at 7° and Pluto which is at 17.2°. This suggests that these "planets" were late additions to the solar system.

4) Tiny Pluto has 7,000 times less mass than either of its neighbors Uranus and Neptune.

5) Pluto's orbital path crosses Neptune's orbital path.

6) Mars, next to and "down wind" from the asteroid belt has the 4 largest topographic features in the solar system. It is widely thought that these are the result of 2 punch through collisions.7) The entire solar system is heavily cratered.

8) Mars is encrusted with both debris craters and slightly higher elevations on its southern hemisphere (search "crustal dichotomy")

9) Earth has a huge 'oversized' moon and this moon is also encrusted with craters on its 'highlands', on one side. Earth is so geologically active that we would not know if it was once encrusted with craters.

10) Earth's highest continent, Antarctica points in the same direction as Mars' highland heavy side.

11) Venus is sort of encrusted with debris craters on one side.

12) Jupiter has a red spot that is considerably hotter than the surrounding areas suggesting perhaps a volcano from a punchin collision.

13) There is water all around our solar system, and most bodies capable of holding water have water.

A single cause theory for these 13 oddities

Here is a single cause theory for most of the oddities of the Solar system. It may be a bit of a stretch in some places, but it seems to generally work. Let's imagine that Jupiter at some time either picked up an outer moon, or simply had an outer moon we will call BULLET. However, Bullet was moving too fast, and its orbit was thus growing. And because of the sun's secondary gravity, Bullet's orbit was being stretched towards the sun. So, over time, Bullet's orbit became increasingly elliptical, and stretched in the sun's direction. Then after some time, Bullet developed an orbital conflict with the planet that was previously in the asteroid belt, a planet we will call SPLATTER

Now splatter was essentially a thin-skinned magma balloon just like Earth. So when it collided with bullet, the debris field was a hot and molten spray that looked just much the asteroids we see in the Asteroid belt — irregular objects shaped like a congealed spray that hardened in a gravity-free vacuum. At least the smaller objects with minimal gravity looked this way. The larger objects had sufficient gravity to reform as spheres.

Now the thickness of the lithosphere on earth tells us that if Bullet was less than say 100km or 120km across, it would have eventually hardened completely. If it was a little more than that size, it probably had a small soft center. If it was the size of say Jupiter's moon Callisto (diameter 4,806km), it would have had a large soft center. Due to the moon mass of the outer solar system, we imagine that Bullet was quite big and thus was probably a magma balloon like Splatter.

Much of the spray from these objects kept going in

more or less the same direction it was going in before. But much of it lost a good part of their trapped gas, so they became denser, and "rockier" like the objects of the inner solar system — and Jupiter's 6 inner-most moons, moons with a density over 3g/cm. This is in sharp contrast to Jupiter with a density of 1.33g/cm and Saturn with a density of 0.69g/cm.

Today, the asteroid belt has approximately 7% of the minimum mass we would expect from a planet. So it would appear that at around 93% of Splatter's mass wound up somewhere else. And this says nothing about Bullet's mass added to the equations.

Much of this material surely fell or spiraled into the sun. And the greatest amount (the short spike) would have happened in the first days and years. Then over the eons, the amounts would have slowed considerably and gone long-tail. Here it is easy to imagine Mars sweeping through the sun-bound spray shortly after the impact. This is where the pockmarked Martian highlands came from; from a single enormous shower of debris that came after the collision. Also, around this time, Mars struck one and then another large clump (solid or liquid) from the impact. These large clumps of relatively stationary debris punched right through Mars which was traveling at faster than 87,000 kph, Mars' current orbital speed. This resulted in Mars' 4 great topographic features.

Now the present axis of Mars is all wrong for this, but planets are know to change their axial rotation. Anyway, over the eons, the imbalanced Mars planet re-oriented with its heavy debris-field side facing its source of secondary gravity. Secondary gravity thus slowly pulled the heavier part of Mars, the part encrusted with the water-rich deposits from the meteor shower "south" or "down". It also changed the orientation of the two punch-throughs.

Earth's moon and Mercury also have one side that is heavily pockmarked, and with "highlands". And Venus has a somewhat pockmarked side. This leads to the conclusion that all these bodies experienced much the same thing as Mars. All three bodies seem to have passed through a single and highly concentrated field of debris.

The collision of Bullet and Splatter also seems to have resulted in at least one object striking Earth. There is a hotspot suggested by the chain of geographical features that runs northeast from Sao Tome towards Lake Chad in Africa. And the Hawaiian islands also seems to be another hotspot. Here the entry and exit hotspots seems to have remained in one place, while the tectonic plates moved over them for around 500 million years judging from their location and the sea floor spreading rate. Anyway, given the unlikeliness of large objects from outside the solar system striking any planet today, and the apparent 'youth' of these features, they may have all been from this single collision between Bullet and Splatter. And there also might have been two impacts.

Now the surface of Venus also dates to 550-500 MYA. And there was also a flurry of moon impacts dated to around 400 to 600 million years ago. This time also roughly coincides with so-called Cambrian Explosion of around 550 million years ago, when multicellular life began here on Earth. So the timing of the Cambrian Explosion perhaps implies that multi-cellular life, (or more likely) single cell life that was multi-cellular ready, may have come from Splatter, a planet that seems to have been covered with water, life's byproduct (judging from all the water in our solar system, and especially and peculiarly on icy Europa). Here we note that the Splatter planet was farther from the sun, so it would have developed a cool-enough life-ready surface much faster than Earth. And because of this, it would have also supported life at an earlier age than Earth.

How fast do magma balls develop a hard skin?

Does it take eons, or does a super thin skin develop almost instantly on contact with icy space? Surely a skin of some thickness forms as fast as a human tongue freezes to icy metal on a planet moving at 90,000kph through space. So here we imagine yet another LL curve (like the lower-left quadrant of a circle) where the formation of a space body's hard skin is exponentially faster at first. Here is why the asteroids have such odd shapes and have not balled up. It is because the skin cooled almost instantaneously before they could ball up. (And perhaps the largest irregular and molten-form asteroids, will enable us to model the rate/degree/depth of the "instantaneous" freezing.)

Are craters formed by melting?

Don't craters look like what forms when we drip paint back into the bucket of liquid paint? Maybe we are wrong to imagine them as formed by dirt-clods hitting solid rock. Maybe the material does not pulverize. Maybe it behaves like a too-weak armorpiercing shell. Maybe true craters are formed by melting. And maybe this process is exaggerated in already hot objects so that impacts by lower-energy objects produce enlarged craters. Is the debris surrounding most larger earthly craters fractured or melted?

The speed of Jupiter's moons

Jupiter's orbital velocity is something like 13km/second Jupiter's outermost and slowest moon Autonoe (diameter 2km) is traveling at only about 1.1-km/second. And Jupiter's somewhat outer moon Himalia (diameter 85km) and is traveling at about 1.7-km/second. So we infer that Jupiter's Bullet-moon was moving at something like 13km/second \pm 1.5km/second.

Impact speeds

Earth and Mars are both moving at around 24km/second or around 87,000kph So Splatter seems to have overtaken sluggish Bullet by around 10km/second or 40,000kph. In other words, Bullet struck Splatter at 40,000kph and probably blew right through the liquid-filled planet like an anti-tank shell blows through solid steel. Also, Bullet might have been quite big if it had an outwardly unstable orbit. Here we ponder say Callisto (diameter 4,806-km).

Bullet was probably heading back to Jupiter

Europa, the water covered moon of Jupiter (diameter 3,140km) would be hard to explain if Bullet was heading directly towards the sun when it hit Splatter. Something had to have driven part of the mess outward away from the sun. Also, it would be hard to get a dense debris field if Bullet was heading directly away from the sun when it hit Splatter. As well, the timing of a collision would be harder to achieve if the objects were moving at say 70° or 90° to one another.

So we imagine Bullet as a moon of Jupiter from an early planetary collision in our solar system, a moon that probably orbited Jupiter since the time that secondary gravity (or initial impact inertia) enforced the plane of the ecliptic.

Then over billions of years, the sun stretched Bullets orbit little by little. After a while, this developed into an orbital conflict with Splatter.

Then one day, some time after Bullet had passed its apo•helion in its orbit around Jupiter, and was arcing back towards Jupiter, it collided with Splatter at maybe 10° or 30° on the sun-side of forward. The result was a debris field of 4 main components:

1) Stuff blown outwards.

2) Stuff that fell into the sun.

3) Stuff that spiraled in towards the sun.

4) Stuff still in the asteroid belt. This is only about 7% of the mass of an object we would expect to find here.

Orbital speeds

Jupiter orbits at 13-kilometers/second, and Earth and Mars at about 24-kilometers/second. And as orbital speed is related to distance from the sun, the orbital speed of the objects in the Asteroid belt is somewhere in between. We probably know about this. I just could not find it without making a data request — something I did not wan to risk.

The material that was blown outwards

Most of Bullet blew right through Splatter, but in doing so, it was sped up considerably. As a result, it assumed a solar orbit, but one in excess of Jupiter's orbit due to the higher speed of Splatter. So the spray re-congealed and then began spiraling away from the sun where it was picked up as moons by Jupiter and Saturn mostly.

This mass of material seems to have at least became Europa. This is apparent due to Splatter's liquid oceans that Bullet carried-away with it. Here we note how all of Jupiter's inner 6 moons have a density exceeding 3 or more g/cm (including Europa). We also note that Jupiter and Saturn have over 35 moons each.

How planets pick up moons

Between degrading and prograding orbits there are 4 possibilities:

1) The soon-to-be moon is on the sun side of the planet and it is traveling slower than the planet. In this case the moon is not prograding to the planet. In this case it is moving away from the planet. So we can disregard this circumstance.

2) The soon-to-be moon is on the sun side of the planet and it is traveling slower than the planet. In this case the moon is prograding toward the planet and we need to consider this.
3) The soon-to-be moon is on the outside of the planet and it is traveling slower than the planet. In this case the moon is prograding toward the planet and we need to consider this.
4) The soon-to-be moon is on the outside of the planet and it is traveling faster than the planet. In this case the moon is not prograding to the planet. In this case the moon is not prograding to the planet. In this case it is moving away from the planet. So we can disregard this circumstance.

If the soon-to-be moon is on one side of the planet, then the moon spins in one direction. If it was on the other side, the moon spins in the other direction. Do the moons of the solar system tend to spin clockwise on one side of the astroid belt and counterclockwise on the other side?

The material that quickly spiraled into the sun

Some of the material from the impact between Bullet and Splatter probably lost most orbital velocity and fell or rapidly spiraled into the sun as a long streak of material.

The material that slowly spiraled into the sun

It is easy to imagine that a large part of material probably spiraled in towards the sun.

Did all inner planets come from Bullet and Splatter?

On one hand it sort of looks like the planets inside the asteroid belt all formed from the collision between Bullet and splatter. But the problem is twofold:

 How did these bodies re-congeal into spheres and harden a skin sufficient to withstand a barrage of asteroids. and
 How did they pass through the faster moving spray from the same collision? Maybe planetary skins hardened as fast as a tongue to frozen metal. This does not seem totally impossible at 87,000 kph. But the part about overtaking the faster spray, How could Mars and Luna and Mercury have passed though that the spray as one compact field that produced hemispherical scaring on three planets? Unless we can figure out a way that that happened, These planets all seem to have been pre-existing.

The idea that they started out without rotation and later developed it is hard to believe. Also, the elliptical-ness of the cratered areas perhaps speaks of the density of the debris field, as well as the prior axial orientation of the hemispherically cratered planets.

Jupiter probably has a thick layer of CO2 near the bottom of its atmosphere.

Three classes of object

Now look at stars, planets and moons as three classes of space object. In general, planets come from star collisions and moons tend to come from planet collisions. Although some planets in stellar orbits also probably come from collisions of larger planets, especially those planets in strange orbits like Mercury and Pluto. However most objects tend to come from collisions of the class of object that they orbit. In other words, colliding stars tend to form planets, and not so much moons around those planets, and colliding planets tend to form moons and rings mostly. Or rather, more accurately perhaps, moons in a solar system should not be a long term outcome of collisions between stars. Moons should tend to be swept up by the larger planets they share the solar system with.

Was the sun pushed up into its current position?

Whatever struck the sun and created the planets probably came from around the vector of greatest secondary gravity, where most of the nearby stars are. That is at least trillions of times more likely than it coming from the void of intergalactic space. So this probably pushed the sun in motion upward out of the galactic melee.

How much is Earth's orbit decaying?

We may not like to think about it, but it stands to reason that all planets eventually fall into their sun. We are obviously billions of years along on that process, but we should be able to measure the rate at which our planet's orbit around the sun is decaying.

What is secondary gravity/inertia for our sun?

There must be a secondary gravity/inertial force. On one hand we have the plane of the ecliptic, and on the other hand, we have this antarctic ridge from gravitational/inertial flexing that is perfectly aligned with the plane of the ecliptic. There must be a gravitational/inertial force pulling on our planet and solar system from this vector. What is it, or what was it?

Finding the secondary gravity source

We know exactly what direction to look in. Both the plane of the ecliptic and the ANTARCTIC TANGENT point in that direction. Something is there or was there acting as G2 (= the source of secondary gravity). It is either the vector of some nearby star(s), or the vector of total galactic gravity past or present.

Why think of stars as different?

What evidence is there to suppose that stars are composed of different material than planets? Why should we suppose that our sun is composed of gasses. It seems to defy common sense that stars wouldn't have a core of heavier material.

Original clumps

I see stars as original clumps from the big bang(s). These stellar clumps are generally of a significantly larger scale and greater pressures that the objects created by the impacts and explosions of stars.

Things were just different early on

1) Interstellar space was much smaller and there was exponentially more gravity.

2) There were exponentially more interstellar collisions.3) Earth was hotter and had a much thicker atmosphere. The planet was probably also much more geologically active.4) ANTARCTIC FLEXURE was much higher due to secondary gravity.

<LL curve>

A 5 billion year-old Universe

To me, everything happens in the beginning. If anyone says that there was this huge delay between when the nemesis object hit the presun, I need a good reason and evidence. So to me, until I see clear proof otherwise, I will assume the universe is only a little older than the Earth and a little less than 5 billion years old.

It is probably stupid to attempt to colonize Mars

Perhaps Mars lacks an atmosphere and is geologically inert because it lacks trapped gas. Perhaps it formed from almost fully degassed debris from Bullet and Splatter and this is why the punch-through impacts did not destroy this planet. If this is so, then the colonization and exploration of Mars is a waste of time.

If we are going to be terra-forming any planets, Venus would be the logical choice. At least there is trapped gas and an atmosphere to modify on Venus.

And while there may be 226,000 times more CO2 in Venus' atmosphere, but there is only 3x as much nitrogen. And much of this nitrogen is due to all the CO2 and its pressure. Maybe we can introduce some bacteria to Venus that will eat the CO2 and convert it to water and calcium carbonate. Maybe this will drop the atmospheric pressure and temperature over time.

Also, logic dictates that we not go back in time to planets that already cooled too much. If we are going to terraform any planet it will probably be the next planet closer to the sun, the next planet due to cool.

Lucretius, On the Nature of the Universe c. 60 BC, Bk 2.80: "If you think that atoms can stop and by their stopping generate new motion in things, you are wandering far from the path of truth. Since atoms are moving freely through a void, they must all be kept in motion either by their own weight [inertia] or on occasion by the impact of another atom." [This predates by 1700 years the work of Isaac New•ton or Mr. 'New•big', the man (with a matrix name) who was gloriously defined by the Apple dictionary as the 'single greatest influence on theoretical physics until Einstein'.]

Lucretius, On the Nature of the Universe c. 60 BC, Bk 2.96:

"Atoms never rest in their course through deep space. They move incessantly, but variably. Some of them rebound far apart after a collision, while others rebound only a short distance from the impact. Those that do not recoil far, and are held in a closer union. These, by the entanglement of their interlocking shapes, give us firmly rooted [formation] rock, and the stubborn strength of steel. Those others [the other atoms] that move freely through larger tracts of space — few and far between, springing far apart and carried far by the rebound — these provide for us the thin air and blazing sunlight. Besides these, there are many other atoms at large in empty space that have been thrown out of compound bodies..." Lucretius, On the Nature of the Universe, c. 60 BC, Bk 2.310: "Although all atoms are in motion, their totality appears to stand motionless, except for such movements as particular objects may make with their own [whole] bodies. This is because the [size of the] atoms all lie far below the range of our senses. Since they are themselves invisible, their movements must also elude observation. Indeed, even visible objects, when set at a distance, often disguise their movements. [For example] Often, on a hillside wooly sheep as they crop their lush pasture, creep slowly onward, lured this way or that by grass that sparkles with fresh dew. And the full-fed lambs gaily frisk and butt. And yet, when we gaze from a distance, we see only a blur — A white patch stationary on a green hillside."

Lucretius, On the Nature of the Universe c. 60 BC, Bk 4.142 [Let us now consider] "the speed and ease that filaments [light waves] are generated and ceaselessly stream out of objects, or reflect off their surfaces. For the surface of all objects is always ready to reflect them. When this [the light] comes in contact with other objects, it may pass through, as it does in particular through glass. When it encounters rock, or wood, then it is promptly scattered, so that it cannot reproduce an image. But when it is confronted by something both polished and solid, in particular a mirror, then neither of these things happens. The filaments [of light] cannot penetrates, as they do through glass: nor are they scattered, because the smoothness guarantees their safety. That is why such surfaces reflect images that are visible to us. No matter how suddenly or at what time you set any object in front of a mirror, an image appears. From this you may infer that the surfaces of objects emit a ceaseless stream of flimsy tissues and filmy shapes [filaments]. Therefore, a great many filaments are generated in a brief span of time, so that their origin can rightly be described as instantaneous. Just as a great many particles of light must be emitted in a brief period of time by the sun to keep the world continuously filled with it. so objects in general must correspondingly send off a great many images in a great many ways from every surface and in all directions instantaneously. You can turn a mirror any way you wish, but all objects are reproduced in it ... "

Lucretius, On the Nature of the Universe c. 60 BC, Bk 4.177 "Let me now explain in my verses [this was written in verse, like a rock and roll song, not in prose, the language of logic.] how fast the filaments [light waves] move and how they swim rapidly through the air [the firmament of the filaments], so that a brief moment is spent on a long journey, whatever direction each one may take in response to its particular motivating force. ... it is commonly observed that light objects and those composed of small particles are fast-moving. A notable example is the light and heat of the sun: These are composed of minute atoms which ... lose no time in shooting right across the interspace... Similarly the filaments [waves of light and heat energy] must be able to cross an incalculable space in an instant of time.... [because] the light and heat of the sun are seen at the very moment of daybreak ... spraying out [diffusing] across the whole space of the sky... flooding the sky. ... [Lucretius then gives a

second proof and says] Here then is proof upon proof that objects emit [or reflect] particles that strike the eyes and cause sight."

Cicero, On the nature of the Gods, 1.73

"What part of his philosophy doesn't come from Democritus? Even if he introduced some variations... for one part his theory is identical: <u>Atoms, a void</u>, images, <u>the infinity of space, the</u> numberless universes, their birth and death, and so on through practically the whole field of natural philosophy." [The 'multiverse is an ancient Arab pro•pagan•da idea for its host. We really should hold sophoscites on similar ideas to see what our scientific community actually believes.]

Image source codes

EOOT = Essentials of Oceanography, Trujillo & Thurman **ITOR** = Invitation to Oceanography Paul R. Pinet **NREEP** = Natural Resources, Ecology, Economics, and Policy, Holeche Cole, Fisher, Valdez

ITWO = An introduction to the World's Oceans, Duxbury, Sverdrup **TALT**= The Atmosphere, Lutgens Tarbuck

ETSBS = Environment, The science behind the stories, a textbook by J Withgott and Scott Brennan

GRRC = Geography, Realms, Regions and Concepts. Muller and de Blij