

Science Errors

How Deterioration of Science

Left Wreckage and Ruin

Gary Novak

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Preface

Physicists have been saying that the universe is 13.5 billion years old, because that's how long it takes light to get to earth from the most distant galaxies. How long did it take for matter to get from the big bang to the edge of the universe? It seems physicists forgot to add that amount in. So they now say it got there in near zero time, which they call inflation.

Laws of nature don't exist when matter travels 13.5 billion light-years in less than a second. Sorcery takes over where laws of nature leave off. Physicists tell us what happened during the first few fractions of a second, because laws of nature supposedly existed for awhile. Then the laws of nature disappeared while matter traveled to approximately its present location.

Science deteriorated into corruption a long ways back in physics, and now in the biological sciences also. Incompetents push their way into science and replace real science with fakery. They create schemes such as global warming for unlimited contrivance devoid of the rationality which proves them wrong.

The fakery cannot be published the way science is supposed to be published, because it will not stand up to openness and accountability. The publications do not describe methodology, and key information that is needed for evaluation is omitted.

The problem is not just a technicality; the evasiveness is a cover for incompetence and corruption. Real science excludes corruption. Procedures of accountability do that. Those procedures are being defied.

Some nonsense, for example, will be promoted saying laboratory measurements show this, as if absurd laboratory results could trump logic and developed knowledge. Fake measurements are a large part of the problem. The fakery relies upon elaborate procedures for obfuscation preventing critics

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from producing corrections. Measurements alone are not science. They cannot be verified without related knowledge consistent with laws of nature.

The net result is that a large part of science has deteriorated to a standard of “just trust us” (authoritarianism) for results which do not stand up to criticism, can be shown to be self-contradictory and are in conflict with developed knowledge and laws of nature.

The promoters of global warming over-simplify thinking single points tell everything, such as greenhouse gases trapping heat. One molecule of carbon dioxide heating 2,500 molecules around it is not a relevant amount of heat. Heat cannot be trapped, because it is too dynamic. It flows into and out of the atmosphere in femto seconds.

There are several dimensions to science which are being missed. One is the vastness of the information; and it is all relevant. It can't be skipped over in evaluating subjects. Another dimension is quality. It's not all of the same degree of reliability. Another dimension is meaning. The method of measurement determines the meaning of the resulting information. Another dimension is purpose. Science cannot produce knowledge and truth without the procedures which produce that result.

Graduate students learn where science comes from when they try to prove something. You can't prove that water is wet. Therefore, all science can do is add evidence. What that evidence is worth depends upon prior knowledge. You can't short-cut the subject.

Another problem is that power is in conflict with the truth that science is supposed to produce. Truth is the same for everyone; power is not. Power mongers want to separate themselves from lesser persons; and they have to suppress or avoid truth to do so. As a result, truth is being overrun by power mongers in science.

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Science is defined by the expectation of replacing ignorance and falsehood with reliable information. Only certain procedures do so. Evidence must be acquired in a verifiable and reproducible manner. Each person must determine for themselves what the evidence means, because truth cannot be dictated; it can only evolve through the interaction of realities.

Instead, science has devolved into an evasive mode, where the evidence is buried in a gnostic pit inaccessible to other scientists, let alone the public. Gnosticism is more than a religion, its the ethic of mongering power through domination. It's the pretense that all knowledge springs from a darkness unfathomable to all but the most superior elites. Rationality is too debased for such elites.

Isn't it strange that this was the charlatanism which science was supposed to replace. It doesn't die easily, because it is the tool used by incompetents to overwhelm rationality in pushing their way into power. Charlatanism is back using science for a fake validity which could not have been dreamed of in the thirteenth century.

There is a general concept, often inside science, that science is acquiring information through any complex procedure. Everyone gets a different version of results unless there are standards which verify. Real science is like a court case; if the standards are not strict enough, the result is motives instead of facts. With real science, there is one version of reality—objective reality—which is continuously built upon and clarified.

What is often not realized is that standards determine the quality and reliability of science. Standards require properly developed methodologies involving controls, references and tests which have been shown to apply to the conditions being used. The quality of science is in developing the right information through the right procedures.

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Properly defined science is difficult to achieve, as demonstrated by corruptions of science which include most of physics. At the physics extreme, nothing resembling proper science has been known since Newton's time. Engineering is mostly coming from Newton's laws and trial and error. But engineering is vastly different from science. In fact, attempts to turn science into engineering has been destroying science since the sixties. Bureaucrats assume science should look like engineering; so they make scientists do their research at a desk instead of a laboratory. Science bureaucrats are a bunch of incompetents who don't have a clue as to what science is supposed to be. They now require statistical analysis with every number acquired in the biological sciences, even though statistics are not valid without the most strict applications requiring specially designed methodology.

Global warming should have raised alarms. Real science doesn't produce that much argument. There are a significant number of scientists who properly relate to global warming as fake science, but they lose their ability to get grants or publish, and the public sees little of it. Their views were assembled by Marc Morano who accumulated a list of 1,000 such scientist (1).

Claiming that 97% of the scientists agree upon something (2) is falling back on consensus. Agreement, or consensus, is a power mongering tool, not a rationality tool. What someone believes used to be determined by asking them with surveys and statistics. That procedure is not malleable enough for climatology, nor is it a real scientific procedure. So the method was to look at thousands of publications and guess at some opinion about something which no one can fathom.

Standards have deteriorated in science to a point where methodology is often little more than a justification for predetermined conclusions.

Can anyone believe that sea creatures are moving toward the poles due to global warming(3), and then on top of that that scientists have a methodology for studying the question? For evidence, hundreds of publications were reviewed to extract the answer. Supposedly, elites can extract gnostic brilliance out of such unidentifiable evidence.

The science of an obscure mushroom called the morel is no different. The morel is a dramatic example of extreme biology and evolution, the mushroom having evolved from a single-celled yeast a few months ago (about 20 thousand years ago) in evolutionary perspective.

University scientists relate to it quite banally referring to it as a cup fungus and recently declaring its evolutionary age to be 129 million years old (3). That's a lot of discrepancy. Where does it come from? One element of the discrepancy is a computer program which mycologists use to evaluate phylogenetic relationships based upon DNA comparison. They use it to construct "the most parsimonious tree" for fungal relationships. The result is quite different from that of traditional taxonomy, which was based on evaluation of all characteristics. In fact, no two evaluations of phylogenetics produce the same results. The discrepancies are never mentioned, let alone resolved, as if each scientist were representing unquestionable laws of nature.

I wasn't allowed to publish my work on the morel mushroom—no reason given beyond one publisher saying the result was nothing but a novelty. I thought scientists were just dying to publish novelties. The real reason would have been that I was not a part of the good-old-boys club that screens scientific manuscripts through the peer review process.

Peer review is not a purifying process; it's a control process. There is no such thing as purifying science. Science can only produce evidence which each person evaluates for himself. Truth must evolve; no one can dictate it.

Through the interactions of realities, consistent relationships support each other and are strengthened, while conflicting relationships are weakened.

We see a strong opposition to this process in the way global warming is promoted. Nonscientists say that if it isn't peer reviewed, it isn't science. Yet most of the promoting is done by nonscientists who don't have a clue as to what has been peer reviewed. They fall back on the consensus of 97% of scientists supposedly agreeing upon something. This standard is not being corrected by scientists; they promote it through implications which are always going to produce unjustified assumptions by nonscientists.

Rationality requires that claims include enough explanation to allow each person to evaluate for themselves. The explanations are not being included with the claims. Without explanations, society is getting a railroad job. False realities do not have a consistent relationship to surrounding realities. Only when explanations are required do the conflicting relationships show up.

Global warming was contrived out of such false standards. There never were explanations for the absurd claims. The first relevant publication modeled atmospheric effects to determine how much heating should occur, while there was no concept of a mechanism for carbon dioxide creating heat. The next step was adding the historical record of 0.6°C global temperature increase with 100 parts per million carbon dioxide increase as the primary effect and then modeling the atmosphere to determine secondary effects, mostly due to water vapor. The historical record included secondary effects, which are now days said to be twice as much as the primary effect by carbon dioxide. And yet, the first and second approaches produce identical results of 3°C expected increase upon doubling carbon dioxide in the atmosphere. Why not just extend the curve for historical effects? Because alarmists wanted to show three times as much heating as history showed. So they used a bunch of

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muddle to get there. There were no explanations in those publications that scientists could evaluate.

Modeling of atmospheric effects is the entire basis for global warming claims. Modeling is not real science. It is the projection of assumptions with no method of acquiring evidence. Science attempts to verify through reproducible evidence.

Science consists of two parts: The acquisition of evidence, and the judgment and evaluation which produce knowledge. The largest part of science is applying accumulated knowledge to a subject. Knowledge, including established principles, is the most important evidence.

Knowledge has to be described to be evidence. A lack of explanations is the new normal for replacing the rationality which people can judge for themselves with modern charlatanism.

The net result shows up in the international meetings on "climate change." Country representatives go to those meetings with the purpose of imposing their will upon each other. Missing is the reality element. Develop the realities, and no force is required. A society cannot run on force; it can only run on realities.

Why isn't the science of global warming being discussed instead of kicking opponents in the face for disagreeing? What is the so-called settled science? How good is the evidence? The public needs to know. If the public doesn't know what the science is, no amount of force is going to fix the problem.

Around the periphery of science there is a promotion of the outdated concept that science is forming a hypothesis and testing the hypothesis. Nothing resembling it has existed in science in at least a century. Modern science is too complex for such over-simplification. There are no instruments or

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procedures for answering the large questions of modern science. Instead, tools are developed for adding more evidence to complex subjects.

Stanley Prusiner and his followers didn't know this. He supposedly pulled a dozen procedures off the shelf for answering the question of whether Scrapies-like diseases, such as Mad Cow Disease, are caused by proteins called prions. Afterwards, no one could reproduce his results; but by then he had a Nobel prize, and you can guess who was supposedly right.

It would have taken numerous laboratories several years to add real evidence to each of the questions. Numerous tests are required to determine proper methodology and validity. References and standardizations are needed for comparisons. These were the standards of previous science, but standards have totally disappeared in most areas of science at this time.

There is a lot that is unscientific and ridiculous in claiming a protein is the causative agent for a disease—so much so that any scientist should be able to flatly state that it doesn't happen. Proteins are extremely vulnerable to damage, while the causative agent was more resistant to damage than anything previously known. This is why most viruses must be transmitted in liquids. Drying destroys the functionality of complex proteins including those surrounding most viruses. Pox viruses are an exception, as their protein coats evolved for drying. But in doing so, they lost all complexity and only function as an inert pouch. This is why smallpox was easily eradicated through immunization. The crude protein coat was not changing its antigenic characteristics; so immunizing to cowpox would be effective against human smallpox. One vaccine would work always, everywhere.

If a protein does not carry its own genetic material with it, then the gene for the protein is carried in the host DNA and is a genetic disease. Genetic diseases never go beyond one mutation before being removed through the

process of evolution. Yet the so-called prion diseases are complex and include strain variations which evolve.

What really happens is that the causative agent damages the brain in such a way as to cause madness for spreading the disease, something like rabies does. The brain damage is caused by lesions which contain an over-production of one of the common proteins in brain cell membranes. This protein transports something into or out of the cell by flipping back and forth between two shapes. One of those shapes is said to be a disease form of the protein. That is an impossibility, because evolution does not destroy the host that way.

There are endless absurdities in the prion "theory." Diseases need a way of spreading. One person's brain protein cannot get into another person's brain. If it could get into the blood, the immune system would destroy it. Foreign proteins are easy to identify in the blood by the immune system. A protein that caused similar proteins to change by bumping into them would not cause the cells to produce more such proteins and destroy themselves doing so.

About 50 million years ago, mammals diverged in their evolution to form lines which separate the human line from the sheep line and cattle line. But at this instantaneous point in time, sheep, cattle and humans are supposedly having their brain chemistry fall apart, in exactly the same ways, creating defective brain proteins which deform when bumping into each other and kill the host—an impossible amount of coincidence in the evolution of a genetic disease.

The problem is that incompetent persons pushed their way into science and shoved out real scientists. They use force to get their way and collaborate with other incompetents (a conspiracy) as a form of group power. Agreement or consensus is their primary form of power. They need power to generate force;

so they become power mongers. They oppose rationality, because it exposes their incompetence and corruption.

At this point in time, power mongers are systematically reversing a large part of scientific knowledge to strip it of its logic, which they cannot handle. They promote fraud, because they can arbitrate it with no danger of logic or knowledge proving them wrong. Fraud is "unfalsifiable." As Popper, the science philosopher, stated, science must be falsifiable. This absurd concern rises to the surface in science due to the relentless effort of power mongers to contrive fraud as an unfalsifiable subject. In relativity, millions of lines of mathematics have been written without a flaw in them, because relativity has no relationship to objective reality. Such frauds are totally stripped of the "scientific method" designed to produce verifiable evidence.

An example of reversal of science is the asteroid belt. For centuries, scientists have known that the asteroid belt was created by a planet exploding between Mars and Jupiter. Recently, scientists have decided that there was no planet exploding; it was the gravity of Jupiter that created the asteroid belt. The fake explanation doesn't answer a relevant question. Gravity doesn't cause broken rocks to form. In fact, Pluto was delisted as a planet, because it is too small to have formed independently. A larger size is needed to create enough of its own gravity to form a planet. Pluto is another asteroid resulting from the exploded planet. The asteroids were flung all over the solar system, but they were swept away in most places by planets and their moons. Out where Pluto is located, there are numerous asteroids, because there is nothing out there to sweep them away.

Another absurdity which could only be produced in recent years is the claim that Yellowstone Park in Wyoming contains a super volcano about fifty miles in diameter. You don't see it in satellite photos. Scientists never saw it until recently. The evidence is under the ground. The supposed volcano is said to

have emitted hundreds of cubic miles of lava during several eruptions in the past. How did the lava get so flat and heterogeneous? It was obviously an asteroid that created the fracture in the earth's crust. Frauds think nothing of forcing absurdities onto everyone through the fake authority of unquestionable science.

The absurdity of absurdities is the way the universe supposedly expanded through inflation. For several decades, physicists have been telling the kiddies that the universe is 13.5 billion years old, because that's how long it takes light to get to earth from the most distant galaxies. But it all supposedly started with a big bang. How long then did it take for matter to get from the bang to the edge of the universe? It seems physicists forgot to add that amount in. As luck would have it, it got there in near zero time.

Laws of nature don't exist when matter travels 13.5 billion light-years in less than a second. Sorcery takes over where laws of nature leave off. Physicists tell us what happened during the first few fractions of a second, because laws of nature existed for awhile. Then the laws of nature disappeared while matter traveled to approximately its present location. Some of the matter stayed quite close to the earth (the center of the universe), and the distribution was extremely unequal. Were there laws of sorcery which determined the distribution? There had to be laws of sorcery which created the universe, because laws of nature don't exist until everything gets exactly where it presently exists, beyond slight movement afterwards. Reduce force or distance by one half, and the universe does not exist through laws of nature. The solar system cannot be half as large and an atom cannot be half as large, unless force also changes in some way.

It wasn't just space inflating. The universe didn't skip from small to large; there is no state for small. It had to be created large. What then inflated, if the universe was created large; and where was the big bang, if the universe was

created large? Was there a small universe, say less than a micron, where suitable forces existed, and then all expanded (inflated)? How do you define a micron, if everything was less? Not having explanations for these questions doesn't put the subject in the realm of rational theory, yet the power mongers proclaim their story as facts of science.

Physics was the first area of science to fall into corruption. The laws of physics are so mysterious and abstract that they are almost impossible to study. This prevents critics from adding evidence to support opposing views. As a result, there has not been an iota of physics produced since Newton's laws which has not been in error.

You say complex technology works, and it's based on laws of physics. Technology is produced through engineering, which is vastly different from science. In many ways, they are opposites. An engineer is in no position to question what he is given. Engineers do tests, but they are superficial, like testing the hardness of concrete. The science of these tests is not studied by engineers. It is when the scientific explanations leave off that engineers must do trial-and-error testing. Physicists are like super engineers when they are creating technology. Afterwards, they produce exotic explanations, which may or may not be right. But products and methods produced through trial-and-error is the engineering method, not the scientific method. The difference is in basic knowledge being the goal and product of science. In other words, physics knowledge can be totally wrong, while engineers and super engineers produce technology. Some persons might disagree and say technologists really have to know what they are doing. Good engineers really know what they are doing, even though there has not been an iota of physics right since Newton's laws. Engineering is entirely based on Newton's laws and trial-and-error testing.

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For example, the definition of kinetic energy which physicists use has too much velocity in it, which results in the rate of energy addition, called power, having velocity in it. So physicists assume that the power of an engine is proportional to its rpms (velocity), when it is really proportional to force only. So a small, high rpm motor supposedly has more power than a large, low rpm motor. Ignoring and rationalizing the contradictions is what physicists live with.

Conceptualize this point like this: If you blow on a spacecraft moving millions of miles per hour, you add several horsepower. If you blow on a stationary spacecraft, you add an ants power. How can you do both? Every spacecraft in existence is traveling millions of miles per hour relative to something, which might be solar wind. Every tree is moving millions of miles per hour relative to something. You can't be adding horsepower and ant power to everything simultaneously. In other words, velocity is too relative to be a part of energy addition. Real scientists do not ignore and tolerate such contradictions, but physicists do.

Most areas of science cannot be ideal, because experimentation is too difficult. Geology is an example. Claiming that soil was created through the breakdown of rocks is amazingly absurd. This sort of oversimplified assumingness is found throughout science, and it really messes up a lot of logic. You can't build knowledge upon it. The study of evolution is particularly dependent upon proper geology.

There are numerous absurdities in the claim. First, clay is high in aluminum, while most rocks have no significant aluminum. Secondly, plant roots need good quality soil to grow in; they don't grow on rocks. Terrestrial plants could not evolve until good quality soil existed.

It appears that shale was the closest thing to soil to be created while the earth was forming. Precambrian sediments would have originated with shale. Oceans would have eroded and dissolved shale. Terrestrial life could not begin under such conditions, because there were no fine particles of shale outside the ocean floor. Modern clay was added later, when a planet exploded. Only then could terrestrial life begin, which would have been the cause of the Cambrian explosion of life beginning 543 million years ago. The exploded planet would have been much larger than the earth, which is why it exploded. Due to its size, the clay which formed was different from the shale produced by earth. Perhaps the explosion allowed aluminum and silicone to reform as clay.

The Disappearance of Science

There is very little left of real science. What replaced it is not poor quality science but the justification of science being used to rationalize corruption. A few scientists saw this with global warming and called it a hoax. What they seem to have missed is that the same thing happened throughout science. In fact, global warming could only come to the surface as a social issue after science deteriorated to a point where the errors prevailed over real science.

There have been tens of thousands of studies produced on the effects of global warming, while global warming does not exist. How can something be studied when it doesn't exist? Not only are humans not the cause of global warming, a temperature increase did not actually occur. The temperature measurements were faked. The original data shows no temperature increase over the past 35 years at least, while the contrivers lowered earlier measurements and increased recent measurements to show a false increase. Critics have been studying these fabrications for the past six years and found endless examples. Satellite measurements have shown no significant temperature increase since they began making such measurements in the late seventies. Only satellite

measurements are suitable for the purpose of climatology, because they average over a wide area and cover everything, while land-based measurements cover about 10% of the earth and have no standards for cross-comparisons or uniformity.

The most basic problem is that the standards required for correct science disappeared. Fakes will study any trivial point and draw any conclusion from the results. The methodology is usually so vague that it does not measure anything real; it just produces random variations. Half the time the variations will move in the direction which is exploitable. If not, make a small variation, and the results will show the opposite. Correlation studies are often used for this purpose. It's like Sam and Joe growing potatoes. Sam wears brown shoes, and Joe wears black shoes. Sam gets 10 pounds per square yard, and Joe gets 15. Therefore, wearing black shoes will produce a higher yield than wearing brown shoes.

Statistics are a common means of getting any desired result. Statistical procedures are so vague and subjective that the users can get any result they want by manipulating the procedures. Statistics were not allowed in hard core science several decades ago for this reason. Now they are required with every number produced, even though valid criteria cannot be met in most cases. The sample size is almost always too small.

In other words, science has deteriorated into a rationalized propaganda machine. Everything that is supposed to correct or prevent such corruption is defied. Criticism is no longer allowed. Numerous scientists who criticized global warming claims have lost their ability to get grants or to publish, if not outright gotten fired. Journalists often refuse to allow criticism of global warming claiming it would contaminate the truth. Such corruption creates a war against rationality. Supposedly, a battle zone is needed around the periphery of science, while the core of science is the sacred ground of

flawless perfection. It's nonfalsifiable. Serious corruptions can only be corrected with outside criticism. It isn't being allowed in science. Scientists police themselves. The mafia never had it so good.

There is a self-condemning element to corruption in science. If science is so flawless that it doesn't need criticism, responding to criticism is necessary anyway to remove misunderstandings. But no criticism is allowed where there is corruption. The wall around corruption does not exist around truth.

The methods are self-condemning. The only pretended basis for preventing criticism or corrections is that there is no need to correct or criticize due to flawless perfection. An extension of this pretense is that critics are so worthless or wrong that there is no need to respond to them. A related pretense is that even if the experts (like the IPCC) are wrong, they are making the best estimate that can be made, so there is no reason to listen to someone else. These pretenses are self-condemning, because truth never exists in the absence of rationality. Persons who produce truth have no difficulty responding to criticism, and it is always necessary to do so to prevent misunderstanding.

What Truth Is

First and foremost, truth has to be relevant. Trivial truth cannot be separated from the subjectivity which degrades persons through gossip. People have a right to private lives separated from the realities which are a concern to everyone. The separation is based on objective reality.

Objective reality is the common reality which is everyone's business. It starts with the material (natural) laws which govern material life. Gravity is one example. Science has the purpose of clarifying truth in that area, so the foundation and starting point of all other objective reality is reliable.

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There is a method of producing and testing the truth of objective reality. It's rationality. The reasoning process relates one reality to another for comparison. The comparisons remove contradictions and show consistent relationships. The consistent relationships define truth. Truth is all objective realities which have consistent relationships between them. They form one whole, which is unified reality. The universe is one set of realities which have consistent relationships between them.

There is only one truth, because there is only one unified reality. False realities are small, broken up and conflicting pieces of reality. They create dissociated realities in minds.

Truth can never be defied where there is openness and accountability, because it is the size of the universe with all elements consistently relating to each other. The darkness of concealment is required to promote falsehoods, because openness exposes false realities to their infinite conflict with unified reality.

Life is made up of unified reality to such an extent that it can be defined philosophically as unified reality. Life could be defined as ordered complexity, but only unified reality allows ordered complexity. The dissociated reality of falsehoods creates disordered complexity.

This is why truth is inseparable from all constructivity. If constructivity is that which sustains life, it can only occur when aligned upon the truth which makes up life. The point is, there is no place for falsehoods in science.

Incompetents who monger power fight a war against rationality, because it proves them wrong and incompetent. They proclaim and reveal reality instead of develop it through rationality. Their method is a form of gnosticism, where the origins of reality cannot be determined, evaluated or verified. "Just trust us" is their standard of handling reality.

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People have a need and right to evaluate, clarify and substantiate all objective reality. It's a "self-evident and inalienable" right, because problems cannot be solved otherwise. All corrupters try to prevent people from determining what objective reality is, because power cannot be arbitrated with truth proving them wrong.

The power of truth is the only force which corrupters cannot subdue. Truth must be suppressed to allow corrupters to function. The reason is because truth is the size of the universe, it forms the basis for all activity and it is interlinked with all other truth. Corrupters must pretend to be promoting truth, because truth is always bigger than they are.

For this reason, the number one purpose of all persecution is to suppress truth. The vulnerable victims of injustice need truth to solve their problems and end their persecution. So they produce truth as the only defense they have.

Oppressors retaliate attempting to stifle the truth. In this manner, truth comes from the bottom of society, while oppression comes from power mongers who use force as their method of prevailing. Corrupters decree their perversions to be truth, but they have to fight a war against rationality to do it.

How could elites be so corrupt in science and such models of perfection everywhere else? They couldn't. That's one of the points. But there is a major difference. Science has the purpose of proving. Muddling a subject beyond comprehension can be called perfection elsewhere, but it isn't science. To produce that standard in science is the corruption of science. Science has the purpose of doing otherwise. To not do what science is supposed to be doing is the total corruption of science.

Over and over, we are told that the science of global warming is beyond dispute. The persons telling us this have never studied an iota of science in their lives and have never looked at the science. So where do they get their

information? From the news. We get the same news. Why do we have to be told something by someone who knows no more about the subject than we do? Because power mongering replaced rationality as the existing social standard. Rationality requires looking, evaluating and explaining. Those standards are a thing of the past.

What Corruption Is

Not-so-bright persons often assume that if they could prevail against other persons it would solve their problems. To prevail is to dominate. So they become dominators. To dominate, they need power. So they become power mongers.

Power mongering is an attempt to be totally at cause and zero effect. If others are allowed to be cause, power mongers fail. To fail is to be a loser worth no more than their incompetence leaves them with.

People don't like to be prevailed against. It prevents them from solving their problems, because prevailing misdirects all activities aligning them upon the motives of power mongers.

Another reason why prevailing is destructive is because it requires force to overwhelm rationality. Force can only be defined in terms of its result, which is to conflict with realities.

The result is that there are two mediums of existence: the reality medium and a force medium. Rational persons do everything through reality, which creates a medium of realities which they exist in. Power mongers exist in a force medium which is incompatible with the reality medium.

Nothing constructive can be done in the force medium, because realities must be controlled for constructivity, while force destroys realities. This means the force medium is not an alternative state of existence but a self-destructive

state of existence. If power mongers in the force medium were to totally succeed they would destroy themselves along with everyone else. They need to exploit constructive persons while destroying them and their activities. It's a transitional state which runs aground as power mongers succeed in taking over the environment around them.

Human history has been endless cycles of power mongers taking over social structures until they destroy themselves and everyone around them. Power constantly shifts from one country to another, as power mongers succeed in taking over everything around them. As one country self-destructs in that manner, another country will rise up to replace it. The power cycles rotated through all European countries, often more than once. Now, the power is in the U.S. As power mongers take over everything in the U.S., the result is self-destructing, as used to occur in European countries.

The results are provable in science. Elsewhere, there is no proof, just conflicts in values. However, to look realistically at what is happening outside science one sees the irrationality of incompetents mongering power without a clue as to the consequences in such corruptions as global warming. Why do alarmists keep saying the science of global warming is settled, when they never look at the science to find out? A few scientists try to criticize, and they lose grants and the ability to function.

If promoters were explaining their claims and showing evidence, we could evaluate for ourselves; but they never do. They don't know how, and they would fall flat if they tried. So we can't evaluate their claims, and the result is a railroad job.

An example is the construction of windmills. Even if carbon dioxide did need to be removed from the air, constructing windmills would put more in the air, not less, because the high costs of construction and distribution include huge

amounts of energy with fractions of assumed output. Governments used to have to do a cost-benefit analysis for their projects, but now days power mongers cannot add and subtract well enough to do a cost-benefit analysis. So they have to waste a lot of money to determine the consequences of their decisions, while "greens" assume that the more money spent on green, the greener it gets.

Values

There are values which develop along the lines of incompetence leading to power mongering as the main source of corruption. The conflict of values is sharpest in anti-progressiveness. Anti-progressives turn green with this statement: The planet could sustain fifty billion people easier than it is sustaining seven billion, if resources were developed instead of squandered.

Strangely, persons who call themselves liberal, and maybe progressive, often claim there are too many people on the planet. They don't explain much along those lines, but the absence of constructivity in their purposes is a deafening silence. Human problems are not being solved. The undeveloped potential to do so is virtually unlimited.

Before conservatives took over the world in 1981, real liberals were progressives and problem solvers. They were on the path of solving the problems which are now dragging down society everywhere. Water is an example which is visible in the affluent world. The U.S. has a catastrophic shortage of water, and no solutions are being discussed. During the seventies, progressives were taking up this problem. The primary solution was to get water from the abundance of ice around the Arctic. The methods being discussed included dragging icebergs into bays and surrounding them with plastic and using nuclear energy to melt Arctic ice and piping the water south. Theses things would be an afternoon picnic compared to the trillions of

dollars spent on wars. But when conservatives took control of the deciding in 1981, all such concerns disappeared and were replaced with the supposedly higher purpose of defeating enemies.

Why global warming followed liberal vs. conservative lines is hard to imagine, but liberals now are usually anti-progressive, because doing anything puts carbon dioxide in the air. Polar bears must be saved, while Orangutans are destroyed to produce biodiesel.

Power mongers are approximately defined by viewing the masses of people as a threat due to consumption of limited resources. Power mongers assume they are worthy of the global resources, while the persons below them are not. Yet power mongers squander resources wantonly, because their concern is not really resources; they use resources as the excuse for domination. Power mongers need to dominate the persons below them, because truth originates from the bottom of society and exposes their incompetence and corruption. The lower classes need to solve problems, which requires rationality, while power mongers would rather create problems, which works best with lies and fraud.

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Introduction

Most science errors are in physics due to the difficulty of making measurements in that area. The biological sciences were in good shape until recently because of the ease of acquiring evidence through numerous means. Evolution, however, is more mysterious and prone to errors. Evaluation becomes more heavily depended upon in evolution biology due to the indirect nature of the evidence.

There is a range of standards with evaluation. Often, the process is too whimsical and unreliable as with the claim that soil was created through the breakdown of rocks. If surrounding evidence were developed better, the contradictions would show up. The best evidence in any area is in the related realities. But it takes a broad study with a lot of observation and experience to develop surrounding realities. Highly specialized scientists have a tendency to miss a lot outside of a narrow focus. The subject of evolution has a lot of gaps and errors for this reason.

Usually, a study of fossils and bones makes up the evidence for evolution. When studying the physiology of mushrooms, fungi and soil, a much broader picture of evolution emerges. (Physiology is the study of interactions between biochemical processes.) With this perspective it is possible to determine how fat production evolved. Yeast acquired the physiology necessary for fat production, and they didn't exist until 50 million years ago. Evidence indicates that there was no storage fat before then.

Not long ago scientists would have nullified this statement based on Mendelian inheritance showing no line of descent between yeasts and other plants and animals which produce fat. Since then a large window into evolution has been opened through the discovery of horizontal gene transfer

which allows genes to be carried between unrelated species by viruses and other microbes.

Another window to evolution is phenotypic variation as an adaptation mechanism. All species use this mechanism to produce variation more rapidly than normal evolution as genotypic variation. A lot of confusion over variants is cleared up in understanding this mechanism.

Examples of extreme evolution create another window into the mechanisms and history of evolution. The morel mushroom evolving from a single celled yeast into a multicellular mushroom over the past 80 thousand years shows rudimentary mechanisms which disappear in the complexities with long-term evolution. Reversion to earlier patterns is demonstrated with the morel showing that physiology is controlled as patterns stored in the DNA to be activated under suitable conditions. The morel also shows how rapidly morphology evolves and how slowly physiology evolves.

With this foundation of information, it is possible to determine that modern respiration evolved in a bacterium called *Pseudomonas fluorescens* approximately 700 million years ago. Physiological demands would not allow this evolution to occur alongside normal metabolism. But polar flagella could evolve as a parallel mechanism in this bacterium with the related protein complex which uses ATP. Reversing the process allowed those proteins to be used for a more expedient production of ATP.

Biophysicists have been making errors based on a concept of converting kinetic energy into chemical energy. Kinetic energy can never be converted into chemical energy. Kinetic energy is in the motion of nuclei. Chemical energy is in the motion of electrons. It is a truism that any force acting upon nuclei (short of a nuclear reaction) will not increase the energy of the electrons. Therefore, kinetic energy (including heat, which is the average

kinetic energy of small particles) can never be converted into chemical energy. In biology, chemical energy is only increased through light acting upon electrons through photosynthesis.

Because of this error biophysicists have a gross description of ATP generation based on protons moving through a gradient to spin proteins and transfer the energy from “binding force” to ATP. Errors of this sort corrupt major areas of science, where corruption builds upon corruption much as with global warming.

Based on the same error of kinetic energy increasing chemical energy petroleum hydrocarbons are said to originate with biological molecules which are acted upon by heat and pressure to increase their level of chemical energy. There is no such thing as fossil fuels due to the inability of kinetic energy to increase chemical energy.

Petroleum hydrocarbons would have been created during the early formation of the earth and then oxidized into water, which created the oceans, and carbon dioxide, which created a large amount of limestone and chalk. Some of the petroleum was protected from oxidation underground, where it remained throughout geological history.

Notice in Wikipedia that chalk supposedly comes from the shells of marine animals. No, Virginia, there is way too much chalk and too much in one place for that. It was created on a massive scale, very rapidly, while the ocean water was forming during the early stages of earth formation. If chalk formation were a late process dependent upon marine animals, it would be loaded with other materials. Instead, it is closer to pure calcium carbonate.

Physicists got the equation for defining kinetic energy wrong in 1686. Instead of correcting the error, physicists reverted to producing fake science. Fakery

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became exploitable in physics due to the abstractness of the material and the darkness of the complex math applied to the subject.

If one of the major banks became a black box, and all anyone could see is what went in and came out, it would become a criminal enterprise in a matter of weeks. That's what happened to physics.

Because of the misdefinition of kinetic energy physicists expect much energy to result from nuclear fusion. There is no significant energy in nuclear fusion, as laser tests have shown. Atom smashers keep getting larger in the attempt to produce such energy without success.

The highly developed pattern and practice of producing fakery in physics resulted in the claim of greenhouse gases creating global warming. There is no such thing as greenhouse gases, because there is no such thing as trapping heat in the atmosphere. Absorbed radiation is re-emitted in femto seconds.

Notice the propaganda in such terms as "heat trapping gas." It is extremely nonscientific to assume heat could be trapped in the atmosphere. The word "trapping" sticks in the minds of nonscientists as something that does not go away. The propagandists also claim that nothing but greenhouse gases heat the atmosphere, and they have added 33°C to the temperature of the earth's surface.

Other scientists know that conduction and evaporation move heat from the surface of the earth into the atmosphere, as they show it on the diagrams of their "energy budgets" for heat moving into and out of the earth. But they never correct such errors, even though the 33°C claim is at the top of the environmental web sites for all fifty states and numerous local governments which replicate the propaganda that comes down from federal bureaucrats.

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Incompetents used to try to argue global warming, but they fell flat on their faces so totally that all they say anymore is that 97% of the scientists agree. No one is allowed to disagree, within science or without. So where does the 3% come from? It's more fakery—pretending that there is a normal discussion where there is none.

Relativity was contrived with no relationship to objective reality to serve as a model and test for contrivance in physics. No science to the subject has every been described beyond a few absurd conclusions, such as nothing can move faster than the speed of light. Physicists pretend that there are oceans of science in their obscure math, but if anything real existed, it would show up someplace, which it never does. They write millions of relativity equations without error, because fake science is “nonfalsifiable,” as Popper, the science philosopher, described it. Nonfalsifiability means errors are imposed through force, and no one is allowed to disagree, which is where global warming now rests.

Quantum mechanics contradicts the unquestionable wave characteristics of light and claims energy packets (photons) replace waves. Energy cannot have length, width height, as packets do. All scientists say there cannot be contradictions in science, yet there is nothing in physics beyond Newton's laws which is not in conflict with other parts of physics.

Mushroom scientists claim that the morel mushroom is an ancient cup fungus 129 million years old. That's older than most dinosaurs. The morel doesn't have a stable morphology yet, evolving from a single-celled yeast during this ice age cycle. It hasn't yet acquired the ability to measure gravity to control vertical growth. Everything that emerges from the ground measures gravity for vertical growth, but the morel hasn't had enough time yet to do so.

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The whole purpose of science is to create a domain of objective reality free from the arbitrariness of subjectivity. In other words, science (and objective reality) is supposed to be the same for everyone.

There is a methodology to producing objective reality, in science and out. The process is called rationality. Rationality is the process of relating one reality to another to show consistent relationships. Objective reality is developed by determining what the evidence shows. Evidence is related to additional evidence including knowledge.

Incompetents in science are defying the process of producing objective reality through rationality, because they cannot function competitively where there is rationality.

Summary (Historical Perspective)

The first century of physics got off to a good start, as René Descartes summarized early results with pendulums and motion (ca 1635) saying, there is a fixed amount of motion in the universe, because it is always conserved through interactions. By motion, he meant the combination of mass and velocity. In 1686, Gottfried Leibniz said Descartes was wrong; It is not the combination of mass and velocity that is conserved but mass times velocity squared. The Leibniz view became the definition of kinetic energy. There has not been an iota of correct physics since then beyond Newton's laws produced in 1687.

James Joule supposedly proved Leibniz correct in 1845 by stirring water in a wooden bucket to determine how much heat is produced from force and motion. So little heat is produced in stirring water that it would have disappeared into the environment as fast as he created it. He said he took care of environmental effects by doing an extra run, which of course was absurd. Physicists were trying to do such an experiment and failing for numerous reasons. Joule claimed to solve the problems which they could not solve, while all he did was run to a complicit publisher with nonscientific contrivances.

Yet, Joule was only off by three parts per thousand from the modern number. Supposedly, the number is 4.1868 Newton-meters per calorie, while Joule said it was 4.2. Joule's supposed precision only shows that the modern number is also fake. The reason why fakery replaces a real number is because measuring the effects of force is impossible. Direct measurement of force now days might produce two or three significant digits, but there is a theoretical problem which cannot be solved. It is impossible for physicists to separate

elastic force from inelastic force—so much so that they conceal the problem and pretend that it is all inelastic force when stirring water.

Here's the nature of the problem: If you row a boat by pulling on the oars very hard, about 80% of the force might be elastic and move the boat, while the other 20% is inelastic and heats the water. But if you pull the oars very slowly, it might be the opposite—20% elastic force and 80% inelastic force. What the real ratio is each time is impossible to determine.

These types of problems exist in all physics. As a result, physicists acquired the habit of faking their results. They seem to assume that they can determine the truth through intuition, and it would be better to fudge in a representation of what they assume than to allow obstacles to stand in the way of progress. One of the problems is that only incompetent fools think that way, and they are always wrong about their intuitions. Yet they prevailed in physics by shoving out or silencing critics through force in place of rationality.

Joule's measurement supposedly proved that Leibniz was right in defining kinetic energy in terms of mass times velocity squared. But to tell the difference between the two alternatives, rates of change have to be measured while components vary. Joule only had a single point of measurement, which could not differentiate between the alternatives. There is no clue in physics that Joule did not determine what kinetic energy is.

So where do physicists get five significant digits for a modern number? They relate to electrical energy, which eliminates the need to measure force.

Electricity can heat water in a very precise way. But doing this only shifts the problem one step farther out of reach. Physicists then need to determine how much force it takes to create a volt of electricity. Doing so would be even more difficult than determining the force required to heat water, because there are additional complexities and inefficiencies in generating electricity.

What it implicitly adds up to (Physics is too dark to pin such things down.) is that circular logic is being used defining kinetic energy in terms of electrical energy and defining electrical energy in terms of kinetic energy. This leaves out what scientists refer to as absolute values, which means referencing to something that actually exists in nature. Electrical and kinetic energy float at some arbitrary value. Physicists could have missed absolute values by several hundred percent. The Stefan-Boltzmann constant, upon which global warming claims are based, shows about 20-40 times too much radiation given off at normal temperatures. That's 2,000-4,000% error.

It's now possible to prove that physicists picked the wrong alternative in defining kinetic energy. Rockets can be used to add energy to mass and compare the dynamics using the same logic that Leibniz used and show that Leibniz was wrong. Burn time for a constant powered rocket is proportional to the energy it used. Therefore, burn time for a rocket can be compared for various masses in motion to show their relative amounts of energy. The rocket equations are quite rudimentary and easy to apply to the task. Proving that kinetic energy is misdefined proves that physicists contrived the claimed 4.1868 Newton-meters per calorie, because there is no consistent number with a false definition of kinetic energy. Whenever conditions change, a different number would result. Joule would not have used similar conditions to any modern measurement.

Einstein paralleled the false definition of kinetic energy in his equation, $E=mc^2$. c squared is the velocity of light squared. Squaring any velocity is ridiculous, since nothing can move at velocity squared. There was no reason for Einstein to square the velocity of light besides paralleling the velocity squared in the supposed definition of kinetic energy.

One of the things it means is there is no significant energy in hydrogen fusion. Physicists expect a lot of energy from fusion, because they use Einstein's

equation to calculate it. Squaring the velocity of light produces a very large number for resulting energy. Unsquare the velocity of light, and there is next to none. Recent laser tests have found no significant energy in fusion, while the engineering worked flawlessly. Atom smashers keep getting larger in the attempt to get energy out of hydrogen fusion without success.

This is the standard by which we are told carbon dioxide in the air is creating global warming. Heat production and transfer are the most common subjects in science including biology as well as physics. When real scientists hear that 400 parts per million of anything in the air is creating heat, they say it is a hoax. Heat doesn't work that way. Heat is a quantity of energy which cannot be created or destroyed, though it can be transformed from other sources of energy. As a definable quantity, it cannot be spread out without getting a lot colder. It's like ink in water—it dilutes.

The term "heat trapping gas" is a scientific fraud. Heat cannot be trapped, because it is too dynamic. It flows into and out of the atmosphere in femto seconds. Heat constantly dissipates and radiates. The amount of heat entering from the sun during the day is the amount that leaves during the night. A miniscule amount is not going to get trapped while the rest radiates into space.

The origins of global warming science are more corrupt than anyone imagined. Climatologists skipped over the dilution factor. There are 2,500 air molecules around each CO₂ molecule, which means each CO₂ molecule must be 2,500°C to heat the air 1°C—an impossibility. There cannot be greenhouse gases creating global warming for this reason. Climatologists admit that the CO₂ in the air is about the same temperature as the air, as it would have to be. They are thereby implying that CO₂ is a cold conduit for heat. There is no such thing as a cold conduit for heat, as thermal conductivity coefficients show.

Climatologists use a so-called energy budget which shows 79% of the energy leaving the surface of the earth to be in the form of radiation. White hot metals could not easily emit 79% radiation under atmospheric conditions. Reducing the radiation would be reducing the claimed global warming.

For a mechanism, climatologists used radiative transfer equations to supposedly show 3.7 watts per square meter less radiation leaving the planet than entering from the sun due to carbon dioxide. There can never be a difference between energy inflow and outflow beyond minor transitions because of equilibrium, as climatologists recognize. Yet they claim the 3.7 w/m² is a permanent representation of global warming upon doubling CO₂. This number is supposed to result in 1°C near-surface temperature increase as the primary effect by CO₂. However, watts per square meter are units of rate, while rates produce continuous change, not a fixed 1°C. The 1°C was supposedly produced by reversing the Stefan-Boltzmann constant, but reversing it is not valid. (Secondary effects supposedly triple the 1°C to 3°C.)

It means climatologists started at the desired end point of 1°C and applied the Stefan-Boltzmann constant in the forward direction to get the 3.7 w/m² attributed to radiative transfer equations. Radiative transfer equations cannot produce any such number, because radiation leaves from all points in the atmosphere with 15-30% going around greenhouse gases. That dynamic, combined with equilibrium, is beyond scientific quantitation.

Chapter 1: Mathematical Proof Energy has been Misdefined in Physics

Chapter Summary

Energy is defined as that which is conserved during transformation into other forms of energy. Before the concept of energy existed, researchers found that mass times velocity was a conserved quantity of motion (c. 1635). In 1686, Gottfried Leibniz claimed to show that it is mass times velocity squared which is the conserved quantity of motion, and it has since become the definition of kinetic energy. The mathematics of rockets can now be used to show that Leibniz was wrong; it is really the original concept, mass time velocity, which is the quantity conserved for transformations of kinetic energy. About ninety percent of physics is corrupted by the error. A uniformly applied error is useful for engineering, but not science. Physics only functions as super-engineering, not real science.



The Results Show This

Energy is defined as "that which is conserved during transformations." Conserved means totals stay the same when components are re-arranged. So the test for the definition of kinetic energy is to re-arrange the components and see which total stays the same, as Leibniz did.

Part 1: Kinetic energy is not $\frac{1}{2}mv^2$.

A 4kg object dropped 1m (meter) has the same amount of $\frac{1}{2}mv^2$ as a 1kg object dropped 4m, because force times distance equals $\frac{1}{2}mv^2$ for an

accelerating mass. But a rocket accelerating the masses to those velocities requires twice as much energy as fuel for the large mass as for the small one.

Rocket burn time:

large mass: 1.77177876722800 seconds

small mass: 0.88588938361400 seconds

Therefore, both masses do not have the same energy; the rocket does not transform energy in proportion to $\frac{1}{2}mv^2$; $\frac{1}{2}mv^2$ is not kinetic energy; and a gallon of fuel does not produce a consistent amount of $\frac{1}{2}mv^2$.

Part 2: Kinetic energy is mv.

A 4kg object dropped for 1s (second) has the same amount of mv (momentum) as a 1kg object dropped for 4s, because force times time equals mv for an accelerating mass. A rocket accelerating the masses to those velocities uses the same amount of energy as fuel for both masses.

Rocket burn time:

large mass: 3.92400000000000 seconds

small mass: 3.92400000000000 seconds

Therefore, both masses have the same amount of energy; the rocket transforms energy in proportion to mv; mv is kinetic energy; and a gallon of fuel produces a consistent amount of mv.

The proof that there are no errors in the math is that the ratio for the first two tests is 2.00000000000000, while the ratio of the second two tests is 1.00000000000000. Any error would replace the zeros with other numbers.

All logic and evidence of energy point to the same conclusion. The logic created the need to derive the mathematical proof. About ninety percent of physics is corrupted by the error.

Physicists mindlessly assume the discrepancies can be accounted for in the exhaust of the rocket. There's no question where the energy is located. It's a question of defining energy in terms of transformation instead of nonsensical math. With $\frac{1}{2}mv^2$, energy addition (including transformation) varies with reference frames, while addition of mv is independent of reference frames.

Key Point

With rocket math, the analysis is referenced to the combustion chamber, where equal and opposite forces determine the result. The reference point is where the force acts. Everywhere else, energy is defined relative to the starting point or some similar, external reference frame.

When the reference is the point where the force acts, you get the correct definition of energy, which is momentum. When the reference point is anywhere else, you get the incorrect definition of energy, which is $\frac{1}{2}mv^2$.

This is because the incorrect definition of energy is equal to force times distance for an accelerating mass. Distance references to something other than the point where the force acts.

History

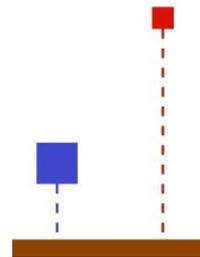
There has not been an iota of physics since Newton's laws which has not been grossly in error. Newton's laws were published in 1687. A year earlier the incorrect definition of kinetic energy was published by Gottfried Leibniz. Early in the century, scientists were studying motion through the use of pendulums, because the velocity of a mass could be determined from the height of the swing. Masses were allowed to collide on a pendulum to determine the transfer of velocities. It was noticed that both mass times velocity (mv) and mass times velocity squared (mv^2) were conserved through the interactions. Conserved means the same totals were found after the

interactions as before. Mass times velocity squared was ignored as an artifact, since nothing can move at velocity squared. Its motion is its velocity, not velocity squared.

Sometime around 1635 René Descartes published a summary saying there is a fixed amount of motion in the universe, because it is conserved through interactions. By motion, he meant mass times velocity (mv). In 1686, Gottfried Leibniz published a paper saying Descartes was wrong; it is not mass times velocity which is the conserved quantity of motion but mass times velocity squared (mv^2).

His basis was the claim that if a four kilogram object were dropped one meter, it would do the same thing as a one kilogram object dropped four meters. This result would conserve mass times velocity squared, but not mass times velocity.

Through an analysis of relationships, Leibniz showed that force times distance is proportional to mass times velocity squared for colliding masses. ($fd = mv^2$)



Leibniz gave no justification for his starting point. The starting point could be modified to relate to time instead of distance saying that if a four kilogram object is dropped for one second, it will do the same thing as a one kilogram object dropped for four seconds. These relationships conserve mass times velocity but not mass times velocity squared. Force times time is proportional to mass times velocity nonsquared. ($ft = mv$)

This issue was argued for two hundred years and then decided in Leibniz's favor due to experiments by James Joule in stirring water in a wooden bucket to determine the relationship between force and heat. Mass times velocity squared (mv^2) became the definition for kinetic energy. But mass times

velocity non squared (mv) was not totally discarded. It was assumed to be conserved in the absence of added energy and was referred to as momentum.

Discovering the Error

I noticed something wrong in 1983 reading an article in Science Digest, where astronomers said they observed masses flying out of quasars at ten times the velocity of light. Other physicists said the result must have been an optical illusion, since relativity says nothing can move faster than the speed of light. It raised the question of the validity of relativity. Why did Einstein square the velocity of light in his equation $E=mc^2$, when nothing can move at velocity squared. He obviously paralleled the definition of kinetic energy, but why was velocity squared in it? The reason was because it is equal to force times distance for an accelerating mass. But why is force times distance conserved? It's not valid to conserve force times distance, because the force does not move through any distance relative to the mass it acts upon. The force moves with the mass. Distance relates to the starting point. The force does not act upon the starting point.

Physicists turn green when you tell them that. They assume you can combine any factors any way possible, once facts have been proven. What is proof without proper logic? Physicists despise logic. They assume any mathematics which balances equations is a law of nature.

I mailed a write-up to several physics labs explaining that rockets show that energy is proportional to force times time, not force times distance. Rockets burn energy at a constant rate and produce a constant force, which combines force and time independent of distance or motion. Distance is relative (undefined), but time is not. A rocket accelerating in space has a different velocity relative to each object which has a different velocity.

Someone at the Jet Propulsion Laboratory responded saying I could prove the definition of kinetic energy to be correct by winding a tapered yoyo. They must have been calling me a yoyo, since the concept is ridiculous; so I wrote back explaining how the characteristics of rockets show the definition of energy to be wrong. In response, they sent me the basic rocket equations saying the equations balance, and therefore the definition of energy is correct.

Balancing equations says nothing about correctness. But with the rocket equations, I could use rockets to replace gravity and show the misdefinition of energy. I have never seen the rocket equations in print. I think the reason why Wernher Von Braun was brought to the U.S. is because the Germans figured out how to balance the rocket equations, and the Americans couldn't figure it out, because there is a small trick to it.

The fuel used by a constant powered rocket is simply its burn time. Therefore, rocket burn time can replace gravity to determine the amount of energy in the falling objects upon which the definition of kinetic energy is based.

Rocket Equations

The rocket is arbitrarily given three properties, and the rest is calculated. Its mass is 20kg; its rate of mass loss is 0.01kg/s; and the separation velocity of the exhaust is 1000m/s.

x' = rate of change for $x = dx/dt$ (' is rate of change)

m_o = mass of rocket at start = 20kg plus payload (21 or 24 kg)

m' = rate of mass loss = -0.01kg/sec

m_t = mass of rocket at time $T = m_o + m't$

v_e = separation velocity of exhaust = 10^3 m/sec (pos)

F = force = $-m'v_e = -(-0.01)(10^3) = 10$ newtons

v'_t = acceleration at time $T = F/m_t$

$$v = \text{velocity} = \int v' dt = \int 10/(m_o - 0.01t) dt =$$

$$\int 10^3/(100m_o - t) dt = -10^3 \ln(100m_o - t) + c$$

(-c is quantity at $T = 0$)

$$c = 10^3 \ln(100m_o)$$

$$\text{burn time} = t = m_o/0.01 - [(c-v)/10^3]e^x$$

e^x is inverse of natural log for the preceding quantity.

m_p = mass of payload

$$\text{mass ratio averaged for loss of mass} =$$

$$\int m_p/(m_o - 0.01t) dt =$$

$$-100m_p \ln(100m_o - t) + c$$

-c is quantity at $t = 0$

$$c = 100m_p \ln(100m_o)$$

Example:

four kilograms dropped one meter.

g = acceleration of gravity = 9.81 m/sec (rounded throughout)

s = distance down = 1m

t = time dropping = $(2s/g)^{1/2} = 0.451523641$ sec

v = velocity after dropping = $gt = 4.429446918$ m/sec

Constant C in burn time:

$$c = 10^3 \ln(100m_o) = 10^3 \ln[100(24)] = 7,783.224016$$

Total Time of Burn:

$$t = m_o/0.01 - [(c-v)/10^3]e^x =$$

$$24\text{kg}/0.01 - [(7,783.224016 - 4.429446918)/103]e^x =$$

$$10.6071633 \text{ sec}$$

Fraction for Payload:

$$m_p = \text{mass of payload} = 4 \text{ kg}$$

t_p = time for payload including mass ratio integrated with time =

$$\int m_p / (m_o - 0.01t) dt =$$

$$-100m_p \ln(100m_o - t) + c$$

c (- quantity at $t = 0$) = $100(4\text{kg})\ln[100(24\text{kg})] = 3,113.289607$

$$t_p = -100(4\text{kg})\ln[100(24\text{kg}) - 10.6071633] + 3,113.289607 =$$

$$1.7717788 \text{ sec}$$

Explanation:

This last step might look a little too magical even to an expert. Actually it is. By logical analysis, this last number would be divided by burn time to determine average mass fraction (Calculus averaging divides by the interval.). It would then be multiplied times burn time to determine the amount of time attributed to the payload. Since dividing and then multiplying by the same number is unnecessary, the integration quantity is in itself the exact quantity desired. It represents the amount of time attributed to the payload.

Numbers for each object:

A - 4 kg dropped 1 m

B - 1 kg dropped 4 m

C - 4 kg dropped 1 sec

D - 1 kg dropped 4 sec

Time Dropping:

A - 0.45152364098573 sec

B - 0.90304728197146 sec

C - 1 sec

D - 4 sec

$$A: t = [2(1\text{m})/9.81]^{1/2} = 0.45152364098573 \text{ sec}$$

$$B: t = [2(4\text{m})/9.81]^{1/2} = 0.90304728197146 \text{ sec}$$

Velocity Dropping:

A - 4.42944691807002 m/sec

B - 8.85889383614004 m/sec

C - 9.81000000000000 m/sec

D - 39.24000000000000 m/sec

A: $v = 9.81(0.45152364098573) = 4.42944691807002$ m/secB: $v = 9.81(0.90304728197146) = 8.85889383614004$ m/secC: $v = 9.81(1) = 9.81000000000000$ m/secD: $v = 9.81(4) = 39.24000000000000$ m/sec**Constant C in burn time:**

A - 7783.22401633603

B - 7649.69262371151

C - 7783.22401633603

D - 7649.69262371151

velocity of rocket =

$$-10^3 \ln(100m_0 - t) + c$$

-c = velocity at t=0

$$c = 10^3 \ln(100m_0)$$

A: $c = 10^3 \ln[100(24)] = 7783.22401633603$ B: $c = 10^3 \ln[100(21)] = 7649.69262371151$ C: $c = 10^3 \ln[100(24)] = 7783.22401633603$ D: $c = 10^3 \ln[100(21)] = 7649.69262371151$ **Total Time of Burn:**

A - 10.6071633272070 sec

B - 18.5215158540212 sec

C - 23.4288933861318 sec

D - 80.8081749880098 sec

$$t = m_0/0.01 - [(c-v)/10^3]e^x$$

(e^x is inverse natural log for preceding quantity.)

$$\text{A: } 24\text{kg}/0.01 - [(7783.22401633603-4.42944691807002)/10^3]e^x = 10.6071633272070 \text{ sec}$$

$$\text{B: } 21\text{kg}/0.01 - [(7649.69262371151-8.85889383614004)/10^3]e^x = 18.5215158540212 \text{ sec}$$

$$\text{C: } 24\text{kg}/0.01 - [(7783.22401633603-9.81)/10^3]e^x = 23.4288933861318 \text{ sec}$$

$$\text{D: } 21\text{kg}/0.01 - [(7649.69262371151-39.24)/10^3]e^x = 80.8081749880098 \text{ sec}$$

Fraction for payload:

m_p = mass of payload = 1kg or 4kg

t_p = time for payload including mass ratio integrated with time equals test mass divided by average total mass (loses 0.01kg/s).

The mass ratio integrated with time is this:

$$\int m_p/(m_0 - 0.01t) dt =$$

$$-100m_p \ln(100m_0 - t) + c$$

-c is quantity at $t = 0$

$$c = 100m_p \ln(100m_0)$$

Constant C in Mass Fraction:

A - 3113.28960653441

B - 764.969262371151

C - 3113.28960653441

D - 764.969262371151

$$\text{A: } c = 100(4\text{kg})\ln[100(24\text{kg})] = 3113.28960653441$$

$$\text{B: } c = 100(1\text{kg})\ln[100(21\text{kg})] = 764.969262371151$$

$$C: c = 100(4\text{kg})\ln[100(24\text{kg})] = 3113.28960653441$$

$$D: c = 100(1\text{kg})\ln[100(21\text{kg})] = 764.969262371151$$

Time of Burn for Payload Only:

$$A - 1.77177876722800 \text{ sec}$$

$$B - 0.885889383614004 \text{ sec}$$

$$C - 3.924000000000000 \text{ sec}$$

$$D - 3.924000000000000 \text{ sec}$$

$$A: t = -100(4\text{kg})\ln[100(24\text{kg}) - 10.6071633272070] + 3113.28960653441 = 1.77177876722800 \text{ sec}$$

$$B: t = -100(1\text{kg})\ln[100(21\text{kg}) - 18.5215158540212] + 764.969262371151 = 0.885889383614004 \text{ sec}$$

$$C: t = -100(4\text{kg})\ln[100(24\text{kg}) - 23.4288933861318] + 3113.28960653441 = 3.924000000000000 \text{ sec}$$

$$D: t = -100(1\text{kg})\ln[100(21\text{kg}) - 80.8081749880098] + 764.969262371151 = 3.924000000000000 \text{ sec}$$

Ratios:

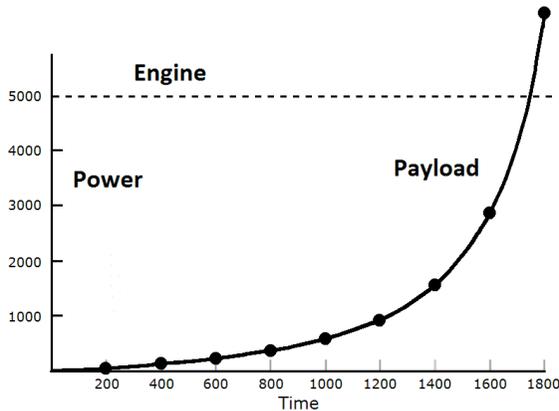
$$A/B - 2.000000000000000$$

$$C/D - 1.000000000000000$$

Second Proof:

A second proof is that power gets absurd at the high velocity of a rocket.

The erroneous definition of energy has a velocity problem. First, squaring velocity creates a problem in the kinetic energy formula ($\frac{1}{2}mv^2$). Then power becomes absurd at high velocities.



Power of rocket payload as rate of change in $\frac{1}{2}mv^2$

The horizontal line is the power of the rocket engine.

Rockets are usually constant powered, meaning they use fuel at a constant rate. Power is rate of energy addition.

Mathematically, the power of the rocket mass and exhaust mass are added to create the constant power. But there is a problem with that analysis. As velocity increases, it reaches a point where the power added to the payload is greater power than the engine produces.

When the definition of energy is corrected, power is proportional to force only, which is constant, as fuel use is constant.

Calculations

m_o = mass of rocket at start = 21k

m_p = mass of payload = 1kg

m' = rate of mass loss = -0.01kg/sec

m_t = mass of rocket at time T = $m_o + m't$

v_e = separation velocity of exhaust = 10^3 m/sec (pos)

F = force = $-m'v_e = -(-0.01)(10^3) = 10$ newtons

v'_t = acceleration at time T = F/m_t

$$v = \text{velocity} = \int v' dt = \int 10 / (m_0 - 0.01t) dt =$$

$$\int 10^3 / (100m_0 - t) dt = -10^3 \ln(100m_0 - t) + c$$

(-c is quantity at T = 0)

$$c = 10^3 \ln(100m_0) = 7650$$

Shortcut Formula for Velocity:

$$\Delta v = v_e \ln(m_0 / m_t)$$

$$= (1000) \ln(21 / m_t)$$

With the existing (erroneous) definition of energy, power as rate of energy addition reduces to force times velocity. With simple math, the logic is this: $\frac{1}{2}mv^2/t = \frac{1}{2}m \cdot v/t \cdot v = \frac{1}{2}mav = \frac{1}{2}Fv$. The one half is dropped, because it was for averaging.

More precisely: the derivative of $\frac{1}{2}mv^2$ with respect to t =

$$\frac{1}{2}m(v^2)' + (m)'(\frac{1}{2}v^2).$$

$$(v^2)' = 2v \cdot dv/dt = 2vv'$$

$$(m)' = dm/dt$$

$$\text{The total is } \frac{1}{2}m(2vv') + m'(\frac{1}{2}v^2) = mv'v + \frac{1}{2}m'v^2$$

But when evaluating the payload only, there is no change in mass. So the power is force times velocity:

$$KE'p = \frac{1}{2}m(2vv') + 0(\frac{1}{2}v^2) = mv'v = mav = Fv$$

The force acting upon the payload (Fp) is the force of the engine (10 newtons) times the mass ratio (m_p/m_t).

$$m = 21\text{kg total, payload} = 1\text{kg}$$

Time seconds	V_r	F_p	KE'_p
200	100	0.526	52.6
400	211	0.588	124
600	336	0.667	224
800	480	0.769	369
1000	647	0.909	588
1200	847	1.11	941
1400	1099	1.43	1,570
1600	1435	2.00	2,870
1800	1946	3.33	6,487

The Logic Problem

The rocket engine produces power at 5,000 units, and in 1800 seconds, the payload is acquiring power at 6,487 units. The payload is acquiring power at a greater rate than the engine produces it; but the engine is the only source of power. This occurs because the erroneous definition of energy results in velocity being included as an element of power, when power should be proportional to force only.

The reason why the rocket payload acquires energy as power at a higher rate than the power of the rocket engine is because velocity is an element of power, when energy is defined as $\frac{1}{2}mv^2$. This means that the rocket engine creates velocity, and then velocity becomes a source of power.

Velocity is not really a source of power. Yet the incorrect definition of energy makes it a source of power. The graph above shows why velocity should not be a source of power. When velocity increases, the total power for an object which does not lose mass, such as the rocket payload, gets larger than that produced by the real source of power—the engine.

Joule's Constant

Joule's constant is the relationship between kinetic energy and heat. Kinetic energy is usually expressed as force times distance (Newton-meters), which physicists call work, but it is interchangeable with kinetic energy.

The most recent value given is 4.1868 Newton-meters per calorie. Joule said it is 4.2 N-m/calorie, which means he was only off by 3 parts per thousand. Pretty good for 1845, huh. Except that only fakery produces that much perfection without real tools of science.

Now days Joule's constant is usually called "the mechanical equivalent of heat." Physicists apparently don't want to draw too much attention to what occurred in 1845. Otherwise, they just love to name their numbers after some god.

Physicists assume that Joule's constant shows that heat transforms into $\frac{1}{2}mv^2$, not mv . There is no real Joule's constant. The number stems from illusion, as often occurs when allowing perception to contradict logic.

James P. Joule supposedly measured the constant in 1845. In actuality, he did not have the slightest ability to make such a measurement. Joule claimed to have stirred water in a wooden bucket and measured the heat produced. The kinetic energy was said to be determined by weights which were dropped to turn a paddle in the water.

There were no thermal constants at that time to determine where the heat was going. Joule was producing such a minuscule amount of heat that it would have dissipated into the environment in a few seconds, while he stirred the water for one or two hours. Yet his error was supposedly only a few parts per thousand (ppt).

He did not describe the details in his brief publication. What he said was that he dropped the weights 12 yards (11m), rewinding and dropping them 16 times for each measurement of temperature. The temperature increase was 0.5°F or less. The weights were four pounds each, and two were used for balance. The rate of descent was said to be one foot per second.

Joule was not a physicist. He mimicked what physicists were doing. When they ran into problems which they could not solve, Joule claimed to have a gimmick for solving them.

To account for environmental influences, he dropped weights an extra time. Here's the way he said it: "A series of nine experiments were performed in the above manner, and nine experiments were made in order to eliminate the cooling or heating effects of the atmosphere." Nothing more. There was no way to account for environmental effects experimentally.

Another problem is that he had to wind the weights back up sixteen times, and the water would have been stirred while winding. There is no evidence of a slip clutch in photographs of the device, which still exists. Winding up the

weights would not have produced a known amount of heat, because the force and energy would vary with velocity.

He said he used floats to prevent the water from rotating. Floats would not have been effective. The problem with rotating water is that the weights would drop at an increasing rate as the water rotation increased. The acceleration would reduce force on the cords, and it would add kinetic energy to the weights.

The reason why Joule did those things and said those things is because real physicists were trying to do exactly what Joule was doing but failing. So Joule copied them but pretended to be successful. They gave up trying, while Joule ran to a complicit publisher with his lies.

Concerning Joule's constant, there are theoretical problems on the relationships between force and energy which physicists do not understand. Some of the force would have been elastic creating stress instead of heat. Physicists have no theoretical concepts for the relationships between elastic and inelastic forces when stirring water.

Joule's corrupt standards were demonstrated even more dramatically in experiments which he did with an electrical generator before switching to the wooden bucket experiment. He supposedly got the constant within about 10% doing a variety of those experiments. But they defied principles of physics besides being technically impossible.

The basic procedure was to put a coil in a test-tube with water and spin it in a magnetic field for fifteen minutes. The kinetic energy on a hand crank was compared to the heat in the water.

He used a galvanometer to measure electrical energy. It is a coil with a pointer, and the current flows through it. There were no concepts of volts or

amps in those days. So he said he referenced the galvanometer to the blue color of a chemical in a solution. He then used its reading as a fudge factor which he called "unity." One of his errors was that a single instrument will not measure electrical energy. Both volts and amps need to be known.

He had no theoretical concepts of what he was measuring. Sometimes he charged batteries. Some of the energy would go into the battery and some would heat the coil. He had no way of determining the energy going into the battery. In one experiment, he said he disconnected the wires and still got the constant. There should have been no force with the wires disconnected.

Physicists say Joule must have known what he was doing, because he was only off by 3 ppt from the number they get. His number was 4.2 Joules per calorie; the modern number is 4.186 Joules per calorie.

Instead of the modern measurement justifying Joule's experiments, it is Joule's experiments which tell the truth about the modern measurement. Since Joule did not have suitable theoretical concepts nor the slightest technical ability to produce such a measurement, the number has to be a contrivance.

Physicists would say they do actual experiments. It only shows that they are contrivers. Their methodology now days is not visible, but it seems to be referenced to electrical energy, which allows a very high degree of precision, except that electrical energy is even more difficult to relate to absolute values. When converting mechanical energy into electrical energy, a large amount of heat is lost. Due to this problem, the volt is apparently guessed at for absolute value, though it can be standardized with high precision.

Regardless of how they conduct modern experiments, Joule's constant is shown to be a contrivance due to the fact that the definition of energy is shown to be in error through my mathematics.

Logic defines knowledge. Producing basic knowledge is the purpose of science. Physicists have been denying that science needs logic, because quantum mechanics and relativity are in conflict with logic. But physicists are wrong. There is no knowledge without logic and no purpose to science besides producing a logic consistent with the laws of nature, which have to have consistent relationships to be functional. Logic means consistent relationships.

Joule's publication.

On the Existence of an Equivalent Relation between Heat and the Ordinary Forms of Mechanical Power.

By James P. Joule, Esq.

[In a letter to the Editors of the 'Philosophical Magazine.']

['Philosophical Magazine,' ser 3. vol. xxvii. p. 205.]

Gentlemen,

The principal part of this letter was brought under the notice of the British Association at its last meeting at Cambridge. I have hitherto hesitated to give it further publication, not because I was in any degree doubtful of the conclusions at which I had arrived, but because I intended to make a slight alteration in the apparatus calculated to give still greater precision to the experiments. Being unable, however, just at present to spare the time necessary to fulfil this design, and being at the same time most anxious to convince the scientific world of the truth of the positions I have maintained, I hope you will do me the favour of publishing this letter in your excellent Magazine.

The apparatus exhibited before the association consisted of a brass paddle-wheel working horizontally in a can of water. Motion could be communicated to this paddle by means of weights, pulleys, &c., exactly in the manner described in a previous paper**.

The paddle moved with great resistance in the can of water, so that the weights (each of four pounds) descended at the slow rate of about one foot per second. The height of the pulleys from the ground was twelve yards, and consequently, when the weights had descended through that distance, they had to be wound up again in order to renew the motion of the paddle. After this operation had been repeated sixteen times, the increase of the temperature of the water was ascertained by means of a very sensible and accurate thermometer.

A series of nine experiments was performed in the above manner, and nine experiments were made in order to eliminate the cooling or heating effects of the atmosphere. After reducing the result to the capacity for heat of a pound of water, it appeared that for each degree of heat evolved by the friction of the water a mechanical power equal to that which can raise a weight of 890 lb. to the height of one foot had to be expended.

The equivalents I have already obtained are:—1st, 823 lb., derived from magneto-electrical experiments; 2nd, 795 lb., deduced from the cold produced by the rarefaction of air; and 3rd, 774 lb. from experiments (hitherto unpublished) on the motion of water through narrow tubes. This last class of experiments being similar to that with the paddle-wheel, we may take the mean 774 and 890, or 832 lb., as the equivalent derived from the friction of water. In such delicate experiments, where one hardly ever collects more than half a degree of heat, greater accordance of the results with one another than that above exhibited could hardly have been expected. I may therefore

conclude that the existence of an equivalent relation between heat and the ordinary forms of mechanical power is proved; and assume 817 lb., the mean of the results of three distinct classes of experiments, as the equivalent, until more accurate experiments shall have been made.

Any of your readers who are so fortunate as to reside amid the romantic scenery of Wales or Scotland could, I doubt not, confirm my experiments by trying the temperature of the water at the top and at the bottom of a cascade. If my views be correct, a fall of 817 feet will of course generate one degree of heat, and the temperature of the river of Niagara will be raised about one fifth of a degree by its fall of 160 feet.

Admitting the correctness of the equivalent I have named, it is obvious that the vis viva of the particles of a pound of water at (say) 51° plus the vis viva which would be acquired by a weight of 817 lb. after falling through the perpendicular height of one foot.

Assuming that the expansion of elastic fluids on the removal of pressure is owing to the centrifugal force of revolving atmospheres of electricity, we can easily estimate the absolute quantity of heat in matter. For in an elastic fluid the pressure will be proportional to the square of the velocity of the revolving atmospheres, and the vis viva of the atmospheres will also be proportional to the square of the velocity; consequently the pressure will be proportional to the vis viva. Now the ratio of the pressures of elastic fluids at the temperatures 32° and 33° is 480 : 481; consequently the zero of temperature must be 480° below the freezing-point of water.

We see then what an enormous quantity of vis viva exists in matter. A single pound of water at 60° must possess $480^{\circ} + 28^{\circ} = 508^{\circ}$ of heat; in other words, it must possess a vis viva equal to that acquired by a weight of 415036 lb. after falling through a perpendicular height of one foot. The velocity with

which the atmospheres of electricity must revolve in order to present this enormous amount of vis viva must of course be prodigious, and equal probably to the velocity of light in planetary space, or to that of an electric discharge as determined by the experiments of Wheatstone.

*The experiments were made at Oak Field, Whalley Range.

**Phil. Mag. ser. 3. vol. xxiii. p. 436. The paddle-wheel used by Rennie in his experiments on the friction of water (Phil. Trans. 1831, plate xi. fig.1) was somewhat similar to mine. I employed, however, a greater number of "floats," and also a corresponding number of stationary floats, in order to prevent the rotatory motion of the water in the can.

I remain, Gentlemen,

Yours respectfully,

James P. Joule.

Oak Field, near Manchester,

August 6, 1845.

Potential Energy

Physicists also have a potential energy problem. Supposedly, energy is conserved as if a fixed quantity were being moved around. But in doing that, it often takes the form of "potential energy." Where is the energy in potential energy? Potential something is not the same as something. It's like spending more money than one has and calling the difference potential money.

If energy is being converted to potential energy, then it is not being conserved. The logic is that it is possible to get the same amount of energy out of potential energy as was put into it, and therefore it is conserved some place

in some form. Why then are not the gods of knowledge telling us what that place is and what that form is?

The truth is that the place and form of potential energy is force. Force is one of the forms of energy. But physicists do not want to admit that force is a form of energy, because force can be amplified, and amplified energy would not be conserved energy. Physicists prefer pretense for convenience, so they don't have to expose their ignorance in trying to explain something which is not understood. If they can't explain amplified energy, then how can they know so much about space warps, worm holes and the rest of relativity? They are peddling the bliss of ignorance and calling it laws of nature.

Consider a helicopter. It uses energy to stay motionless above the ground. It is said to have potential energy. If it drops out of the air, the potential energy is converted to kinetic energy. Guess what. It takes a fixed rate of energy to stay in the air for any amount of time, yet it always has the same amount of potential energy. It has the same potential energy after 10 hours as it had after 1 minute. Yet it uses 600 times as much energy in 10 hours as 1 minute. This occurs because gravity creates and destroys energy. Physicists deny that any such thing occurs.

The proof that force is one of the forms of energy is in elastic collisions. When the two objects move toward each other, they have kinetic energy, and there us no force involved. As they collide, a force develops between them, as their motion decreases. Kinetic energy is converted to force. If force is interconvertible with motion, as Newton's laws indicated, then force is a form of energy. What then is amplified force, as a lever produces it? It's unimaginable, because physicists do not know what force is. All they know about force is what it does.

Contradictions in Living Force vs. Dead Force

The corruption of physics began in 1686, when Gottfried Leibniz published the claim that force times distance is the basis of kinetic energy. Prior to that time the relationships between force and motion were on track and provided the basis for Newton's laws. At that time, there was a recognition of two types of force: dead force and living force. Living force is the force which Newton's laws are based on. It accelerates mass. Dead force is stress. It does not accelerate a mass.

Living force is a repelling force, which pushes mass. Dead force is an attracting force, which pulls on mass and holds matter together. Living force is involved in transformations of energy, where energy is said to be conserved. Conserved means that the quantities of energy stay the same after an interaction as before. Dead force does not conserve energy. It includes gravity and stress, which can create and destroy energy. (So-called potential energy is energy which is created and destroyed by gravity.) And it includes levers, which amplify force.

The result is that there are two alternatives for the definition of energy. There are contradictions between the two alternatives, and they cannot be resolved with existing knowledge. If energy is defined in terms of living force, transformations of energy conserve energy, but the dead force of levers amplify energy. If energy is defined in terms of dead force, levers conserve energy, but transformations based on living force do not, as shown with rockets in the mathematical proof.

Should energy be defined in terms of dead force found in levers or living force found in transformations? Since conservation through transformation is considered to be the defining property of energy, transformations through living force should provide the basis for defining energy. In this case, my proof with rockets apply. But physicists based their definition of energy on

the dead force of levers and contradict transformations based on living force such as heat produces in a rocket engine.

There is no resolving the contradictions. Dead force and living force contradict each other. Picking one as the basis for defining energy is going to contradict the other. The proper alternative for defining energy is the living force which Newton's laws are based upon and which transformations of energy include, not the dead force which levers amplify. But physicists base their definition of energy on the dead force of levers.

What the Mathematical Proof Means

Physicists mindlessly assume the discrepancies can be accounted for in the exhaust of the rocket. There's no question where the energy is located. It's a question of defining energy in terms of transformation instead of nonsensical math. With $\frac{1}{2}mv^2$, energy addition (including transformation) varies with reference frames, while addition of mv is independent of reference frames.

The proof shows that, when defining energy as $\frac{1}{2}mv^2$, the exhaust energy of two rockets can be the same, while the transformation is not the same.

In tests 3 and 4 (Part 2), the rockets have the exact same burn times, while the $\frac{1}{2}mv^2$ of one mass is 192, and the other is 770. One mass gets four times as much $\frac{1}{2}mv^2$ as the other, while the rockets do exactly the same thing.

If the rocket and exhaust can do exactly the same thing in both cases and add four times as much supposed energy to the forward mass of one than the other, then the energy is not coming from the fuel or rocket motor; it is simply a mathematical equation with no relationship to laws of nature.

In other words, what I call proof is to show that the incorrect concept of energy has no relationship to fuel use. This should be considered proof in any rational mind.

The correct analysis is that the equal and opposite forces created in the combustion chamber transfer equal and opposite amounts of kinetic energy to the exhaust and forward mass. This is consistent with kinetic energy being proportional to force times time and mv .

What this proof shows is that the erroneous definition of energy separates energy addition from the transformation. Energy addition becomes a mathematical abstraction which changes with reference points and does not maintain a consistent relationship to the transformation which is supposed to be the source of the energy.

The corrected definition of energy maintains a consistent relationship to the transformation, because the transformation produces a consistent and definable amount of force times time. The transformation does not produce a consistent amount of force times distance.

The result of this mathematical proof is totally predictable, because force times time (Ft) does not equal $\frac{1}{2}mv^2$ for an accelerating mass, and Ft is the only product of a rocket. The rocket produces a constant force, which means unchanging through time, while it has no relation to distance.

In other words, if a rocket burns for one second, it will do the same thing at one thousand miles per hour as it will at one mile per hour. In fact, the speed is relative to reference frames. But the amount of $\frac{1}{2}mv^2$ is different in each case.

If a small rocket engine adds a one pound force for one second to a spacecraft moving at 25,000 miles per hour, a lot of energy is added; but if the same

rocket engine adds a one pound force for one second to a roller-skate, a lot less energy is added according to the incorrect definition of energy. Same transformation; different energy. With the corrected definition of energy, the same amount of energy is added in both cases.

While a constant powered rocket is accelerating, its speed goes from zero to several thousand miles per hour. All the time, the engine is doing the same thing independent of velocity. But the incorrect definition of energy says power is proportional to velocity. The explanation of physicists is that while a constant powered rocket is accelerating, the power shifts from exhaust to rocket. Supposedly, the power of the rocket mass increases with its velocity, while the power of the exhaust mass decreases, since its velocity is in the negative direction. Combining the forward mass and exhaust mass always balances their equations—that is relative to an external reference frame. Using an external reference frame is not valid for kinetic energy, because the forces act upon impact points. Where the force acts is where the energy gets transformed. Relative to an external reference frame, nothing happens while a rocket burns energy.

The Counter-Argument of Physicists

Rockets show that energy is transformed in proportion to force times time (ft), which equals mass times velocity (mv) for an accelerating mass. Rockets usually burn fuel at a constant rate and produce a constant force. It means that a defined amount of fuel produces a consistent amount of force times time. Rockets do not produce a consistent amount of force times distance, which would equal mass times velocity squared. Rockets do not see distance. Distance relates to the starting point, and it varies with velocities, which vary with reference frames. In other words, a rocket will have a different velocity

relative to the earth and to the moon. With different velocities, there will be different distances to the starting point.

Physicists use a distracting irrelevancy to counter these facts. They show mathematics for the power of a rocket which is independent of reference frames. To do this, they relate power (rate of energy addition) to the separation velocity of the exhaust, which is always constant independent of reference frames. They then say equations balance, so there is nothing wrong with the definition of energy. But in the process they shift the reference from the rocket engine where the force acts (and creates separation velocity of exhaust) to an external reference for their equations which they claim balance.

Balancing equations in that matter is a distraction, which does not directly test the definition of energy. But physicists indirectly prove the definition of energy wrong in doing so. When they use the separation velocity of the exhaust as the reference for rate of energy use, they throw out the distance to the starting point. If the starting point is not relevant to their argument, then energy is not transformed in proportion to force times distance.

Shifting Reference Frames

The false definition of energy is rationalized through shifting reference frames. Kinetic energy must be evaluated and defined in relation to the point where the force acts. Physicists do not. They define and evaluate kinetic energy relative to external reference frames.

The problem with reference frames is inherent in the force times distance form of kinetic energy, because distance relates to the starting point, while the force does not act upon the starting point, and velocities are relative for starting points.

Physicists make the inane argument that force times distance is work, not energy. But the so-called work and false kinetic energy are interchangeable, and whatever is most convenient will be used to represent energy.

An example which they consider proof of kinetic energy being $\frac{1}{2}mv^2$ is that it shows a net increase when energy is added to a system, while mv does not. The model for this point is an explosion blasting two objects in opposite directions. The question is whether there is a net increase in momentum.

The quantity mv increases by the same amount in two opposite directions, because for every force there must be an equal and opposite force. The increase in one direction is given a minus sign; and when added to the mv in the other direction, the total is zero.

The quantity $\frac{1}{2}mv^2$, however, shows a net increase. Its velocity is squared, which converts any negative quantity to a positive quantity; and adding two positives always shows a net increase.

That argument is a fallacy. It is not valid to put a minus sign by momentum when quantitating energy addition, because there is no such thing as a negative quantity of momentum. (In determining velocities, the negative sign has a different purpose.) An increase of momentum in two opposite directions is an increase in momentum. Therefore, momentum should be quantitated in absolute values when relating to energy.

Here's another way of stating it. The original question is total quantity of energy. The minus sign changes the question to vectorial quality. After adding, it is then reinterpreted in terms of total quantity. Switching back and forth between total quantity and vectorial quality is not valid.

Anything hit with the negative part of the mass will feel the same thing as if it were the positive mass. There is no such thing as negative energy, negative momentum or negative motion of mass.

The assumption that energy must show a directional increase relative to an external reference frame is a fallacy. This point is demonstrated when heating a piece of metal. There is no directional increase in energy.

Energy exists regardless of the direction of movement. Heat demonstrates this point. It is a randomization of motion. And it is called energy. To say that negative momentum cancels positive momentum is the same as saying half of the heat cancels the other half of the heat.

For a correct analysis, energy addition must be evaluated relative to the point where the forces act or the impact point. Momentum increases in both directions relative to the impact point, when energy is added.

In analyzing collisions, there is often no negative velocity, because the center of mass may be moving at a high velocity relative to an external reference frame resulting in both of the equal and opposite momentums having a positive velocity. Regardless of whether there is a negative velocity, no net momentum change occurs relative to an external reference frame, when energy is added, even though the momentums do change relative to the center of mass.

The question is, must energy be able to change relative to an external reference frame; or is it something that only changes relative to impact points? Forces can only exist relative to impact points—not relative to an external reference frame, which is relative and infinitely variable. So the correct definition of kinetic energy should be the change in momentum relative to impact points or the points where the forces act.

With rockets, the analysis of power by erroneous concepts is made relative to the point where the forces act by using the separation velocity of the exhaust as the reference. This strange twist allows the rocket equations to be balanced with the erroneous definitions. It also contradicts the premise that energy addition must occur relative to an external reference frame by the erroneous concepts.

Rocket power is defined relative to the separation velocity of the exhaust (meaning impact point) but is then shifted to an external reference frame which results in indefinable power, as the second proof shows.

Energy is defined by its transformation. Force transforms energy. And force acts on impact points. But force times distance is removed from impact points.

When shifting reference frames, the arguments go in circles, but the math above proves that physicists are wrong.

Walking Through the Math

The math is quite rudimentary. Anyone who has studied a little calculus can verify it.

$x' =$ rate of change for $x = dx/dt$ (' is rate of change)

$m_0 =$ mass of rocket at start = 20kg plus payload (21 or 24 kg)

$m' =$ rate of mass loss = -0.01kg/sec

$m_t =$ mass of rocket at time $T = m_0 + m't$

$v_e =$ separation velocity of exhaust = 10^3 m/sec (pos)

$F =$ force = $-m've = -(-0.01)(10^3) = 10$ newtons

$v't =$ acceleration at time $T = F/m_t$

Force

The rocket is arbitrarily given its basic characteristics. Then velocity is calculated from them. The analysis of a rocket's motion is based upon the fact that mass propelled from the exhaust produces a force in proportion to its acceleration; and an equal and opposite force acts upon the rocket.

The force is based upon mass times acceleration ($F=ma$), which is the same as rate of mass loss ($m'=0.01\text{kg/sec}$) times separation velocity of exhaust ($v_e=10^3\text{m/sec}$) (both were arbitrarily chosen), because time in the denominator can be moved from one element to the other, which is how the rocket analysts do it.

Acceleration

$$v'_t = \text{acceleration at time } T = F/m_t$$

The acceleration of the rocket mass is force over mass ($a=F/m$). Since acceleration is velocity over time, it is denoted as v' . (The apostrophe is being used to denote division by time.)

For any particular instant in time, acceleration is force over mass at that particular time.

Mass Loss

$$m_t = \text{mass of rocket at time } T = m_o + m't$$

Since mass is being lost through the exhaust, the rocket mass varies with time. The mass at any particular time (m_t) equals the starting mass (m_o) plus the rate of mass loss (m') times the elapsed time (t).

Velocity

Velocity is derived from acceleration. Since acceleration is velocity over time, velocity is acceleration times time. In calculus, acceleration is the derivative of velocity with respect to time, which is the same thing as dividing

something by time. The question is the opposite, knowing acceleration, what is the velocity. It is the anti-derivative of acceleration, which is the integration dt .

Acceleration which changes with time ($v't$) is F/m_t or $10/(m_0 - 0.01t)$.

Velocity is the antiderivative of it, which is $\int v'dt$.

$$v = \text{velocity} = \int v'dt = \int 10/(m_0 - 0.01t)dt$$

For this mass (m_0), we will use 20 kg to improve clarity.

So we need to know this: $\int 10/(20 - x)dx$

The antiderivative is:

$$\begin{aligned} \int 10/(20 - x)dx &= -10 \int -dx/(20 - x) \\ &= -10 \ln(20 - x) + c \end{aligned}$$

The generic antiderivative for that type of equation is this:

$$\int du/u = \ln(u) + c$$

$$u = (20 - x) \quad du = -dx$$

"ln" is natural log base e.

Before the actual equation is converted, it must be factored as follows:

$$10/(m_0 - 0.01t) = 10^3/(100m_0 - t)$$

Its antiderivative (same as velocity) is

$$-10^3 \ln(100m_0 - t) + c$$

The quantity for c is calculated by using zero for time and changing the sign.

The net result is this:

$$\begin{aligned} v = \text{velocity} &= \int v'dt = \int 10/(m_0 - 0.01t)dt \\ &= \int 10^3/(100m_0 - t)dt = -10^3 \ln(100m_0 - t) + c \end{aligned}$$

(-c is quantity at $T = 0$)

This formula is factored for time to get the desired quantity. Time is the only unknown, because the velocity is determined in the falling object analysis.

Time

$$v = -10^3 \ln(100m_o - t) + c$$

$$t = m_o/0.01 - [(c-v)/10^3]e^x$$

e^x is inverse of natural log for the preceding quantity.

This equation for time is tailored in form and sequence for a calculator.

The method of factoring velocity to get time is this:

First, move a few things around to get this: $(c-v)/10^3 = \ln(100m_o - t)$

Apply this principle: If $a = \ln b$, then $e^x a = b$

It says: If a is the natural log of b , then inverse of natural log of a equals b

Now have a equal $(c-v)/10^3$ and b equal $(100m_o - t)$

Then inverse natural log of $(c-v)/10^3$ equals $(100m_o - t)$

$$e^x[(c-v)/10^3] = 100m_o - t$$

Changing the signs and relocating is this:

$$t = 100m_o - e^x[(c-v)/10^3]$$

For sequential entries on a calculator, it looks like this:

$$t = m_o/0.01 - [(c-v)/10^3]e^x$$

Fraction of Time for Payload

The ratio of test mass to total mass is integrated with time. It is then averaged, and the average is multiplied times total time. The mathematical procedure for averaging nonlinear change is to integrate with the desired variable and then divide by the interval for that variable.

The mass ratio integrated with time is this:

$$\int m/(m_0 - 0.01t) dt = -100m \ln(100m_0 - t) + c$$

This quantity is divided by burn time to determine average mass fraction. It is then multiplied times burn time to determine the amount of time attributed to the test mass. Since dividing and then multiplying by the same number is unnecessary, the integration quantity is in itself the exact quantity desired. It represents the amount of time attributed to the test mass.

Example for Exact Time

For example, in the first test case, $m = 4\text{kg}$. The integration is this:

$$-400 \ln(2400 - 10.6072) + c$$

-c is quantity at $t = 0$

$$-c = 3,113.2896$$

The integration quantity is 1.771779, which is exact time for test mass.

Shortcut Formula for Burn-Time

This can be applied to payload only:

$$\text{From } Ft = mv$$

$$t = m_t v_t / m' v_e$$

1. Energy: Historical Development of the Concept. R. Bruce Lindsay. 1975. p345. Dowden, Hutchison & Ross. 396pp. ISBN-10: 0470538813. ISBN-13: 978-0470538814

Chapter 2: The Morel Mushroom—Extreme Evolution Scientists Got Wrong

Chapter Summary

The biology of the morel mushroom is not really studied by university scientists, because broad subjects are too complex for the narrow focus at universities. The morel evolved from a yeast growing at the base of trees and extending into the soil where rich bacterial nutrients exist. The resulting mushroom is not well adapted, and it dies out in about two ice age cycles (200 thousand years). It re-evolves during each ice age cycle. Other scientists claim it is 129 million years old (1). Such extreme errors should not be possible where there is real science. Phylogenetics is part of the problem. It is a modern way of scrambling taxonomy using trash computer programs applied to the study of molecules. It's like buying a house by looking at one square inch of its surface. Elaborate studies of DNA can provide useful information on evolution, but phylogenetics is way over-simplified.



The morel mushroom (genus *Morchella*) evolved recently from a yeast which formed a mushroom about 20 thousand years ago. Other morel scientists claim it is an ancient cup fungus 129 million years old. The mushroom hasn't formed square corners on the cells, and it can't measure gravity to determine vertical direction. Everything which emerges from the ground measures gravity to grow vertical, but the morel hasn't gotten that far.

Such an extreme divergence from reality occurred because university scientists do not study whole organisms; they study laboratory procedures. To understand mushrooms, you have to study a lot of



ecology and evolution and spend a lot of time outdoors looking. In fact, you probably need an agriculture background, because only ags study the soil. Biologists don't study soil. Even if they study soil ecology, they only look at the organisms they are concerned with, and they don't understand soil. I studied agriculture in high school in South Dakota, and I started college in agriculture. I later switched majors to microbiology.

Morel scientists never noticed that morels only grow in sandy soil or something similar such as mountain humus. Morels follow sandy river basins and become quite isolated due to difficulty getting ascospores out, which results in a lot of localized variations.

Sand has the characteristic of not drying out, because it lacks capillary action for moving water to the surface. The morel does not tolerate drying, because yeasts don't. Yeasts evolved from filamentous fungi after modern biology began 65 million years ago. They adapted to sugary solutions produced by modern plants. Fossil evidence shows yeast going back only 50 million years (2).

The significance of these points shows up in the erroneous claim that a leaf mold (*Costantinella cristata*) is a conidial stage of the morel. Conidia are microscopic stalks with exposed spores on them—the most common way for molds to form spores.

Early in the last century, Molliard attempted to grow morels on apple compost in the ground. He inoculated it with morel tissue and covered it with leaves. A white sheet of leaf mold covered the surface before a few morels came up. So he studied the leaf mold claiming it was a conidial stage of *Morchella*. The assumption was totally unwarranted, but it still persists. The leaf mold was said to be found in great abundance on dead leaves in the forest. *Morchella* could not grow in that manner, because it does not tolerate exposure without dehydrating. Also, it is not a decay organism, as it would have to be to grow competitively on dead leaves. Morphological complexities were also uncharacteristic of *Morchella* including microstructures such as crosiers and rosettes in addition to conidia. Microstructures take millions of years to develop. That type of evolution occurred between 100 and 300 million years ago and should not be expected to be occurring at this time. There are windows of opportunity for evolution based on stages of complexity and competition. The window closes for the type of evolution that occurred under more primitive conditions.

Author's Research

In graduate school, I studied yeast physiology. The yeast that I studied, *Nadsonia fulvescens*, had the same physiology as mushrooms. This physiology would have been impossible to study directly in mushrooms. The physiology of filamentous fungi is almost unstudied, because the organisms cannot be grown in liquid media as yeasts and bacteria can. Microbial physiology is very highly developed because of the ease of using liquid media

and the speed of growth. The study of physiology in higher organisms is largely built upon the work done with microbes. It's a lot easier to study physiological effects after the basics have been established.

There are two major physiological patterns which I found. One is endotrophism, and the other is energy (ATP) control over differentiation. Differentiation means formation of a new structure such as a spore or mushroom.

Endotrophism means nutrition from within. It showed up as the formation of spores in distilled water. This was surprising, as yeasts were assumed to require nutrients while spores formed. In retrospect, it can be said that this yeast is the only one which produces spores endotrophically, because there is a telltale sign. Cell material must migrate into a smaller chamber. There is a significant reduction in cell mass, as energy gets burned up and new material is synthesized. So the entire cytoplasmic mass migrates into a smaller chamber where the spore forms. The new chamber is about one third the size of the original cell. No other yeast shows this migration of cell material into a chamber where the spore forms. There are, however, undiscovered yeasts in the wild.

Nadsonia was forced into endotrophism, because it adapted to growing on tree sap on the surface of trees. When rain would wash the yeast cells away from their nutrients, they would die off, unless they formed a spore.

The other major physiological process was the control of differentiation through a peak in the ATP level. This mechanism was first suggested by A.F. Croes in 1968. Yeast scientists knew there was a trigger mechanism with sporulation, but they could not determine what caused it. They tested every chemical on the shelf to see if it would trigger sporulation and found nothing. Croes looked at energy metabolism and found that it reached a peak just when

sporulation was triggered indicating a causative effect. I found additional evidence in nitrogen depletion. Without nitrogen, synthesis of cell material stops, while energy metabolism continues. This results in an accumulation of ATP, because much is being produced and little is being used. Sporulation was enhanced under these conditions.

Mushrooms show the same physiology in the way the composting procedure works. First, mycelium is grown on compost containing straw which is attacked with excreted enzymes. After about a month, the mycelial mass gets large, and it is covered with a layer of peat moss called a casing. After another month or two, the mycelium gets to the surface of the casing, and a mushroom forms. Afterwards, the mycelium has nearly disappeared, as the cell material was transferred upward into the mushroom. The transfer of cell material is an endotrophic process.

Soil type mushrooms must be endotrophic to speed up formation of the above ground structure, because the tissue dries rapidly. It must get spores formed and into the air within two or three days. An exception is the bolete (*Boletus edulis*, porcini). Its tissue does not dry out, so it takes a month or more to gain full size, and it does not need to store up a large mass in the mycelium first.

The bolete evolved a high degree of sophistication over hundreds of millions of years. Only the puffball is older. Their tissue is virtually the same. It's like tough marshmallows, and it evolved away all flavor as a means of preventing animals from eating it. The spore area of the bolete has much flavor; and later, the rest of the tissue acquires much flavor to encourage animals to eat it and carry spores around.

With the composting procedure, the mushroom does not form until the mycelium gets to the surface of the casing. The only difference between the surface and within the casing is oxygen availability. The only thing oxygen

does is create respiration for the synthesis of ATP. This means a peak in the ATP level induces mushroom formation. This effect occurs with all fungi and is usually visible as spores forming on the surface. The ATP level is the universal signal for conditions suitable for differentiation with fungi. It says cell machinery and nutrition are adequate to complete the process.

I studied the morel because of its extremely mysterious nature. Why would a mushroom produce ascospores within the tissue, which is extremely problematic and limits the ability to get spores out? The answer was found when growing mycelium in jars of sterile peat moss with various nutrients. With two jars sitting along side each other, one had thick, white mycelium, while the other had little. Checking the make-up of the cultures, the only difference was that one of them contained glucose, and the other one did not. The one containing glucose had little mycelium, while the one without glucose had much mycelium. Glucose is an ideal nutrient for all living organisms except photosynthesizing plants. If a nonphotosynthesizing organism doesn't get glucose in its diet, it will synthesize it, because it is needed as a starting point for some synthesis reactions. The only reason why glucose could have inhibited mycelium growth would have been the production of acid as a byproduct; and only yeasts excrete acid as a byproduct of glucose metabolism. It meant the morel had the same metabolism as yeasts. Morel mycelium thrives on glucose, but under these conditions, acid produced from glucose was allowed to accumulate to toxic levels.

Morel Physiology

Filamentous fungi excrete nothing but carbon dioxide under most conditions. The reason is because anything which is excreted would accumulate on the mycelium and damage it or kill it. This means the morel didn't evolve the

excretion of acid for some purpose; it had to recently acquire the property from its ancestor, which had to be a yeast.

The morel continues to excrete acid as a method of feeding on bacteria in the soil. The primary bacterium which it feeds on would be *Pseudomonas fluorescens*. This bacterium flourishes in wet, spring soil, which morels grow in. The bacterium has a strong symbiotic relationship to plants. Evolutionary age increases symbiosis. The pseudomonad has had plenty of time to adapt, as it is approximately the oldest living creature on the planet. Blue greens are an exception, as they evolved into a dead end in polluted water.

Pseudomonas fluorescens (*P.f.*) had similar characteristics to its present ones including two polar flagella for rapid motion in water about a billion years ago. About 700 million years ago, it evolved the modern mechanism for ATP synthesis for respiration from its rotating flagella. When terrestrial life began during the "Cambrian explosion of life" 543 million years ago, *P.f.* would have been the first bacterium to enter the soil. It is now the best adapted soil bacterium and the best adapted water bacterium. It has versatility and sophistication incomparable to any other bacterium. The way it feeds plants is by breaking down proteins and other biological materials in early spring soil and then self-destructing (called autolysis) to release more refined nutrients into the soil for itself and other species.

All bacteria and yeasts undergo autolysis as they age or die off as a method of recycling nutrients. They break down large molecules into their subunits including amino acids and nucleic acids. Plants then get these pre-constructed molecules as ideal nutrients. The morel has become dependent upon such nutrients, though it will grow on more rudimentary nutrients including glucose and ammonium sulfate. The morel can easily induce autolysis in *P.f.* by excreting acid, as the bacterium will break down at pH 5.0 and lower. This

pH is surprisingly high for bacterium, resulting from its highly developed symbioses with plants. Plant roots excrete small amounts of acid as nutrients to promote bacterial growth around them. The roots can then excrete more acid to induce autolysis in *P.f.* to feed on it. This situation was ready to be exploited by the morel mushroom due to the natural tendency of yeasts to excrete acid.

The yeast which the morel evolved from appears to be *Schizosaccharomyces japonicus*, as they both have eight spores lined up in a row in the ascus. The yeast grew at the base of trees and extended mycelium into the soil to feed on bacteria. This is indicated by a high tendency of morel mycelium to revert to a pattern of surface growth under laboratory conditions. The surface growth forms a tissue with a degree of differentiation including the creation of pigments with some patterns similar to a mushroom surface. This growth is highly anomalous and very informative. The ability to revert to such a structure indicates a recent history of multicellular surface growth in nature.



The anomaly scrambles the characteristics of the morel mixing recent forms with earlier ones. It creates a rubbery tissue on the bottom, which sits on a hard gel called agar with nutrients. The cells on top become elongated and some filamentous. The elongated cells often break into arthrospores, which is an adaptation to water by the morel. The tissue cells are rounded, like potatoes, without square corners.

The morel has not formed square corners on the cells, because microstructure is much more difficult to evolve than macrostructure. Cells must be very highly ordered to maximize efficiency. A little sacrificing of efficiency won't work, because there is too much complexity. The reactants move from enzyme to enzyme with a minimum of space between each one to prevent reactants from floating around and getting in the way of each other. The enzymes are held in place through attachment to membranes. It's no easy thing to re-order the arrangement. Evolution of microstructure requires a re-ordering. So the microstructure of the morel is still very much like the yeast which it evolved from. Twenty thousand years of evolution is nothing for changing microstructure. The microstructures of filamentous fungi mostly evolved between two hundred and three hundred million years ago.

Evolution was much easier early on than it is now, because there was less specialization and interdependence. There is so much specialization now that all biology is on the verge of becoming extinct due to too much interdependence between functions. The large number of species becoming extinct at this time is greatly influenced by the over-specialization which makes adaptation difficult.

There are remnants of microstructures in filamentous fungi (molds) which were extremely frivolous due to the ease of evolution and little for competition creating demands for efficiency. Variations of the clamp connection show this. A clamp connection is a tube that grows out the side of a filament and circles around a cross wall to re-enter the adjoining cell. Sometimes nuclei would pass through the clamp connection, and sometimes gene exchange would occur within them.

To some extent, ancient structures are not totally abandoned by evolution when no longer needed. There must be a selective advantage in producing

change before it will occur. Without advantage for change, remnants of structures will be carried for hundreds of millions of years. An example of this is two small dots on a bone below the front teeth of humans. Those dots can be felt with the tongue. They are remnants of hooks used by ancient fish to catch prey. They evolved down to a point of irrelevance and were then maintained religiously in the DNA without alteration for about four hundred million years. This shows that evolution discards nothing in the DNA. This may be part of the reason why ninety percent of human DNA does not appear to have a function. Some of it has invisible functions, such as coding for regulatory RNA, as showing up in recent molecular biology. Eight percent of human DNA is old retrovirus DNA. Some of it gets adapted to new purposes.

The morel shows that patterns of physiology are also carried through evolution without being discarded. The morel anomaly reverts to patterns of growth on a surface which were once needed but no longer have a use in nature. It also shows a scrambling of characteristics, where recent pigments are mixed with irrelevant tissue.

The morel also continues with disadvantageous characteristics which will eventually evolve away but haven't had enough time yet. An example is residual autolysis, which is breakdown of tissue. The yeast ancestor used autolysis to recycle nutrients. The morel gains nothing from autolysis. It causes mycelium to deteriorate rapidly in a laboratory, and it causes the tissue to break down rapidly in the wild. As morels age in the wild, residual autolysis causes the release of nutrients which cause undesirable bacteria to grow on the tissue. The undesirable bacteria are called "gram negative" because of a test which shows that they have ancient type cell walls. These cell walls contain lipoproteins (called endotoxin) which chew through the cell walls of other species including plants and animals. When people eat old morels they often get sick due to the gram negative bacteria growing on them.

This doesn't happen with other mushrooms. They appear circumstantially to excrete carbohydrates which cause "gram positive" bacteria to grow on their surface and shove out gram negatives. Gram positives are safe to eat, if they don't have some other undesirable features such as disease causing characteristics.

Ascospores (spores inside of cells) are very problematic for yeasts and the morel. The morel needs a lot of surface area for ascospores resulting in heavy ridges with deep pits between the ridges. To get the spores out, the tissue must dry and shrink, which creates a force to propel the spores out. These requirements create contradictions which are not totally resolvable.

The tissue must stay hydrated for about three days while spores are forming. Then the tissue must dry and shrink before deterioration occurs. To improve the chances of all that occurring, the morel forms some types with thick tissue, to delay drying if needed, and some types with thin tissue, to speed up drying when needed. Thick tissue morels have a narrow base, which slows drying, while thin tissue morels have a wide base, which speeds drying.



Phenotypic Variation

These differences are called phenotypic rather than genotypic. Phenotypic means the appearance is different while the DNA is the same. Different parts of the DNA are used thereby showing different characteristics. Genotypic

differences are those resulting from differences in the DNA, as occurs with inheritance.

Tissues are examples of phenotypic differences, where the DNA is the same in all of the tissues, while different parts of it are used for each different tissue. The areas on the DNA chromosomes which are not being used are covered with proteins. Each type of tissue has different areas on the DNA covered with protein. This is why stem cells are needed to create tissue. Stem cells have all of their DNA freely exposed.



Phenotypes growing near each other can be known to be the same genotypes (same DNA) for two reasons. One, gene exchange will homogenize the gene pool making them all approximately the same. And two, two different genotypes cannot occupy the same niche. One will prevail against the other.

These morels are all from the same patch, which means they are all genotypically the same, while they are phenotypically different in extreme ways.



Phenotypic variations are extreme with morels due to the difficulty of getting spores out. It's a method of adapting to environmental variations when genetics and evolution are not adequate for the purpose. All species have some phenotypic variation as a method of adapting to changes which are too fast for evolution. Usually, it is seasonal variations which are rapid which require the most phenotypic variation.

An example of phenotypic variation with humans is muscle types. There are two types of muscle cells: fast and slow. Each person has a different combination of the two types. Persons who have fast muscle cells are good at tennis; and persons with slow muscle cells are good at endurance such as long distance running. These differences are randomly distributed through a population rather than following lines of Mendelian inheritance. The test of phenotypic variation is its random distribution through a population.

Morels have so much phenotypic variation that there has probably never been two morels the same. There are probably variable phenotypes for every gene. Variations in the same gene are called allotypes. In studying many of the common enzymes in morels, from three to five allotypes are usually found for each protein or corresponding gene.

The morel does not vary phenotypes in a controlled way. It randomly re-scrambles the combination each time a spore is formed. As a result, most of the combinations are nonfunctional. This results in some of the morels being very weird looking. I have found that only about ten percent of the morels in my area are capable of producing functional spores. This varies from area to area, as



aberrant phenotype

phenotypic variation does. When environmental conditions are extreme, as on the hot plains, there is a lot of phenotypic variation. Where weather is more consistently humid and cool, there is less noticeable phenotypic variation.

Consider the puffball by contrast. It's the oldest mushroom having something similar to its present form 200-300 million years ago. It is very highly refined. It appears to have four phenotypes. They are each quite different. In other

words, it takes much evolutionary time to reduce the phenotypes to essential characteristics.



Phenotypic variation shows up in the anomaly of morel mycelium. The anomaly is a combination of tissue cells and mycelium which forms on the surface of agar medium. It is made up of scrambled characteristics of the morel. The anomaly shows variations in colors and shapes, just as morel mushrooms do. Each anomaly shown here is an outgrowth from a single spore. Each spore outgrowth is a different phenotype.

Phenotypic variation is extreme with wildflowers which grow under harsh conditions. The color of the flower petals and their shapes will be highly varied. By contrast, the domesticated flowers evolved under ideal conditions and do not show much phenotypic variation.

These pairs of wildflowers are genotypically the same but phenotypically different. They grow near each other, which means they exchange genes and become genetically the same.



Sclerotia

Phenotypes

Morel mycelium reverts to masses of cells called sclerotia under the ground as a method of surviving harsh conditions which include summer heat and winter cold. The mycelium usually takes more than one year to get adequately developed after a spore germinates. Typically, the mycelium will cover an area of 6-8 feet (2-3 meters) in diameter. This can be known because the same phenotypes will be that far apart. As the mycelium is expanding over an area, it constantly reverts to sclerotia as conditions get warm and dry and then grows back into mycelium after rains.

Seldom do mushrooms form sclerotia, because their mycelium is hardier and more able to tolerate variations in conditions. The puffball is again extreme in its ability to tolerate harsh conditions. Its mycelium prefers the hardest, driest ground, such as car trails, because there will be less vegetation there to block spores from escaping into the air. Puffball mycelium will develop over many decades often spreading over hundreds of feet of space. More typically, mushroom mycelium does not survive winter freezing and must be restarted from spores each year.



University scientists assume the purpose of sclerotia is to start the formation of a mushroom. This assumption stems from an elaborate growing procedure which was developed by first producing large masses of sclerotia and then placing them in a tray for morel production. In this situation, the sclerotia is serving as a food source with well established mycelium, but scientists claim it is a life-stage cycle preceding mushroom formation. The ridiculousness of that assumption is that sclerotial masses do not get large under natural conditions but are spread thinly over a large area. A mushroom cannot form from these tiny masses of sclerotia, or there would be dozens of them per square foot.

The morel must evolve into a cup fungus for long term survival. An indent in some of them shows the beginning of evolution in that direction.



The cup shape combines thick tissue and thin tissue. Thick tissue is near the ground and slow at drying. Tissue gets thinnest at the rim, where rapid drying can occur. Supposedly, somewhere in between drying occurs at the right rate each year for getting spores emitted.

But it is a losing battle. The cup fungi last two ice age cycles and die out. They are in two genera which include *Disciotis venosa* and *Discina leucoxantha*. They are said to have identifying features on the surface of the spores which are the same as on the morel (Nancy Smith Weber, *A Morel Hunter's Companion*, 1988). It means a new genus forms during each ice age, and only two genera means two ice ages. This isn't the result of 129 million years of evolution claimed by university scientists. It's the re-evolution of the morel during each ice age cycle.



The Nature of Ice Ages

Ice ages have been cycling at precisely 100 thousand year intervals for the past ten cycles. Ice forms for 80 thousand years and melts for 20. The next cool-down is scheduled to occur at any time. It will occur when the humidity gets high enough to produce more snow up north than can melt during the summer. The snow will reflect away more sunlight and result in a precipitous

cool-down. The increase in humidity results from warmer ocean surface temperatures.

It wouldn't be a coincidence that the morel evolved at the same time humans created agriculture. The front of the ice sheet creates every possible ecosystem within walking distance of each other. The ice sheet draws humidity out of the air, as an air conditioner does. This creates hot, dry air in front of the ice sheet, except for a stream of cold air which sweeps down the front edge and hugs the ground for some distance. It would create cold valleys and warm hills.

High humidity and rainfall are required to start morel evolution, because a filamentous yeast must resist dehydration on tree bark during the early stages. Cold air sweeping off the ice would be required to prevent summer heat from dehydrating the yeast as it adapts to the soil.

Geologists have been totally mystified about the cause of ice ages, and their theories are extremely varied. A recent theory involves the earth's orbit, and it has numerous flaws.

The cyclic nature of recent ice ages creates evidence that the cause of ice ages is a hot spot in the earth's center which moves around and comes closer to the surface from time to time. When near the surface, it heats the oceans causing more rain to occur. The increased rainfall causes snow to accumulate faster than it can melt. The increased snow and cloud cover reflect sunlight causing a cool-down of the planet.

With this theory, the reversal can be attributed to the movement of the hot spots in the earth's core. The reason why ice ages increase 80% of the time and decrease 20% of the time could be that the earth's surface is slow at responding to warm up but fast at responding to cool down.

An explanation for the large variations in the cycle time of ice ages before the previous ten is that the movement of tectonic plates could cause oceans to heat differently, or the movement of hot spots in the earth could be variable.

Another explanation for the cause of recent ice ages is that the oceans are always heating up, because they store energy from the sun, and some geothermal heat enters from below. The constant heating of oceans causes humidity to increase resulting in more and more precipitation including snow, until so much snow forms during winters that it does not all melt during the summers. The reflection of sunlight from the snow results in a precipitous cool-down. This mechanism raises the question of why exactly 100 thousand year intervals. The nature of the earth's orbit could determine when the ice starts to melt again, but hardly when it starts to form, since the start is certainly dependent upon humidity, not a general cool-down as usually claimed. Dry and cool conditions would do nothing to start an ice age, because little snow forms under such conditions.

A Garden of Eden

In 1994 a Stone Henge-like ritual site was found in western Turkey (3). It's called Gobekli Tepe. It was dated to 12,000 years ago. This is when the last ice age was ending. The environment was a paradise resembling the Biblical "Garden of Eden." Now the environment is rocky and barren. The assumption is that humans destroyed the environment by abusing it.

I would theorize that 12,000 years ago, that location was at the leading edge of a glacier. Cold and humid air coming off the glacier created a rapid transition between something like a rain forest and a desert. In between the extremes would have been all imaginable ecosystems. To transition between diverse ecosystems in such a short distance gave humans the ability to exploit

the environment to a maximum. The soil looks like glacial till pointing to such a history.

The evidence of the morel mushroom evolving in such an environment and the Garden of Eden-like conditions at Gobekli Tepe point to the transitional front of the glacial mass of an ice age creating ideal conditions for evolution and human exploitation.

Detailed Explanation of Phenotypic Variation

Scientists often encounter phenotypic variation, but they are confused by it. They often assume it is caused by environmental conditions.

The cumulative effect of gene exchange is adaptation by improved function. The cumulative effect of phenotypic variation is adaptation by multiple options. The test of phenotypic variation is random distribution of genetic variation through a population.

Phenotypic variation can be known to be genetic rather than environmental by the repetition of patterns in a population. It is sustained in a population. It involves factors which must be under genetic control such as morphology and pigmentation, which are products of complex biochemistry under genetic control.

The harshest conditions produce the most phenotypic variation. Prairie wildflowers are very extreme in their phenotypic variation due to harsh conditions.

Multiple alleles are used to create phenotypic variation. Different alleles are turned on and off during gene exchange. Scientists have known for a long time that multiple alleles exist, but they didn't know why. Creating varied phenotypes is why.

The morel mushroom has extreme phenotypic variation, and extremes have been found in alleles. The TCA enzymes were separated and found to have 3-5 allotypes for each enzyme.

Phenotypic variation as an adaptation mechanism is an important biological phenomenon which was not previously known to exist. When aware of it, it is easy to see in plants. Presumably, it exists in animals also. It would be common in yeasts, which is where the morel acquired it.

The phenomenon is observed as variations in a population which would be genetically homogeneous. Populations become homogeneous over time due to gene exchange. Variations must be introduced from outside sources. The source of differences is diverse environmental conditions. In other words, inbreeding causes offspring to become genetically similar. Inbreeding means lack of outside diversity. In this way, Mendelian inheritance homogenizes the gene pool in the absence of outside sources of diversity.

When variations are introduced into a population, they spread according to the Mendelian pattern, which means from parents to offspring with half of the genes from each parent. Gradually, the variations blend uniformly into the population.

By contrast, phenotypic variation is observed as randomized distribution of variations, and it does not disappear over time by blending into the population. The test of phenotypic variation is randomization of variations in place of the usual Mendelian variations following lines of inheritance. A random distribution of variations is observed.

Biological variations are created by differences in environments. An example would be one type of alligator adapting to a swamp which has a lot of grass, and it eats small prey. A different type of alligator adapts to a large open bay,

and it eats large prey. So the two types evolve slight differences in size and so forth.

Those differences are valuable for survival under diverse conditions, so they are remixed through gene exchange, when the different types come together. Nature invests heavily in gene exchange (as sexuality) so that differences can be remixed into new combinations for improved adaptability.

The flowers on plants have that purpose. Flowers attract insects which carry pollen from plant to plant, so differences can be mixed into new combinations.

Animals also invest heavily in sexuality producing dramatic colors and courtship rituals to promote gene exchange, so differences can be promoted for better survival under a diversity of conditions.

But gene exchange does not create differences, it can only remix what already exists. The mixing process homogenizes the gene pool. Over time, all offspring become similar, unless new sources of variation are added, and they must come from a diversity of environments.

A qualifier must be added here. The remixing of genes during gene exchange does produce individual combinations in new ways, but pre-existing genes must be used. The evolution of new genes is a slow process that occurs in response to variations in environmental conditions.

How the mixing occurs is evident in human ethnic groups. A few centuries ago, humans were quite isolated and did not move around much. So ethnic groups acquired identifiable characteristics. When they started to travel to different areas and mix with other persons, the differences started to disappear.

Notice that an ethnic group acquires its characteristics because gene exchange homogenizes the group, when external sources of variation are limited. In other words, gene exchange does not create diversity, it destroys diversity. Diversity is generated by varied environmental conditions. A lot of scientists assume otherwise. They assume diversity is a product of gene exchange.

An alternative to the process of using gene exchange to remix characteristics is phenotypic variation. It is a mechanism used by yeasts because of their limited gene exchange.

Yeasts are fungi which adapted to sugary solutions during the era of modern plants beginning about 65 million years ago. In sugary solutions, yeasts lost the ability to disseminate easily. External spores were converted to internal spores, so single cells could form spores. Then the wind could no longer carry spores from one group of cells to another.

The limited gene exchange left yeast with reduced ability to adapt to variations in environmental conditions. So to survive under a variety of conditions which they might encounter, they used phenotypic variations.

So what is phenotypic variation? It is a difference in appearance or function for types which are genetically the same. For example, the morel forms thick-tissued and thin-tissued mushrooms to cope with variations in weather.

Another example of phenotypic variation is embryonic development. Different types of cells are created, even while they are all genetically the same. A muscle cell is genetically the same as a fat cell. The differences are phenotypic, not genotypic.

The way it occurs is by repressing some genes and using others. Each cell type uses a different combination of genes, even though all of the cells have the same reservoir of genes.

The morel mushroom evolved from a yeast and carried phenotypic variation from its ancestor. It had to continue to use phenotypic variation, because its ascospores limit gene exchange.

The morel spores are formed inside of cells (asci) on the surface of the mushroom. A force propels the spores out of the asci. The force is created by shrinkage of tissue upon drying. The spores are very heavy, which allows them to function better as projectiles. They often contain more than twenty nuclei, which increases their mass. Some spores stay on the surface of morels to be picked up by wind. But wind is not used effectively by morels. The surface of morels lacks the aerodynamic advantages of gills, which allow wind to sweep out a large number of spores; and the morel environment is surrounded by trees and brush which reduce wind and block spore movement.

Another problem with dissemination of spores by morels is that there are large amounts of space between localized populations of morels, because the soil must be sandy or similar, which is usually limited to river basins. There is a lot of diversity of morel types, and those differences are readily observed over distances of a few hundred miles. But spores are not easily carried by wind over those distances. Regional differences are sustained for this reason. Otherwise, there would be more homogenization of types, as observed with other mushrooms.

So the morel had to continue to use and develop phenotypic variation as an adaptation mechanism. It did that by producing a large number of variants which have the same genotype. Some of those variants are better adapted to a particular set of environmental conditions than others.

Here's a subtle point which is the key to understanding this subject. If the morel can produce so many variants phenotypically, why not do it genotypically? After all, there has to be a gene for each phenotype.

There are two answers to that question. One is time. Speed is the precious commodity of gene exchange. If genes can be rapidly rearranged into new combinations, then changing environmental conditions can be met with new functions. But if diverse options cannot be rapidly brought together and remixed, then a large number of options must be sustained continuously, which is phenotypic variation.

The other answer is that genotypic adaptation involves loss of genes. All of the disadvantageous genes are discarded. But gene exchange allows a complete variety of genes to be reacquired from their original sources of diversity. If however, gene exchange is too limited, genes which are lost cannot be reacquired easily, and then the whole diversity of options must be carried through each generation, as occurs with phenotypic variation.

The cumulative effect of gene exchange is adaptation by improved function. The cumulative effect of phenotypic variation is adaptation by multiple options. Improved function is more adequate and complex than multiple options. So the extreme use of phenotypic variation of *Morchella* is a disadvantageous necessity resulting from the use of ascospores and a carry-over from its yeast ancestry. Yeasts rely heavily upon phenotypic variation for the same reasons as the morel.

The Anomaly Explained

Anomalies are rare and informative in science. The morel anomaly defies usual evolution and physiology in an extreme way thereby providing much information.

Most species cannot produce extreme aberrations, because their characteristics are highly refined over millions of years. It's only because the

morel was a single-celled organism a few years ago that it can produce numerous aberrations.

Species usually have a fixed shape (morphology) which cannot vary much. If animals have a birth defect, it can be traced to one step in embryonic development. The morel anomaly is not off by one step; all of its morphology is off and some of its physiology.

The moral anomaly occurs when the mycelium grows on the surface of a liquid or gel with optimum nutrition. A detailed nutritional study was required to optimize nutrition.

With the anomaly, the mycelium starts to change its morphology and physiology without forming anything resembling a mushroom. It forms visible pigment and a variety of cell structures at the microscopic level, while it forms a flat sheet on the surface.

Mushroom mycelium can never form pigment, beyond traces of accidental color, because it grows in the dark where pigment is not visible. It takes enzymes and energy to produce pigments. No cell waists energy and physiology producing something it cannot use. But it is not the mycelium per se producing the pigment in the anomaly; it is cells undergoing change which have a microscopic structure.



For mushroom cells to grow flat on a surface and produce pigment is an extreme anomaly. It isn't just one thing wrong with the morphology; it is everything wrong with the morphology. The physiology produces pigment when there is no mushroom for the pigment.

There are loops and curls in the anomalies which are rudimentary formations of ridges and pits on the surface of the tissue. The tissue in the anomalies partially differentiates into the morphology of the mushroom.

One important thing that the anomaly says is that the morphological structure of the morel has not been stabilized the way it is for other species. Other species cannot revert to some other shape, because there is no pattern other than their usual shape. But the morel has a pattern to follow when growing on a flat surface.

This means the morel was growing on a flat surface so recently that it still carries the pattern for flat surface growth in its DNA; and the DNA transcription can revert to that pattern. It is surprising that DNA can carry a pattern which can no longer be used. The flat-growth-pattern is in fact integrated into the normal pattern, which scrambles the characteristics of the anomaly. The pigments in the anomaly are characteristic of the normal morel strain. In other words, if the strain has a red pigment, it shows up in the anomaly, and if it has a black pigment, it shows up in the anomaly.

When adding this evidence up, it means the morel evolved from a yeast so recently that it can revert back to a yeast-like growth, where there is no macromorphology when growing on a surface.

The Details of Morel Evolution

The round shape of yeasts is promoted by growth in liquids, and the filamentous shape of molds is promoted by growth on surfaces.

There are two types of evolution. Minor changes occur in a slow and continuous manner with all species. Major changes are made in large leaps which occur rapidly. Both are caused by changes in environmental conditions.

Radiation and chemicals produce point mutations for slow change, while flowers and sexuality create large leaps through redistribution of genes.

Morel mushrooms are undergoing rapid change, as a yeast growing on trees adapted to the soil. The end point must be a cup fungus for long term survival, because ascospores require that strategy. A cup-like indent is appearing on some variants of the morel, but only a related genus, *Helvella*, is apt to complete the process.

Ascospores are extremely contra-survival for filamentous fungi, which means they only exist when carried from a yeast ancestor.

Yeasts and higher fungi evolved in opposite directions creating major differences in many of their important characteristics. Yeasts evolved toward high speed growth through simplicity, while higher fungi sacrificed time for complexity. The basis for the difference is that yeasts must battle more directly against competitors, while higher fungi battle against the elements growing on surfaces in ways which competitors cannot.

Yeasts began their evolution about 50 million years ago, as indicated by fossil evidence and circumstances. Modern plants began producing sugary substances at about that time, which is the primary factor causing yeasts to evolve. Sugar is a dehydrating agent, so it must be in the form of dilute liquid to be utilized by microbes. Since competitors including bacteria and molds can grow in sugary solutions, high speed growth was needed by yeasts.

To maximize growth rate, yeasts discarded all possible complexity. Besides simplifying morphology, they minimized the number of enzymes they maintained. Discarded were most extracellular enzymes for breaking down large molecules plus enzymes for using unusual nutrients. Of the remaining enzymes, about ninety percent were repressible being synthesized only when

needed. The result for typical yeasts was a mass doubling time of about 90 minutes at room temperature compared to 45 minutes for bacteria.

High growth rate was not the only adaptation to increase competitiveness of yeasts in sugary solutions. Also important was the excretion of acid and alcohol. Yeasts normally break down sugars into two-carbon compounds through glycolysis, while repression of TCA enzymes prevents further reduction. Some of the carbon is used for synthesis, but a limited amount is excreted as acid and alcohol to inhibit growth of competitors. The excreted carbon also causes sugar to be depleted more rapidly making it less available to competitors. When the sugar is depleted, TCA enzymes are synthesized, and the excreted carbon is remetabolized.

Acid and alcohol excretions by yeasts are under intrinsic control, and the quantities depend upon adaptations. While alcohol must be excreted for anaerobic glycolysis, the extent to which such fermentation is used varies with adaptations.

This procedure is effective, because yeasts can develop a high tolerance for acid and alcohol. They usually tolerate pH 3.0 well. Bacteria in general do not tolerate acid as well as yeasts, because their environment is not usually acidic, and because their prokaryotic characteristics do not meet the demands as well as does the complexity of eukaryotic cells.

Molds have a low tolerance for acid in organic form, at least when it is absorbed. Circumstantially, the reason appears to be that protons must be pumped out of the cell, while molds must avoid excreting substances which concentrate on exposed mycelium and kill it.

The evolution of filamentous fungi traces back in fossil records to the beginning of terrestrial life. New forms of fungi continued to originate from

different starting points for several hundred million years. Since yeasts appeared much later, they could only have evolved from higher fungi. The diversity of yeasts indicates that they evolved from several different lines of higher fungi. If this assumption is true, there should be more phylogenetic difference between some yeasts than between some yeasts and some higher fungi.

There is a window of opportunity for all evolution; and it closes, because basics cannot change much after they are depended upon. Early in evolution, while basics were still alterable, higher fungi acquired specialized characteristics. Yeasts gave up some of those characteristics and cannot regain them, because that type of evolution no longer occurs.

The demanding evolution which higher fungi underwent created the following characteristics:

1. external spores
2. extracellular enzymes for breaking down solids
3. the ability to tolerate dehydration on exposed surfaces
4. high efficiency metabolism for preventing the excretion of toxic substances which would be harmful to exposed mycelium.

Yeasts gave up those characteristics, and it appears that they cannot reacquire them. Some yeast-like fungi have external spores, but they would have carried them from ancestors. Yeasts maintain some extracellular enzymes for breaking down polysaccharides. (It is most likely that yeasts release such extracellular enzymes through autolysis, as bacteria do, rather than synthesizing them on the cell surface, as filamentous fungi do.)

Yeasts not only excrete in a controlled manner but also excrete a variety of metabolites in a manner which appears to be inadvertent. The uncontrolled

excretion indicates a lower efficiency of metabolism than higher fungi have. Influencing metabolic efficiency is the spatial arrangement of enzymes which are attached to membranes, and this characteristic would be resistant to change.

There is no evidence of filamentous yeasts tolerating dehydration. For example, when insects make holes in trees causing sap to be exuded, filamentous yeasts grow in the bore holes, where there is protection from dehydration, while unitary yeasts grow in the exudate on the bark.

Like yeasts, *Morchella* mycelium lacks resistance to dehydration. When *Morchella* is cultured, exposed mycelium dies off and turns brown, unless humidity is saturated.

When *Morchella* mycelium turns brown from dehydration, it excretes alkali, which would primarily be ammonia resulting from residual autolysis. (The alkali is observable on the mycelium with color indicators.) Yeasts and bacteria undergo autolysis upon die off, which allows nutrients to be recycled. Molds do not. *Morchella* evolved from a yeast so recently that it continues with a degree of autolysis which is not advantageous.

There is evidence of a disadvantage for *Morchella* autolysis. Deliquescence is a problem for *Morchella*. Bacterial attack appears to be involved, as the breakdown is spotty. Also indicating bacterial attack are incidents of long time morel eaters getting sick on morels. The cause in some cases would be endotoxin from gram negative bacteria growing on the surface. Gram negatives would attack the tissue, while gram positives would not; and gram positives would be edible. Considering the viscous surface of other mushrooms, they probably promote the growth of gram positives by excreting a small amount of carbohydrate. *Morchella* apparently promotes gram negative bacteria by excreting nitrogen through residual autolysis.

Residual autolysis may stem from some of the autolytic genes being involved with differentiation preventing them from being discarded until new genes are produced for that purpose.

Yeasts do not adapt to soil growth. Yeasts are found in the soil, but their prevalence is sporadic indicating that they are there by chance. The main problem for yeasts adapting to the soil is dissemination. Normally, they are disseminated by insects which feed on them and pick them up on their feet. The extent to which air or water disseminates yeast apart from insects is unknown.

While the ancestor of *Morchella* began adapting to soil growth, it needed to continue with spore dissemination above the ground utilizing insects and eventually wind, before an ascocarp was developed for that purpose. During this phase of its evolution, surface exposure would have created vulnerability to dehydration. Therefore, the weather must have been consistently rainy or very humid.

Once the yeast ancestor of the morel acquired the ability to evolve in the soil, it was drawn in because of the exploitability of bacteria as nutrients. Typical yeasts inherently have the ability to feed on bacteria by killing them with acid, though the quantity of bacteria in their environment is not usually great. The soil contains a large number of bacteria early in the spring due to recycling of nutrients. Freezing provides nutrients for microbes by breaking apart cells and releasing their contents when the ground thaws.

The most specialized bacterium for exploiting cell debris in spring soil is *Pseudomonas fluorescens* (*P.f.*). Its name stems from a water-soluble fluorescent pigment which it produces. The purpose of the pigment is to attract insects for dissemination, much like the color of flowers. It releases

proteolytic enzymes into the environment through autolysis, and the enzymes break down proteins from the cell debris.

In a study of *P.f.*, this author found that it undergoes complete die-off sharply below pH 5.0. This pH appears to be an adaptation designed to release enzymes and recycle nutrients. It means *P.f.* is highly exploitable by a yeast which can enter the soil and excrete acid. The exploitability of *P.f.*, and perhaps other bacteria, appears to be the primary factor which allowed *Morchella* to adapt to soil growth in spite of its other characteristics being poorly suited for the purpose.

Normally, mushroom mycelium would not be expected to excrete acid, because the acid would concentrate on the mycelium and kill it. *Morchella*, however, appears to have become dependent upon the excretion of acid for attacking bacteria and feeding on them. To use acid most effectively, it appears that *Morchella* repeatedly reabsorbs it, channels it through the mycelium and re-excretes it. This mechanism causes the acid to accumulate in absorbent areas while not accumulating on the mycelium.

Laboratory evidence of this mechanism is found in nitrogen utilization. In most, if not all, cases, fungi absorb ionic nutrients without their homologous ion, which results in a shift in exogenous pH. When ammonium ions are used as a nitrogen source by *Morchella*, the medium becomes extremely acidic stopping growth at about pH 3.0. To start growth on ammonium ions, the initial pH must be 6.0 or higher; and even then, mycelial growth is thin. If, however, an alkali creating nutrient is used with ammonium ions, the initial pH can be much lower, and mycelial growth is much thicker. Examples of alkali creating nutrients are K-acetate and Na-glutamate. K-acetate produces a strong rescuing effect for growth on ammonia, because it neutralizes the acid

that forms on the surface of the mycelium. Na-glutamate is used more slowly and is thereby less effective.

The difference between initial pH and developed pH is that newly inoculated mycelium is not in an ideal condition and must undergo adaptation to the new medium. The adaptations create a heavy drain on the ATP supply. ATP appears to be needed for pumping protons out of the cell but not for absorbing them, as known to be the case with yeast. During initial growth, it appears that protons are freely absorbed but cannot be pumped out because of a shortage of ATP. Therefore, initial growth requires a high pH, or the acidity must be neutralized on the surface of the mycelium through an alkali creating nutrient.

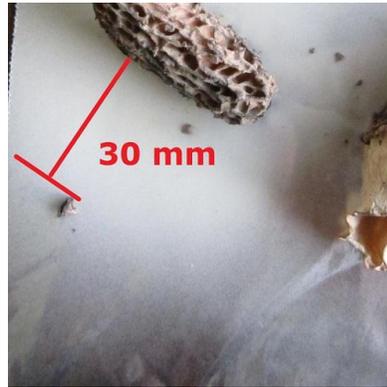
Requiring an initial pH of 6.0 for utilization of ammonia indicates a developed tendency for *Morchella* mycelium to absorb protons as a method of protecting the mycelium from acid.

Evidence of *Morchella* mycelium excreting acid is found in agar media, when using a nitrogen source which does not apparently alter pH, such as casein hydrolysate. The amount of acid produced is proportional to the dextrose concentration indicating that the acid originates with the dextrose, and therefore it would be acetic acid. The amount of acid is not great, as it reduces the pH from 7.3 to 6.0 in typical agar media with moderate buffering capacity. A small amount of acid can be used quite effectively in attacking bacteria by causing it to concentrate where it gets absorbed. So the nutritional evidence combined with the ecology strongly indicate that *Morchella* attacks bacteria with acid and feeds on them.

Morel mushrooms have a bulbous shape which maximizes surface area for the emission of ascospores. Ridges on the surface also increase surface area. Wind currents are not used well for dissemination of ascospores, because a force propels the spores from the ascus independent of wind currents. A few

spores remain on the surface to be picked up by wind currents; however the morel cap does not protect the spores from being washed to the ground by rain.

Morel ascospores are very large and heavy, containing numerous nuclei each, which causes them to sink in water in a matter of seconds. They therefore travel as projectiles, as demonstrated by the distribution of spores around morels which are drying on a surface. This means the spores have no ability to be suspended in air without wind.



Another limitation to dissemination of *Morchella* spores is heavy vegetation in the environment resulting in wind currents being diminished and spores being caught by the vegetation. Morels emerge in the spring when there is usually little wind beyond sporadic storms.

Also limiting spore dissemination is a failure of morels to come up every year in areas where spring weather can be dry. Growth is sustained under the ground from year to year in the form of sclerotia, which is a brittle mass of spore-like cells.

Considering these factors, spore dissemination is highly unreliable for *Morchella*, so much so that spores are not depended upon for seasonal survival. Instead, sclerotia serves that purpose. Sclerotia functions as a resistance state for survival of mycelium under harsh conditions.

Apparently, modern (gilled) mushrooms must rely upon spores for survival through winter conditions, because the mycelium will not tolerate freezing.

Their spores do not usually germinate readily because of their need to survive through the winter. *Morchella* spores do, however, germinate readily, because they cannot be used reliably for seasonal survival. They are used for dissemination only. Presumably, the ancient mycorrhizals, such as boletes, have hardy mycelium which will survive freezing. Truffles might not be so ancient, and the inability of the mycelium to survive freezing may be why they form a mushroom underground.

The morphology of thick-tissued morels is highly informative. The ascocarp is hollow, which promotes drying. Tissue thickness is controlled primarily by the width of ridges and the amount of space between them.



With thick-tissued types, ridges are wide and curved with little space between them. With thin-tissued types, ridges are small leaving much space between them. Another identifying difference is the width of the stem, which correlates with the amount of empty space inside the cap. Thick-tissued morels have a narrow stem, while thin-tissued ones have a wide stem. These factors control how concentrated the tissue mass is and therefore its rate of dehydration.

Morels growing in the upper plains of U.S.A. are exposed to hotter and dryer conditions than usual. They have therefore been recently adapting by

producing a thicker-tissued variant. Thick-tissued mass has been evolving so rapidly and recently on those morels that it has a tendency to be disordered. This effect shows up as globs of tissue hanging off the cap at the base or oversized ridges creating bumps or globs of tissue. There are thick-tissued morels from other areas which have a more refined morphology.

Another feature of the thick-tissued morel is an indent in the cap, which slows the rate of dehydration even further. At the indent, ridges are closer and tissue more concentrated creating a slow-drying area on the cap.

This indent would be the early evolution of a "cup fungus." It demonstrates the function of the cup which ascosporeogenous fleshy fungi usually have. The cup collects water and creates an aggregation of tissue at the bottom while leaving thin and exposed tissue near the rim. The cup thereby maximizes the extremes between slow drying and fast drying tissue. For these reasons, the cup shape is the form toward which fleshy ascomycetes must usually evolve, and there is a convergence of evolution at that point. Of course, the "cup" shape has numerous variations. *Morchella* would have to evolve into a cup fungus to survive through more than one ice age, which means it is only one ice age old. The recent ice ages have been cycling at 100 thousand year intervals for the past million years. The yeast which *Morchella* evolved from and the ecology would not change much in such a short amount of time; so the same starting point for *Morchella* evolution appears to redevelop at the beginning of each ice age.

There are cup fungi said to be closely related to *Morchella* based on spore morphology (Nancy Smith Weber, *A Morel Hunter's Companion*, 1988). They include *Disciotis venosa*, *Discina leucoxantha* and other *Discina*. Appearing in the spring in an environment similar to that of *Morchella* but

being slightly more advanced than *Morchella*, they appear to have evolved from the *Morchella* line during an earlier ice age.

Cup fungi vary somewhat in their shape. If they need to dry easily, they have thin tissue; and if they need to delay drying, they have folds in them.

The *Morchella* cap is quite impractical for survival under adverse conditions. The cap demonstrates extravagance in producing a large but simple structure which does not tolerate much variation in weather. Such an impractical cap is made possible by the use of sclerotia for seasonal survival, because then ascospores do not have to be reliably produced every year.

There is much information about the characteristics of *Morchella* revealed in other mushrooms which evolved with it, which appears to include the families *Helvellaceae* and *Morchellaceae*. A very informative example is *Helvella crispa*. This mushroom is smaller than the morel. It emerges in the same environment as the morel but about a month later, when weather is hotter and dryer. Its cap is shaped like a potato chip hanging over a stalk. Its ascospores do not germinate readily indicating that they are used for seasonal survival, and sclerotia can be assumed to not be produced.

Helvella crispa's small size and absence of sclerotia would stem from a diminished availability of bacteria to feed upon late in the spring. Since it cannot rely upon sclerotia, it must effectively emit spores every year. To achieve this, its cap is much like that of a cup fungus, except that it does not collect water. There is an aggregation of tissue near the stalk, while tissue is thin around the outer edge. Somewhere in-between, drying occurs at the right rate each year.

This comparison indicates that *Morchella* splurges on the shape of its cap, because it can produce sclerotia from the abundance of nutrients which are

available early in the spring. But the dependence upon sclerotia limits its habitat to that which can produce a large quantity of bacterial nutrients. The cup fungi have a broader habitat, because they are not dependent upon such rich nutrients for sclerotia production.

The cup fungi which are related to *Morchella* thereby appear to be more similar to *Helvella* than *Morchella*, at least in terms of the described characteristics, and therefore they may have evolved from that genus.

These types should re-evolve during each ice age along with *Morchella*. The cup fungi related to *Morchella* indicate a re-evolution of types with each ice age.

There are numerous obstacles for a yeast to evolve at the base of trees at this time. Normally, tree exudate would be needed for nutrients, but it is sporadic. Dehydration would be a problem when there is not a lot of exudate.

Perhaps cold, humid air sweeping off the ice sheet creates an improvement upon tree sap at the base of trees. Normally, only elm trees produce a large amount of exudate, and it is sporadic. However, conditions under the loose bark of some trees create suitable conditions for yeasts. The yeast genus *Nadsonia* has a species, *elongata*, which is adapted to growing under the loose bark of birch trees. This type of growth may be improved in front of the ice sheet.

Indications of *Morchella* evolving from a yeast are these:

1. The reversion anomaly lacks normal structure.
2. Mycelium lacks extracellular enzymes.
3. Residual autolysis is disadvantageous for mycelium.
4. Intolerance of dehydration of mycelium is yeast-like.
5. Excretion of acid never occurs with usual filamentous fungi.

6. Ascospores are disadvantageous.

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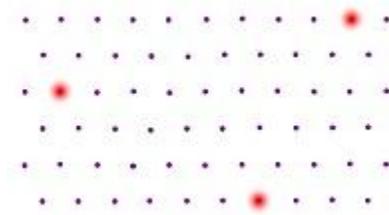
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Chapter 3: Global Warming Contrived Through Fake Science



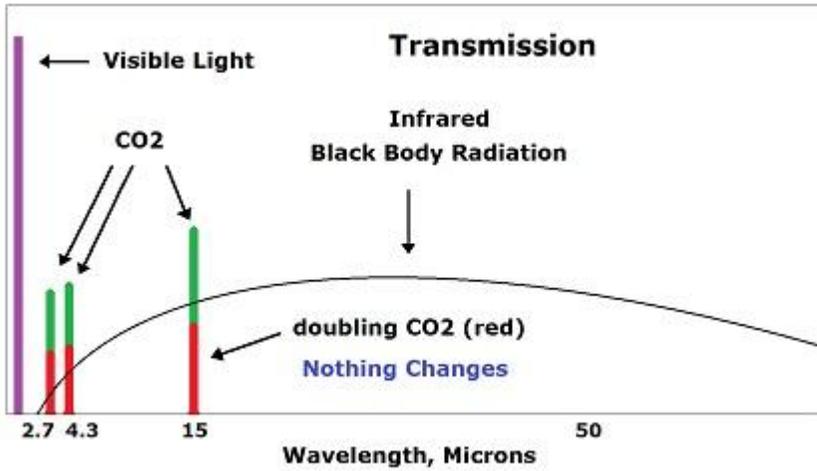
Chapter Summary

Absorbed radiation is re-emitted in 83 femto seconds average, which means there is no such thing as trapping heat in the atmosphere. Without trapping heat, there is no such thing as a greenhouse effect.

Since heat isn't trapped, it can't spread to the surrounding 2,500 air molecules. Without significant dilution, each CO₂ molecule would have to increase 2,500°C to heat the total air 1°C, an impossibility.

If all 0.7°C heating said to be caused by humans went into the surface of the oceans to a depth of 100 meters, the temperature increase would be 0.025°C, and none would be left in the air. It means hurricanes are not caused by global warming, nor is coral bleaching.





There are two reasons why the concept of global warming is ridiculous. One is that only a miniscule amount of energy is involved. The second is that even the tiny amount disappears in femto seconds and does not accumulate.

Very little energy leaves the surface of the earth as radiation. It's about 1-3%. Climatologists claim it is 79%. They use an erroneous Stefan-Boltzmann constant to get that result. Even though they know 79% is ridiculous, they can't reduce the number, as they have tried to do but failed because of the erroneous Stefan-Boltzmann constant.

If the radiation is 2% while said to be 79%, the miss is a factor of 40 on whatever global warming does. If you blow on hot soup for 8 seconds, it would do the same thing as letting it sit for 10 seconds, if 80% of the heat loss were due to radiation and there were only a 20% gain from blowing. Cooling fans would not exist if radiation were doing that much cooling. In cooling electronic components, various techniques are used, and radiation is not even a relevant consideration in the process.

Scientists bicker over a half of a degree (50%), while the most obvious error is a factor of 40 (4,000%). They are a bunch of incompetents and frauds.

Another error/misrepresentation is saturation. It means carbon dioxide absorbs all radiation available to it in traveling 10 meters under near-surface conditions. Therefore, adding more CO₂ to the atmosphere only changes the distance without increasing the heat. This number is extremely easy to measure in a laboratory, but all mention of saturation disappeared after a brief mention in the 2001 IPCC report. Somehow, radiative transfer equations made saturation disappear. A German physicist, Heinz Hug, did such a laboratory measurement and said the distance for saturation is 10 meters and indicated that others found the same. He was not allowed to publish such contradictory evidence to global warming, so he put his results on the internet. Since saturation cannot be made to disappear through mathematics, why is there no verification of the number by "peer reviewed" officials?

The 2001 IPCC report said that edge frequencies are absorbed in longer distances, and they create global warming. That's like saying ants on the road determine gas mileage. The edges would have to be one thousandth of the CO₂ to get to the top of the troposphere for saturation distance (10 km height divided by 10 meters is 1,000). Only less CO₂ than that would be available to create global warming within the troposphere.

This miniscule number of CO₂ molecules cannot heat the atmosphere, because any energy they acquire disappears in 83 femto seconds on average. These numbers might have little meaning to nonscientists, but there are methods of looking at them that are easy to grasp. There would have to be some form of accumulation of heat to get miniscule quantities to add up to relevance. This is why propagandists in science concocted terminology

related to greenhouses. They say "heat trapping gasses" create a "greenhouse effect." Nothing resembling such an effect is possible.

Consider what a fraud this terminology is. A greenhouse uses glass or plastic to stop wind currents while radiation is allowed to go through. There is no such physical barrier in the atmosphere, and wind currents would be irrelevant.

All matter emits radiation constantly, and the transparent gas of the atmosphere allows radiation to escape from every molecule, unlike an opaque solid which only allows radiation to escape from the surface. This constant emission of radiation prevents the heat picked up by CO₂ from accumulating. If it can't accumulate, it does nothing, which is why propagandist focus upon a fake accumulation through a greenhouse effect.

Each carbon dioxide molecule in the atmosphere is surrounded by 2,500 air molecules. With saturation being considered, only one thousandth of these are relevant, which means each of these CO₂ molecules are surrounded by 2.5 million air molecules. The heat which CO₂ molecules acquire cannot spread to the other air molecules, unless it can accumulate. Otherwise, it disappears as fast as it is acquired. A trace amount of energy would spread to about five nearby molecules by bumping (conduction of heat), but those molecules are also radiating. With five molecules radiating away the picked up energy it disappears awful fast.

Since the energy cannot spread to the surrounding 2,495 air molecules (much less, 2.5 million) each CO₂ molecule (plus its five helpers) must be 2,500 times hotter than the average temperature increase of the atmosphere. The temperature will be the average energy of all molecules in it. That means about 2,500°C for the CO₂—a total impossibility. All molecules in the air

must be similar in temperature, because any difference will rapidly transfer to surrounding molecules.

It means an accumulation effect is absolutely necessary to get global warming, but it is a physical impossibility. Does anyone really need to know anything more about the fraud of global warming?

Main Points

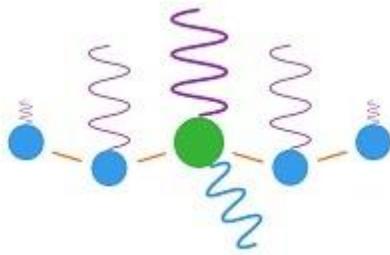
Every molecule emits radiation due to its vibrations. Absorbed radiation by carbon dioxide is re-emitted in 83 femto seconds.

A transparent gas emits more radiation than an opaque solid. The Stefan-Boltzmann constant states how much radiation is given off at any temperature.

That means no accumulation of heat occurs. And it means no spreading of heat to the surrounding 2,500 air molecules occurs before the energy is radiated away. And CO₂ is like a 1 watt heater in an auditorium.



A major error of global warming is not noticing that each carbon dioxide molecule is surrounded by 2,500 air molecules and has no way to spread the heat around. This dilution divides the CO₂ temperature by 2,500 for the average temperature, which is no heating at all.



Conducting heat to nearby molecules by bumping increases the number of molecules radiating away the added heat, which prevents very many molecules from being heated.

Climatologists claim there is 79% radiation in the energy leaving the earth's surface. A white hot light bulb cannot emit that much radiation without a vacuum environment. Reduce it to the 1-3% that it should be and global warming reduces by a factor of 40. The claimed 0.7°C caused by humans would reduce to 0.018°C , if there were such a thing. This error occurred because an erroneous Stefan-Boltzmann constant shows 20-50 times too much radiation at normal temperatures.

If all 0.7°C heating said to be caused by humans went into the surface of the oceans to a depth of 100 meters, the ocean surface temperature increase would be 0.025°C , and none of the heating would be left in the air. It means hurricanes are not caused by global warming, nor is coral bleaching.

It's an absolute truism that a small amount of something cannot heat a large amount of something without extreme differences, because heat dissipates, always. Four hundred parts per million carbon dioxide in the air is never going to influence the temperature of the atmosphere for this reason.

More than a century ago, scientists determined that carbon dioxide saturates in the atmosphere and cannot absorb more radiation. This means CO_2 absorbs all radiation available to it, so more CO_2 cannot absorb more radiation.

Additional CO₂ only shortens the distance required for complete absorption. The saturation distance for CO₂ in the near-surface atmosphere is 10 meters.

But climatologists erased the whole concept of saturation by supposedly calculating how much radiation gets to the surface of the atmosphere through fake "radiative transfer equations". Making saturation disappear is an impossibility.

While CO₂ absorbs fingerprint radiation, it re-emits black body radiation, which means the wavelength shifts to slightly longer. One of the basic errors of climatologists is looking at a trough in the absorption spectrum and assuming it represents heat, while not realizing that the energy is re-emitted at different wavelengths, which is not evident in the absorption spectrum. So they contrive a math to fit their erroneous assumptions.

Fingerprint absorption is caused by chemical bonds (electron orbits) stretching and bending, while black body radiation is caused by the whole molecule vibrating.

Therefore:

1. With absorbed radiation being re-emitted in 83 femto seconds, global warming caused by humans does not exist.
2. With dilution by 2,500, global warming caused by humans does not exist.
3. With radiation divided by a factor of 40, global warming caused by humans does not exist.
4. With an impossibility of a small amount of something heating a large amount of something, global warming caused by humans does not exist.
5. With saturation, global warming caused by humans does not exist.

Global Warming was Contrived

Incompetents in science imagined global warming and contrived unreal science to get there. Climate is too complex and random for the tools of science. The science is total fakery. Real scientists do not go down the path climatologists follow pretending to measure complexities and randomness which cannot be measured. A measurement requires that all influences over the results be identified and separated from other influences. Climate has too many interacting complexities to do that.

For these reasons, there is nothing resembling real science to the subject of global warming. Science is a process, not a conclusion. Conclusions come out of a dark pit in global warming science. Fake procedures are claimed, with no explanation or logical purpose. Necessary scientific standards are defied in extreme ways attempting to contrive a subject without accountability.

Conservative critics of global warming have been saying that the underlying science is correct, but global warming is not occurring because of the effects of clouds. They haven't looked at the underlying science, because they don't understand it. Their position has left society with no significant criticism of the basic science of global warming. As a result, criticism is brushed off claiming that it is disproven and needs to stop. Conversely, nothing has been shown to be correct in the science. The burden of proof should be on the scientists, not the critics.

One reason for this situation is that hired scientists cannot be significantly critical without being kicked out of science or being denied grants or the ability to publish. There is a long list of scientists who met that fate. This practice alone is a major fraud upon the public. How can science (or anything else) be right, when no one is allowed to criticize it? Truth benefits from criticism. The opposition to criticism points to an unjustifiable position.

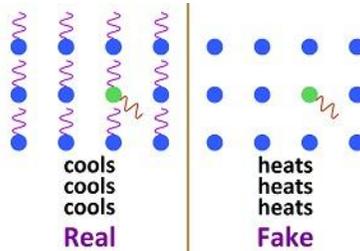
Criticism is stymied by an absence of validly published research. Research publications on climatology lack the necessary descriptions of methodology. Key information needed for evaluation is omitted in an attempt to obfuscate the subject. Without proper publications, the only way criticism can be produced is to draw upon 500 years of evolved knowledge and show that the conclusions are self-contradictory impossibilities.

A flat-earther is supposedly someone who can't understand that absorption of radiation means heat. Five hundred years of science has produced a lot more knowledge than that. After absorption, then what?

There never was real science to global warming. Modeling is nothing resembling science. It's wishful thinking imposed upon gullible persons, like blood letting. It creates something to do for incompetents in science who don't know how to produce real science.

A tiny amount of something can never heat a large amount of something under any set of conditions. Nothing resembling it is found anywhere in science. This is why parts per million greenhouse gasses cannot heat the atmosphere. Heat doesn't do that without nuclear reactions.

The second law of thermodynamics says heat dissipates, all the time, everywhere, without exception. There cannot be a greenhouse effect in the atmosphere because of the second law of thermodynamics.



Climatologists cannot explain a mechanism for global warming. Instead they use fake numbers, such as 3.7 watts per square meter to represent heat trapped in the atmosphere due to human activity. There are no square meters in the atmosphere. Climatologists convert the number into 1°C by reversing the Stefan-Boltzmann constant; but reversing that constant is not valid, because it only applies to surfaces.

Six Points that Prove Global Warming Cannot Occur

1. Dilution Factor

Climatologists skipped over the dilution factor. Each CO_2 molecule in the air would have to be $2,500^{\circ}\text{C}$ to heat the air 1°C —an impossibility—because there are 2,500 air molecules around each CO_2 molecule.

If a brick building has 2,500 bricks, heating one brick won't heat the building.

There cannot be greenhouse gases creating global warming for this reason. Climatologists admit that the CO_2 in the air is about the same temperature as the air, as it would have to be. They are thereby implying that CO_2 is a cold conduit for heat. There is no such thing as a cold conduit for heat, as thermal conductivity coefficients show.

2. White Hot Metals

The amount of energy given off by the surface of the earth is claimed to be 79% radiation and 21% conduction and vaporization. White hot metals could not emit 79% radiation under atmospheric conditions. The real proportion would be 1-3% radiation. Reducing the radiation by a factor of 40 would reduce the calculated global warming by a factor of 40.

3. Trapping Heat

The term "heat trapping gas" is a scientific fraud. Heat cannot be trapped, because it is too dynamic. It flows into and out of the atmosphere in femto seconds.

Each vibration by molecules in the air is a wave of radiation being emitted. There are typically 83 femto seconds per bump (both directions). About five bumps removes added energy. Five bumps occur in 415 femto seconds. That's half of a pico second. A half of a pico second for holding heat is not trapping heat.

The amount of heat entering from the sun during the day is the amount that leaves during the night. A miniscule amount is not going to get trapped while the rest radiates into space.

The claim by some scientists that only greenhouse gases heat the atmosphere is another fraud. Most heat gets into the atmosphere through conduction, convection and evaporation.

4. Heat Capacity

The air has too little heat capacity to warm ocean water or melt Arctic ice. Twelve-year-olds were supposed to learn what heat capacity is, but physicists didn't.

To heat oceans with air requires a ratio of 3483 by volume for same temperatures. The heat capacity for air is $1.2 \text{ kJ/m}^3/\text{°C}$, while for water it is $4180 \text{ kJ/m}^3/\text{°C}$. To heat the oceans 0.2°C to a depth of 350 meters would require air losing 0.2°C to a height of 1,219 kilometers (at constant surface pressure). That's 100 atmospheres. The oceans cannot be heated by the atmosphere.

Melting ice with air is even more absurd, as an additional "heat of fusion" is required, which is 334 kJ/kg, which is an additional 278,000 m³ of air per °C per m³ of ice. In other words, air in contact with ice sucks the heat out of the air with no effect upon the ice. With a small amount of ice and a lot of air, the cool air gets replaced with warm air, but on a global scale, the replacing does not occur. It means ice melting has nothing to do with global warming.

The Arctic is warming due to warm Pacific Ocean water flowing over the Bering Strait, not a miniscule air temperature increase. With the recent El Nino, the northern Pacific Ocean is warming causing warm water to flow over the Bering Strait to heat the Arctic and melt Arctic ice.

5. Temperature Measurements are Fake

Not only are humans not the cause of global warming, a temperature increase did not actually occur. The temperature measurements were faked. The original data shows no temperature increase over the past 35 years at least, while contrivers lowered earlier measurements and increased recent measurements to show a false increase. Critics have been studying these fabrications for the past six years and found endless examples. Satellite measurements have shown no significant temperature increase since they began making such measurements in the late seventies. Only satellite measurements are suitable for the purpose of climatology, because they average over a wide area and cover everything, while land-based measurements cover about 10% of the earth and have no standards for cross-comparisons or uniformity.

6. Starting at the End-Point

For a mechanism, climatologists used radiative transfer equations to supposedly show 3.7 watts per square meter less radiation leaving the planet

than entering from the sun due to carbon dioxide. There can never be a difference between energy inflow and outflow beyond minor transitions because of equilibrium, as climatologists recognize. Yet they claim the 3.7 w/m² is a permanent representation of global warming upon doubling CO₂. This number is supposed to result in 1°C near-surface temperature increase as the primary effect by CO₂. However, watts per square meter are units of rate, while rates produce continuous change, not a fixed 1°C. The 1°C was supposedly produced by reversing the Stefan-Boltzmann constant, but reversing it is not valid. (Secondary effects supposedly triple the 1°C to 3°C.)

It means climatologists started at the desired end point of 1°C and applied the Stefan-Boltzmann constant in the forward direction to get the 3.7 w/m² attributed to radiative transfer equations. Radiative transfer equations cannot produce any such number, because radiation leaves from all points in the atmosphere with 15-30% going around greenhouse gases. That dynamic, combined with equilibrium, is beyond scientific quantitation.

The atmosphere is cooled by radiation which goes around greenhouse gases. The amount going around doesn't matter. A gate half open won't keep in half the sheep. The cooling occurs until equilibrium is established with the amount of energy coming in from the sun.

The amount of radiation going around greenhouse gases is said in Wikipedia to be 15-30%. Calculations by climatologists are based upon none going around. They calculate the amount of radiation getting to the top of the atmosphere using "radiative transfer equations." Those equations cannot account for equilibrium, which is a response to every influence upon temperature.

If the amount going around were calculated without equilibrium, there would be a 100% error in the range (15-30%), while the product of the radiative

transfer equations is said to have about 1% error. That product serves as the primary effect by carbon dioxide, which no one in science questions. Only secondary effects are argued.

But the gate is not 15-30% open. Each molecule in the atmosphere radiates energy, with 15-30% going directly into space. That which is absorbed by greenhouse gases is re-emitted with 15-30% going into space. It means the gate is about 99.99% open. The atmosphere cools as fast as heat enters it leaving very low temperatures in equilibrium with the sun's energy. The equilibrium temperatures are very cold, because heat leaves in all directions during all hours, while it enters from one direction, half the time. The energy from the sun lands on the surface (mostly), while it leaves from the entire atmosphere at a depth of 12-15 kilometers.

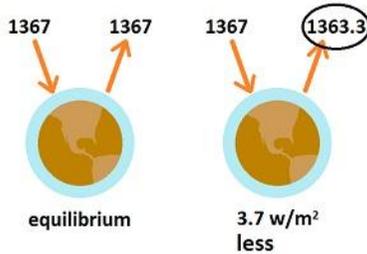
Radiative Transfer Equations

There is no way to produce an equation or number for atmospheric effects. The official climatology position is not an explanation; it's fake mathematics that shows a number to represent heat trapped in the atmosphere, when there is no such thing as trapping heat in the atmosphere. The math is called Radiative Transfer Equations. The result is not a measurement; it is a series of calculations.

The calculations cannot account for the smallest fraction of the effects in the atmosphere or climate. So the omissions are filled in with fake modeling. Modeling cannot account for the missing information either.

Supposedly, the calculations show that 3.7 watts per square meter of radiation less than the sun's energy would show up at the top of the atmosphere upon doubling the CO₂. Failing to escape the atmosphere, this radiation supposedly

creates global warming.



Radiative transfer equations are a scheme for calculating global warming. It is totally impossible to produce such a number, because infinite interactions cannot be represented by one number, and the difference between energy inflow and outflow must always average zero due to equilibrium.

Disequilibrium is an impossibility.

Obviously, the air cools at night. Why would some of the heat be trapped while the rest cools? An impossibility.

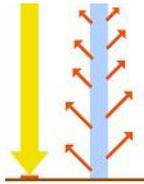
It's impossible to say what the number (3.7 w/m²) is supposed to represent, since nothing about the subject can be reduced to such a number; and therefore, climatologists cannot produce a consistent description of what the number is supposed to mean. A difference between energy inflow and outflow seems to be the most common interpretation.

And then, the number is a rate of energy addition, which cannot be converted into a temperature; yet 1°C is claimed. Supposedly, a reversal of the Stefan-Boltzmann constant converts the rate into a temperature, while reversing the constant is not valid, as it applies to a surface, and there is no surface involved.

Equilibrium

Climatologists needed a number to represent global warming, while there is no number where there is equilibrium.

Equilibrium means the same amount of radiation goes into space as enters from the sun. All large, dynamic systems keep doing something until an endpoint is reached, which is equilibrium. Things self-adjust until they all balance, which is equilibrium.



The way the earth's energy equilibrium works is that radiation carries energy into space at the same rate the sun adds energy to the earth. Most of the radiation leaves from the atmosphere, not the surface of the earth. The reason is because radiation can leave from every point in a transparent gas, but only from the surface molecules for the opaque solids on the surface.

As radiation carries energy away, the atmosphere cools down. The colder it gets, the slower it radiates. It cools until it liberates as much energy as the sun adds. There is a slight delay, as energy builds up during the day and cools down at night.

Equilibrium determines the temperature of the atmosphere independent of how the heat gets there. Supposedly, humans ruined the radiation equilibrium causing less energy to leave the earth than enters from the sun upon doubling the amount of CO₂ in the air. It's impossible for the system to not reach equilibrium.

Climatologists needed a number to represent global warming, so they said 3.7 w/m² of disequilibrium is the number. But there is no such thing as disequilibrium.

The claimed 3.7 w/m² was a mathematical stunt needed to pretend that climatologists can calculate global warming. Otherwise, all numbers disappear in the process of equilibrium occurring. What are scientists if they can't find the numbers?

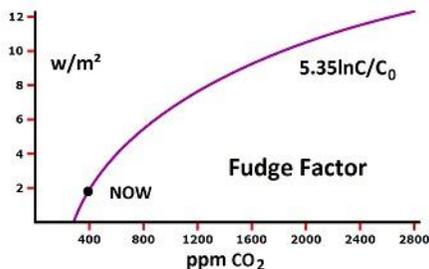
Notice that less energy leaving the earth than entering should result in a continuous buildup of heat. Yet the result is said to be a fixed 1°C temperature increase upon doubling the amount of CO₂ in the air. There is no explanation for this discrepancy. It is being overlooked for the purpose of pretending to have a mathematical analysis where there is none.

Fudge Factor

The fudge factor is the claimed primary effect. It was determined by Myhre et al, 1998 using radiative transfer equations.

It says, the amount of heat added to the atmosphere (watts per square meter) equals 5.35 times the natural log of the amount of CO₂ after an increase divided by the amount before.

Heat increase (w/m²) = 5.35 ln C/C₀



The watts per square meter are then converted into a temperature increase by applying the Stefan-Boltzmann constant.

Fake radiative transfer equations were used to show the primary effect of global warming. The supposed result of the radiative transfer equations was converted into a rudimentary fudge factor for simple calculation of the result. It says that doubling the amount of carbon dioxide in the air, even from one molecule to two molecules, would add 3.7 watts per square meter of energy to the earth.

A three component equation supposedly takes care of the complex effects of carbon dioxide heating the atmosphere. The problem is not that the fudge factor is a simplified representation; the problem is that there is no science to the calculation.

C over C sub zero is the increase in CO_2 . The question is what would happen upon doubling the amount of carbon dioxide in the air. For this the ratio of C over C sub zero is 2. So the fudge factor is 5.35 times the natural log of 2, which is 3.7 watts per square meter. Climatologists call this effect "forcing."

This subject is discussed in the 2001 publication of the IPCC, chapter 6 (6.3.1) (reference 1).

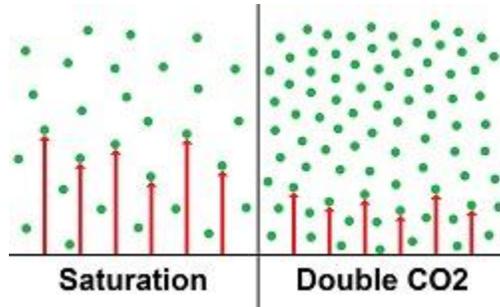
Stefan Rahmstorf (in a book by Ernesto Zedillo, 2008) cited the IPCC saying: "Without any feedbacks, a doubling of CO_2 (which amounts to a forcing of 3.7 W/m^2) would result in 1°C global warming, which is easy to calculate and is undisputed."

The fudge factor is invalid, because it removes saturation. Nothing can remove saturation. Nowhere is there an explanation of how or why saturation was removed in the calculation of the fudge factor. The fudge factor is

derived out of muddle which shows no other purpose than removing saturation from the effects.

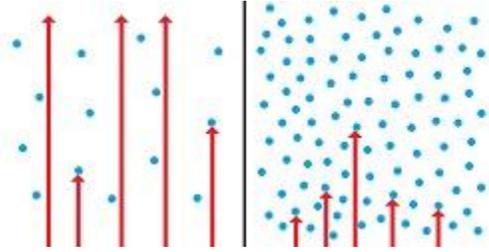
The derivation for the fudge factor was the use of radiative transfer equations by Myhre et al, in 1998. There was no logic in using the radiative transfer equations besides muddling the subject to remove saturation, because there was no known mechanism, and the process of calculating radiative transfer tells nothing of relevance to any suggested mechanism.

Saturation

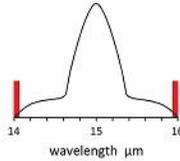


Real scientists determined a century ago, and ever since, that saturation precludes global warming by carbon dioxide. Saturation means all radiation available gets used up in a short distance 10 meters, so more CO₂ cannot absorb more radiation. Fakes pretend to get around saturation but can never explain how.

Supposedly, each molecule of greenhouse gas adds heat to the atmosphere by absorbing radiation. For this to occur, there must be some radiation which would otherwise go through the atmosphere, so it can be blocked. That radiation does not exist.



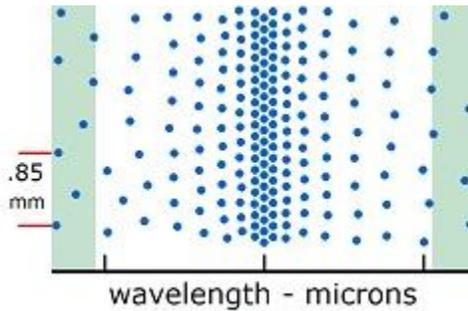
Rationalizers look for a situation represented by the image on the left, where some radiation would go through. At first, they said molecules on the shoulders of the absorption peaks are thin and do what is shown in the image on the left. But that claim would not stand up to criticism; so they switched to the upper atmosphere, where molecules are thinner. The molecules don't get thin enough until they are far beyond the top of the normal atmosphere (troposphere).



The insurmountable problem of rationalizers is that when the molecules get thin enough to allow radiation through, they spread the heat so thin that no significant temperature increase can occur. The molecules would have to be one thousandth as dense as at the surface. But that means one thousandth as much temperature change for each unit of heat.

Carbon dioxide absorbs all radiation available to it in the center of its 15 μm band by the time the radiation travels 10 meters near the earth's surface (6. Heinz Hug). Where then is the non-saturation occurring? Let's say non-saturation occurs when the radiation goes beyond the top of the troposphere. The top of the troposphere averages around 17 km. The density of the

shoulder molecules must be 10/17,000 times that of the center of the absorption peak. This is 0.06% as much as the center molecules (0.00059).

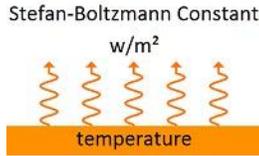


Consider how far apart these molecules are. A CO₂ molecule is about 200 pico meters across, and nitrogen about the same. The atmosphere is now about 400 ppm CO₂. This means there is 500 nano meters of distance between each CO₂ molecule ($1/400 \text{ ppm} \times 200 \text{ pm} = 500 \text{ nm}$). The 0.00059 which does not saturate would have a spacing of 1,700 times that amount ($1/0.00059 = 1,700$), which is 0.85 milli meters. The CO₂ molecules which absorb more radiation for supposed global warming are 0.85 mm apart. This distance is visible with the naked eye.

The dilution factor for CO₂ in the atmosphere is one molecule in 2,500 air molecules. But only the unsaturated molecules can absorb more CO₂, and they are diluted to one part in 2.5 million air molecules (one thousandth of the CO₂ molecules). A small amount of something can never heat a large amount (apart from nuclear reactions) because heat always dissipates (the second law of thermodynamics) instead of accumulates.

Stefan-Boltzmann Constant

The Stefan-Boltzmann constant is used to show the amount of radiation given off by matter at a particular temperature. It shows 20-50 times too much radiation at normal temperatures.



This constant implies that all matter is the same in emitting radiation. Since there are variations, adjustments are made, which are called emissivity, usually given as a percent. For example, some type of wood might give off 70% as much radiation; so its emissivity is 70%, which is multiplied times the result of the Stefan-Boltzmann constant for that type of wood.

This constant can only be applied to the surfaces of opaque solids, not gases like the atmosphere, because radiation is emitted much more readily from a transparent gas than an opaque solid. In a transparent gas, radiation can leave from every molecule, while an opaque solid only allows radiation to leave from the surface molecules.

But the Stefan-Boltzmann constant is routinely applied to the atmosphere. How can an error that gross exist in physics? Overlooking such errors is standard operating procedure in physics. Usually, incongruous math conceals the absurdity. In climatology, the absurdities are more visible than usual.

The reason why the Stefan-Boltzmann constant is applied to the atmosphere is because there are no significant tools available for applying science to climatology. Climatology is so complex and random that it evades scientific study. But after 120 years of failing to convince real scientists that global warming is a problem, the promoters of the cause began applying complex science to the subject. They had no real tools of science to work with, so they misapplied whatever they could find for scientific procedures. Besides using the Stefan-Boltzmann constant for atmospheric effects, they used modeling to fill in the gaps for missing information. Modeling is nothing resembling a

scientific procedure, as it is not a measurement, as shown by the endless variations for results that come out of modeling.

The Stefan-Boltzmann constant is this:

$$\mathbf{W/m^2 = 5.670373 \times 10^{-8} \times K^4}$$

This result is the number of watts per square meter of infrared radiation supposedly given off by matter at a temperature represented by K (degrees Kelvin, which is $273 + ^\circ\text{C}$).

At a normal temperature of 27°C (80°F), the Stefan-Boltzmann constant without emissivity indicates 459 W/m^2 being radiated.

At the assumed average temperature of the earth (15°C , 59°F), it's 390 W/m^2 .

At the freezing temperature of water (0°C , 32°F), it's 315 W/m^2 .

On a hot day of 37°C (98°F), it's 524 W/m^2 .

It isn't happening. Normal temperature matter is not giving off that much infrared radiation.

NASA Energy Budget Flow Charts

The latest NASA energy budget as shown graphically uses the same numbers as the Kiehl-Trenberth model with minor updated numbers. The Kiehl-Trenberth model is the standard reference for energy flows as shown in the IPCC (2) reports. This model is severely constrained by the need to apply the Stefan-Boltzmann constant to radiation being emitted from the surface of the earth. That amount of radiation is stupendously ridiculous. It shows as much radiation being given off by the cold surface of the earth as a white hot light bulb, which is stated to be 79% of the energy leaving the surface of the earth.

This number shows how far off the Stefan-Boltzmann constant is. There should be 1-3% of the energy leaving the surface of the earth in the form of radiation, the rest leaving as conduction, convection and evaporation. If the real amount is 2%, it shows the Stefan-Boltzmann constant to be off by a factor of 40.

The Kiehl-Trenberth model was forced to show such ridiculously high radiation, because the numbers would not fit into the equations with less radiation due to a dependence upon the Stefan-Boltzmann constant.

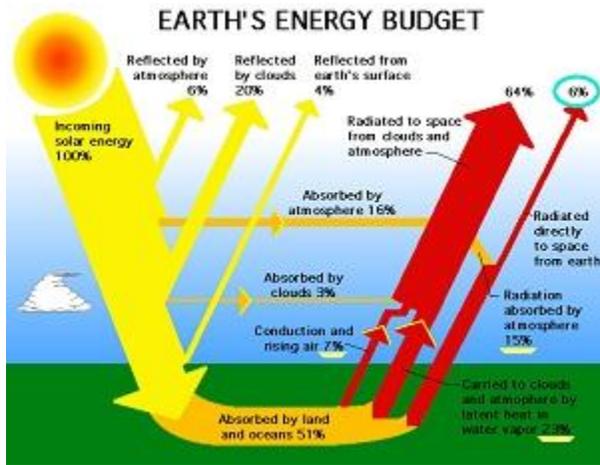
Recent NASA Energy Budget



This model shows 398.2 watts per square meter of radiation being emitted from the surface of the earth. Conduction and convection are said to be 18.4 w/m². Evaporation is said to be 86.4 w/m².

$$398.2 \div (398.2 + 18.4 + 86.4) = 79\% \text{ radiation.}$$

Earlier NASA Energy Budget



For several years, NASA used this earlier energy budget, which shows 41% of the energy leaving the surface of the earth to be in the form of radiation. It shows radiation leaving the surface of the earth as 15% absorbed into the atmosphere and 6% going into space, which is a total of 21%. It shows 7% for conduction and convection and 23% for evaporation.

$21\% \div (21\% + 7\% + 23\%) = 41\%$ radiation.

Why did NASA show 41% radiation for several years? It looks like guess-work. Eventually, they had to conform to the Kiehl-Trenberth model, since it is in the IPCC reports, and the Stefan-Boltzmann constant leaves little room for variation on that number.

Why should the amount of radiation leaving the surface of the earth be 1-3%? Fans would not be used for cooling if radiation were a significant method of getting rid of heat. The earth's surface has a constant breeze blowing over it on average. With a rough surface and a breeze, almost all heat loss will be due to conduction, convection and evaporation.

Emissivity Omitted

In addition to the absurdly high radiation required by the Stefan-Boltzmann constant, the 390 W/m² (revised to 398.2) radiation leaving from the surface of the earth is supposed to be adjusted for emissivity, which is now days said to be 0.64 for the earth's surface. This means 0.64 times 398.2, which equals 255 W/m² instead of 398.2 W/m². Yet the recently produced NASA energy budget continues to show the same numbers as the Kiehl-Trenberth model.

Presumably, when the Kiehl-Trenberth model was produced in 1997, a number did not exist for the emissivity of the earth's surface, so it was omitted. Later, the model by NASA reduced the radiation from 79% to 41%, presumably attempting to make it look more credible. But by then, the Kiehl-Trenberth number had been enshrined in several editions of the IPCC reports, so NASA apparently felt maintaining the same number would be less incriminating than reducing it to almost one half. And still, emissivity was not used to reduce the number to 255 W/m², which shows that a consistent absurdity was more important to them than correct scientific procedures.

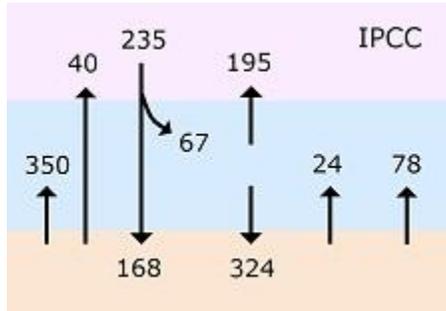
Numbers for the Kiehl-Trenberth Model

This is the Kiehl-Trenberth model (3). (Jeffrey T. Kiehl, Kevin Trenberth (1997): Earth's Annual Global Mean Energy Budget; in Bulletin of the American Meteorological Society, Vol. 78, No. 2/1997, S. 197-208)

The Stefan-Boltzmann constant is this:

$$\mathbf{W/m^2 = 5.67051 \times 10^{-8} \times K^4}$$

With the Stephan-Boltzmann constant, the surface of the earth must be giving off 390 watts per square meter of radiation at its average temperature of 15°C (59°F).



Radiation from sun onto earth's surface: $235 - 67 = 168 \text{ W/m}^2$.

Radiation from atmosphere to earth: 324 W/m^2 .

Total on earth's surface: $324 + 168 = 492 \text{ W/m}^2$.

From surface by conduction (air rising): 24 W/m^2 .

From surface by evaporation: 78 W/m^2 .

From surface as radiation: 390 W/m^2 .

Of the 390 W/m^2 :

40 W/m^2 directly into space.

350 W/m^2 into atmosphere.

Net radiation from surface to atmosphere: $350 - 324 = 26 \text{ W/m}^2$.

Net energy from surface to atmosphere: $24 + 78 + 26 = 128 \text{ W/m}^2$.

From sun to atmosphere: 67 W/m^2 .

Emitted from atmosphere to space: $128 + 67 = 195 \text{ W/m}^2$.

Total into space: $195 + 40 = 235 \text{ W/m}^2$.

Alarmist climatologists use this procedure to show that the numbers can be balanced when using the Stefan-Boltzmann constant, and the greenhouse effect is supposed to be a necessary method of getting the surface temperature up from the -18°C which liberates 235 W/m^2 , based on the Stefan-Boltzmann constant, to 15°C .

There are two major problems visible in the numbers shown. One is that only 24 W/m² leave the surface as conduction, with 390 W/m² leaving as radiation. That's 16 times as much radiation as conduction. Nothing resembling that happens below the temperature of white hot metals. Those numbers were forced into the method because of preposterously high radiation indicated by Stefan-Boltzmann constant.

To account for the extremely high radiation indicated by the Stefan-Boltzmann constant, there had to be a lot of radiation interacting with the earth's surface—specifically 324 W/m² going from the atmosphere back to the surface. This amount left almost nothing for conduction, convection and evaporation. The 390 W/m² being emitted from the surface included 40 W/m² going into space and 350 W/m² going into the atmosphere. The 324 W/m² coming back out of the atmosphere and onto the surface had to be less than the 350 W/m² going in. The 324 W/m² left almost no space for conduction, convection and evaporation, because most of it had to be used to create the 390 W/m².

Balancing ridiculous numbers was more important to alarmist climatologists than a credible logic. Throughout the global warming issue, logic is sacrificed to absurd claims and fake mathematics including falsified data. It also means physicists made up the Stefan-Boltzmann constant off the top of their heads with no relationship to objective reality. It rationalizes fake math and numbers for greenhouse gases, which requires a lot of radiation, but contradicts logic and evidence.

A Ridiculous 33°C

The number one claim produced by nonscientists, particularly bureaucratic authorities, is that greenhouse gases supposedly heated the planet by 33°C. This number, or a description of it, is at the top of nearly every web site on the dangers of "climate change," which nearly every state and local government maintains. The derivation of this number is disgusting; yet it is repeated by some Ph.Ds. and presumably derived by Ph.Ds.

This claim convinces nonscientists that global warming is occurring and of much importance. Until nonscientist activists can get beyond this assumption, they can't be told anything more about global warming.

The stupidity of it is the assumption that radiation is the only way heat gets into the atmosphere. Most heat gets into the atmosphere through conduction, convection and evaporation, not radiation.

Conduction and evaporation must at least reduce the 33°C to a smaller number. Additional factors make it a lot smaller number, even for most climatologists.

But the problem is not just the size of the number, the problem is that there is a lot more to the subject than nonscientists assume; but they have no reason to consider any of it, when 33°C tells them the whole story. This is why almost nothing else is mentioned on government web sites. Once you see the 33°C, there is nothing more you need to know about global warming.

The sun puts an average of 235 watts per square meter of energy onto the earth. The Stefan-Boltzmann constant says matter emits this amount of radiation at a temperature of -18°C. But with an atmosphere the global average temperature near the earth's surface is 15°C, which is 33°C higher. Therefore, greenhouse gases supposedly heated the earth by 33°C.

They missed the conduction, convection and evaporation which heat the atmosphere without greenhouse gases influencing the result. No real scientists could miss the conduction, convection and evaporation. But a few supposed scientists feed this error to nonscientists as their most convincing point.

Here's how this subject was explained for several years on the web site of the Union of Concerned Scientists (removed later). It says this:

"The 'greenhouse effect' refers to the natural phenomenon that keeps the Earth in a temperature range that allows life to flourish. The sun's enormous energy warms the Earth's surface and its atmosphere. As this energy radiates back toward space as heat, a portion is absorbed by a delicate balance of heat-trapping gases in the atmosphere —among them carbon dioxide and methane—which creates an insulating layer. With the temperature control of the greenhouse effect, the Earth has an average surface temperature of 59°F (15°C). Without it, the average surface temperature would be 0°F (-18°C)...

Scientists have concluded that human activities are contributing to global warming by adding large amounts of heat-trapping gases to the atmosphere...we release carbon dioxide and other heat-trapping gases into the air."

Were greenhouse gases allowing the Cambrian Explosion of Life to occur 543 million years ago when there was 20 times as much CO₂ in the air? If so, humans must be doing wonders for life. What is delicate about 20 times as much CO₂ in the air when modern photosynthesis evolved?

How 1°C Was Calculated

Climatologists cannot explain a mechanism for global warming. Instead they use fake numbers, such as 3.7 watts per square meter to represent heat trapped

in the atmosphere due to human activity. There are no square meters in the atmosphere.

It's strange that radiation was calculated, when there is no method of converting radiation into temperature. Temperatures have to be measured, they cannot be calculated. The reason is because infinite complexities related to rates of heat loss and gain determine temperature. For routine events, engineers will set up a model system to determine expected results through trial-and-error. Atmospheric change is not that sort of routine event.

Radiative transfer equations were used to supposedly show 3.7 watts per square meter less radiation leaving the planet than entering from the sun upon doubling CO₂. There can never be a difference between energy inflow and outflow beyond minor transitions because of equilibrium. The disequilibrium is only applied to human activity, as if nothing else in 4 billion years of climatology including volcanoes putting CO₂ in the air created disequilibrium.

With fake science, no two climatologists can agree upon much. So various explanations exist for the 3.7 w/m². Some say, it pushes the equilibrium temperature upward. But there is no mechanism for doing so. Watts per square meter represent a rate of energy addition, which does not produce a stable temperature without an equal rate of subtraction. There would have to be two calculations to include both the addition and subtraction.

This rate of energy addition to the atmosphere (3.7 W/m²) is supposed to result in 1°C near-surface temperature increase as the primary effect by CO₂. The 1°C was supposedly produced by reversing the Stefan-Boltzmann constant, but reversing that constant is not valid, because it only applies to surfaces. Secondary effects supposedly triple the 1°C to 3°C.

To model temperature increase due to CO₂, a primary effect is the starting point, and then secondary (feedback) effects are added. The primary effect is described as "radiative forcing due to CO₂ without feedback," which is the fudge factor, and this is converted to a temperature with a "conversion factor." The result is said to be 1°C for doubling CO₂ in the atmosphere. The simple math is this:

The primary effect (fudge factor) is this: $5.35 \ln 2 = 3.7 \text{ W/m}^2 = 1^\circ\text{C}$. The question is, what happens upon doubling the amount of CO₂ in the air. For doubling CO₂, the ratio of C/C₀ is 2. So the natural log of 2 is used for this purpose.

$$5.35 \ln 2 = 3.708 \text{ W/m}^2$$

This little calculation is promoted as an unquestionable law of physics upon which all else in climatology is based. It is the primary effect from which secondary effects are modeled. Only the secondary effects are in question. The calculation is total fakery.

What this means is that climatologists claim that the primary effect upon doubling carbon dioxide in the atmosphere will heat the atmosphere by 1°C, and then modeling is used to determine secondary effects, which supposedly add 2°C for a total of about 3°C. The primary effect is not questioned, supposedly being an absolute law of physics, and only the secondary effects are studied and argued.

Climatologists convert the 3.7 W/m² into 1°C by reversing the Stefan-Boltzmann constant; but reversing that constant is not valid, because it only applies to surfaces.

Here's how the Stefan-Boltzmann constant is reversed:

The SBC is this: $W/m^2 = 5.670373 \times 10^{-8} \times K^4$

The global average, near-surface temperature is said to be 15°C. Average emissivity is said to be 0.64. The desired end-point of 1°C is plugged in going from the global average temperature of 15°C to 16°C. The end result is 3.486 W/m², and the reversal shows that it produces 1.064°C temperature increase.

°C	°K	W/m ²	after emissivity
15	288	390.1	249.7
16	289	395.6	253.2
difference		5.446	3.486
$3.708/3.486 = 1.064^\circ\text{C}$			

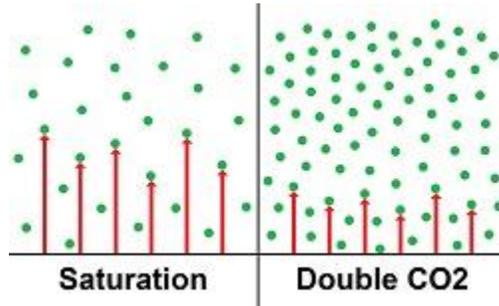
The result is the desired 1°C for the primary effect of doubling CO₂ in the atmosphere, as if climatologists could calculate such things with extreme precision. They claim about 1% error on this calculation.

What this shows is that climatologists started at the desired end-point of 1°C for near-surface temperature increase upon doubling CO₂ in the atmosphere and faked the fudge factor through obscure radiative transfer equations which could only be produced using the world's largest computers eliminating any possibility of critics reproducing their results.

Evolution of the Concept

The initial concept of global warming was that more carbon dioxide in the atmosphere would absorb more radiation and heat the atmosphere. Scientists then found that laboratory tests were not showing an increase in radiation absorption with an increase in CO₂ for a very simple reason: A very small amount of CO₂ absorbs all radiation available to it in a short distance. Adding

more CO₂ only shortened the distance required for absorbing all of the radiation. Climatologists refer to this concept as "saturation."



But hold-outs were sure global warming must be caused by increases in CO₂ and looked for explanations. During the seventies, as computers became available, complex modeling was used to show heating of the atmosphere upon increases in CO₂.

In 1979, a quasi governmental office created a study group to clarify the climate influences of carbon dioxide. The result was a publication by Charney et al, 1979 (4), who used modeling of atmospheric effects. Their conclusion was that a doubling of CO₂ in the atmosphere would result in a temperature increase of 3°C. The claims were total fakery. Scientists do not have the slightest ability to convert the details, complexities and randomness of the atmosphere to measurement or calculation, which is why weathermen cannot predict more than a few days for simple elements such as temperature and precipitation.

Charney et al claimed to model such things as "horizontally diffusive heat exchange" and "heat balance." The terms used are nothing but word salad. There is no such thing as horizontally diffusive heat exchange in the atmosphere or oceans. In large fluids, diffusion would cover no more than a few nanometers before convection renders it irrelevant. Why add "heat exchange?" There needs to be two mediums with an interface for heat

exchange. If atmosphere and oceans were the interface, there is no "horizontally diffusive" element to it. Diffusion is a chemistry concept, not an energy concept. Heat moves through conduction, not diffusion. There is also no such thing as "heat balance." Heat migrates and transforms to and from other forms of energy. There is nothing balanced about it.

To model heat through the atmosphere resulting from carbon dioxide, the starting point must be some quantity of heat which is supposed to be moving through the atmosphere. Yet that quantity was the end result of the Charney study rather than the starting point. Numerous other studies used the same basic modeling concepts.

In 1984 and 1988, Hansen et al (5,6) used similar modeling but started with a concept of how much heat carbon dioxide should produce determined as "empirical observation," by which they meant the assumed historical record of carbon dioxide heating the atmosphere. The assumed historical record is that humans increased the amount of carbon dioxide in the air by 100 parts per million (ppm) (280-380 ppm) when the first 0.6°C temperature increase occurred in the near-surface atmosphere. Modeling then had the purpose of showing complex future temperatures. Implicitly, the atmosphere would add secondary effects to the primary effect of carbon dioxide. But the historical record included the secondary effects, which means the secondary effects were compounded. In other words, there is no clear concept of a purpose or a logical set of cause-and-effect relationships.

Yet Hansen et al arrived at approximately the same conclusion as Charney et al—that the expected temperature increase upon doubling the amount of CO₂ in the atmosphere would be about 3°C. This result is always given for numerous such studies with widely varying procedures, which shows that it is nothing but a contrived end result with nothing but fakery for a method of

deriving it. How could the same number be produced with and without a starting point for the amount of heat CO₂ supposedly produces based on the historical record? The implication is that all research on this question used the exact same procedures and got the same results. But the publications are not produced or described the same way, and procedures and technology seem to have been evolving. There wasn't much need for improvement when they always got the same results.

The reason for the invariable 3°C increase upon doubling CO₂ is that journalists said they would not be concerned unless the temperature increase would be 3°C. Otherwise, why not just use the historical record? If it is extended, it would indicate a temperature increase of 1.7°C upon doubling CO₂ in the atmosphere. ($280/100 \times 0.6 = 1.7$) To get some other number than 1.7°C upon doubling CO₂ is to say the atmosphere is going to do something different than it did in the past. There is no explanation of why it should.

In 1998, Myhre et al (7) did "radiative transfer equations," which supposedly defined the energy increase due to CO₂ with extreme precision, which required the world's largest computers. They claimed that the primary effect by CO₂ causes 3.7 watts per square meter of energy to accumulate in the atmosphere upon doubling the amount of CO₂. One of the absurdities is that there is no accumulation of energy in the atmosphere, as equilibrium requires the average amount of radiation leaving to equal the amount coming in from the sun.

Radiative transfer equations also remove the saturation problem. Saturation can be determined in a laboratory in a few minutes. It leads other scientists to conclude that no greenhouse effect can occur for this reason alone. Heinz Hug did such a measurement (8) and said all relevant radiation is absorbed by the time it travels 10 meters in the atmosphere. He wasn't allowed to publish such

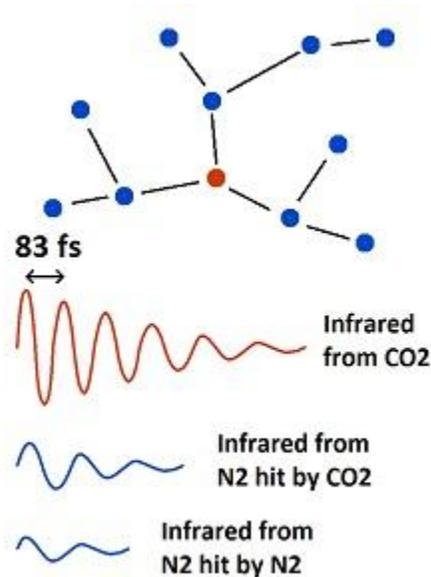
significant criticism, but he put it on the internet. It means the radiative transfer equations made saturation disappear.

Heat Cannot Be Trapped

The second law of thermodynamics says heat dissipates, always, without exception. Here's an explanation of how heat dissipates in the atmosphere upon absorbing radiation.

The relationship between radiation and temperature cannot be calculated due to infinite complexities. One of the problems is that radiation being absorbed by a molecule is partially transferred to other molecules through conduction and partially re-emitted at black body wavelengths. How the energy is distributed by conduction before being re-emitted determines the temperature increase. No theory can say how the energy is distributed.

This image shows how energy is re-distributed when radiation is absorbed by carbon dioxide in the atmosphere.



When a molecule of CO₂ in the atmosphere absorbs fingerprint radiation (the only thing in question) it increases in vibratory motion, which is heat. As it bumps into surrounding molecules (mostly nitrogen gas), it imparts some motion, which reduces its own motion, while increasing the motion of the other molecule. This bumping goes from molecule to molecule, as the energy spreads through the atmosphere.

The vibrating motion of molecules sends out waves of infrared radiation. As the molecular motion decreases, the intensity of the radiation and its frequency get lower.

If the average wavelength of emission is 25 microns, there are 83 femto seconds for each initial bump. (frequency equals velocity over wavelength. Time equals inverse of frequency) ($3 \times 10^8 \div 25 \times 10^{-6} = 12 \times 10^{12}$, inverse = 83×10^{-15}).

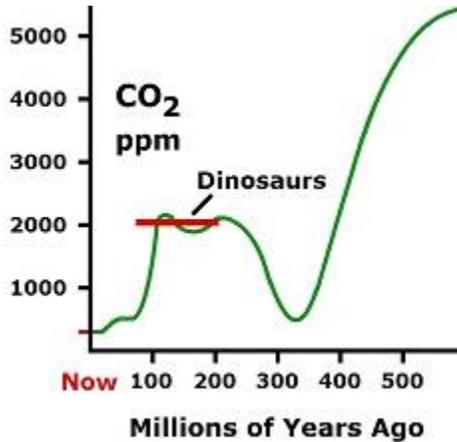
The number of waves or bumps required to liberate absorbed radiation depends upon the relative temperatures of emitting and absorbing molecules. From a hot surface to a cold atmosphere, strong radiation is absorbed by CO₂, and weak radiation is emitted. But most radiation travels less than 10 meters, because the saturation distance is ten meters at sea level air pressure. For this, weak radiation is emitted, absorbed and re-emitted.

With weak radiation, five bumps or waves should dissipate the energy absorbed by one wave. The emitting radiation is in fact stronger than the absorbed radiation, because radiation emitted is black body radiation, which means wide bandwidth, while absorbed radiation by CO₂ is fingerprint radiation, which is narrow bandwidth. But more than one wave emitted per wave absorbed would be required, because energy is being imparted to surrounding molecules through collisions. Those molecules also emit radiation, which means a few bumps should send the added radiation out.

At 5 bumps (two directional) or waves and 83 femto seconds per cycle, the energy radiates away in 415 femto seconds, which is about a half of a pico second. A hundred bumps would give up half of the energy in 8.3 pico seconds. No one knows exactly how the energy disperses through the surrounding environment. So no one knows how much energy is retained before it is radiated out again. Each of the molecules which receive energy will emit some outflowing radiation, but how much and when cannot be determined. So no one knows how much temperature increase occurs, but it is miniscule to a point of irrelevant when one CO₂ molecule out of 2,500 air molecules is doing the absorbing, and the rest are emitting. Of course, most of the heat enters the atmosphere through conduction and evaporation, and that heat is emitted through radiation also.

There Is No Delicate Balance

One of the most ridiculous things about the concept of global warming is the assumption that there is a "delicately balanced" which humans are upsetting. There is a ridiculous concept of balance with global warming, where the cumulative effects reach just the right quantities for survival. This result is supposed to be somewhere between 180 and 280 parts per million carbon dioxide in the air. For a billion years? How absurd can anyone be. There was five times as much carbon dioxide in the air during dinosaur years, and twenty times as much when modern photosynthesis began. How many species can live on one twentieth as much food as they evolved on?



All biology is on the verge of becoming extinct due to a shortage of carbon dioxide in the air, which is needed for photosynthesis. Oceans absorb carbon dioxide and convert it into calcium carbonate and limestone. As a result, carbon dioxide almost disappeared from the atmosphere 300 million years ago. In the nick of time, the level bounced back to the amount during the dinosaur years.

The bounce-back would have been due to volcanoes, as tectonic plates started moving around and separating at that time. Tectonic plates continually get thicker as the planet cools. They were just getting thick enough to do things during the dinosaur years.

Three hundred million years ago is also when conifers evolved. They have needle leaves as a method of maximizing surface area for absorbing carbon dioxide in low supply. The pointedness of the needles also reduces the tendency of dinosaurs to bite into them, though the wood would have been more relevant. Dinosaurs ate nonwoody plants.

The claim of oceans acidifying due to the absorption of carbon dioxide is nothing but more fakery. No one has ever found any other pH than 8.1 in the oceans beyond isolated environments such as estuaries. The claims otherwise

are all predictions, projections, aquarium tests, etc., at least as they leave the science domain; and then nonscientists take it from there and create everything up to the green Martian disease with it. The reason why the ocean pH never varies is because it is buffered by calcium, which combines with the carbon dioxide to form carbonate. The calcium never runs out, so the ocean pH never varies.

All major global effects equilibrate. This means they change until they cannot change further in their interactions. These equilibrium forces are large, and they established themselves billions of years ago. For this reason, the temperature of the globe is in equilibrium with the energy being absorbed by the sun. Equilibrium is not a delicate balance.

Hurricane Math

Simple math shows that hurricanes are not caused or influenced by human-induced global warming.

The atmosphere would have to cool 55°C to heat the surface of the oceans 2°C.

If all 0.7°C heating said to be caused by humans went into the surface of the oceans to a depth of 100 meters, the increase in temperature would be 0.025°C, and none would be left in the air.

Scientists keep saying that hurricanes are not caused by global warming. Activists keep saying they are. The promoters of causes don't let scientists get in their way.

The fact that there have been few hurricanes over the past twenty years shows the truth: The claimed heating caused by humans has not been creating hurricanes. On top of that, simple math shows why. The atmosphere would

have to lose 55°C to heat the top 100 meters of the ocean 2°C. Logic indicates that at least a 2°C temperature increase on the surface of the oceans would be needed to increase hurricanes significantly.

This result, which activists don't realize, is due to air having very low heat capacity, while water has a high heat capacity. It means the heat gets drawn out of air without doing much to the oceans it enters. Melting Arctic ice with air is even more ridiculous, as ice requires 80 times as much heat as warming water requires.

Calculating Ocean Heat

The oceans cover 361×10^6 square kilometers (km²) of the earth's surface.

A depth of 100 meters produces 0.1 times that many cubic kilometers, which is 361×10^5 km³.

At a billion cubic meters per cubic kilometer, the water consists of 361×10^{14} cubic meters.

At 1025 kg/m³, the sea water is 3.7×10^{19} kilograms.

At a specific heat of 3850 joules per kg per °C or 7700 per 2°C, it takes 2.85×10^{23} joules of heat to heat that much water 2°C.

Calculating Atmospheric Heat

The mass of the atmosphere is 5.15×10^{18} kg.

At a specific heat for air of 1,000 joules per kilogram per degree centigrade, there will be 5.15×10^{21} joules per °C of heating.

Dividing the number of joules required to heat the water by the number of joules required in the air equals 55°C of air temperature reduction.

It means the air would have to lose 55 degrees centigrade to heat the oceans 2°C to a depth of 100 meters. The total heating caused by humans was only supposed to be 0.7°C so far.

And activists don't need scientists to tell them global warming is not causing hurricanes. Yet any number of fake scientists are saying the oceans are heating, and Arctic ice is melting due to global warming. Most persons don't believe scientists can be that wrong. Too many scientists are, because too many of them are just like the activists—they don't have a clue as to what they are doing, and they move words around as if it were science.

What the Claimed Human Effect of 0.7°C Does

Supposedly, 0.7°C is the amount of heating of the near surface atmosphere that humans caused with greenhouse gases. What if all that heat went into the top 100 meters of the oceans. More absurdly, how can it still be there if it went into the oceans?

From above, it was noted that the atmosphere will produce 5.15×10^{21} joules per °C of heating. At 0.7°C, multiply this times 0.7, and it is 3.6×10^{21} joules.

It was noted above that the amount of water of concern weighs 3.7×10^{19} kg. Multiplying times the specific heat of 3850 joules per kg per °C equals 1.4×10^{23} joules per degree centigrade. Dividing this into the 3.6×10^{21} joules above yields 0.025°C.

This is how much the oceans would be heated to a depth of 100 meters if all heat supposedly produced by humans went into the oceans: 0.025°C. And then there would be none in the air.

It shows that greenhouse gases would be irrelevant even if everything said about them were true. There is almost no there there in terms of joules compared to everything else. Surfaces control near-surface temperatures.

Melting Ice

Melting polar ice with air is even more ridiculous, because melting ice requires a lot of heat, called heat of fusion, which is 334 kJ/kg (kilojoules per kilogram). Each cubic meter of ice melted would require 261,000 m³ of air losing 1°C ($334,000 \div 1.28 = 261,000$). A cubic meter of water or ice is about 1,000 kg. Melting requires 334 kJ/kg. Combined, it's 334,000 kJ/m³. The specific heat of air is 1kJ/kg with a density of 1.28 kg/m³ at 0°C.

This number can be divided by the height of the atmosphere, which is equivalent to 5km at normal pressure, and it is 52 atmospheres of height above the ice. ($261,000 \div 5,000 = 52$). That's for one meter of ice depth and 1°C of global warming. If the ice is 10 meters thick, 520 atmospheres above it would be required to hold enough heat to melt it.

Of course the air would not circulate well enough at more than a few kilometers of height. What really happens is that the air above polar ice rapidly becomes the same temperature as the ice, and nothing melts. It takes warm ocean currents to melt polar ice. The melting that has been occurring at the North Pole results from warm Pacific Ocean water flowing over the Bering Strait and into the North Pole area.

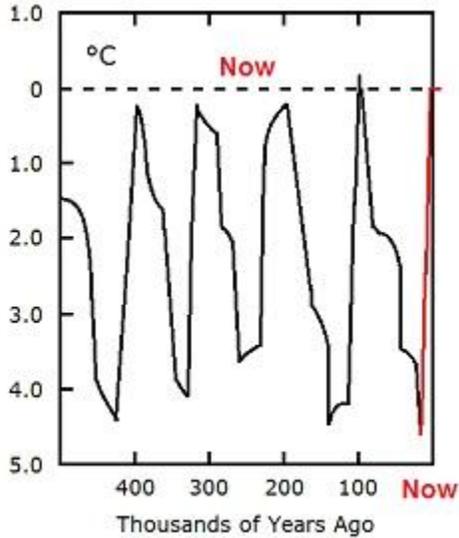
Ice at the South Pole keeps getting thicker, because it sits over land. Warming ocean currents put more moisture in the air which adds snow inland over Antarctica. Around the edges, a small amount of ice melts due to warming ocean currents. Why ocean currents warm and cool, no one knows, except that

ocean temperatures slowly increase between ice ages, and oceans are extremely heterogeneous for temperature.

The glaciers on mountains are totally irrelevant, because they are usually too small. Only the Himalayas are large, and they are not melting, because they are too high to be reached by warm air currents. The low level ice melted shortly after the last ice age. The edges of the mountain glaciers constantly increase and decrease for random reasons. This effect was shown by the "iceman" found in the Alps after some ice melted. He died there about 5,000 years ago. This means there was no ice where he was at about 5,000 years ago, then ice covered over him, and then the ice melted again a few years ago. Such ice melting and reforming has nothing to do with greenhouse gases.

Oceans Accumulate Heat

Oceans increase in temperature continually between ice ages. Oceans are extremely heterogeneous with rivers and mountains of cold and warm water, because heat is stored in the oceans and doesn't release easily. To then assign a number for human influence is total contrivance. One of the points being missed is that oceans are continuously heating, because they trap energy from the sun and a small amount from geothermal energy. Only ice ages cool the oceans back down. A large part of the change that is occurring is due to oceans continually heating.



This graph is a proxy measurement of ocean temperatures using sea shell analysis. Each peak is an ice age. The past few ice ages have been occurring at exactly 100 thousand year intervals.

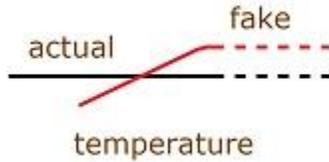
My impression is that the jagged edges on the lines of the temperature graph are largely due to variations in solar influences, but they cannot create an ice age, because ocean temperatures must heat up substantially, particularly around the Arctic, to put enough moisture in the air to cause more snow to accumulate than can melt.

Temperature Measurements are Fake

Temperatures stopped rising, because measurements are fake, and they can't be faked upward any farther. Some of the procedures which show a false increase could only be done once, such as eliminating colder stations, and they cannot be carried further.

Alteration of measurements is never valid in science. Altered measurements are not reproducible measurements. Science isn't someone's irreproducible

wisdom coming out of a dark hole. If it can't be verified, it's garbage. Global warming shows why.



The biggest concern with global warming over the past few years is why near-surface atmospheric temperatures have not been increasing significantly since 1998. Since temperatures never were increasing, why did the fakery stop in 1998? The obvious answer is that the fakery cannot be carried further. The discrepancy with actual measurements is getting too extreme to keep adding fake excuses for alterations of data.

After the email scandal, commonly referred to as climategate, which occurred in 2009, critics looked into temperature measurements, and everywhere they looked they saw tampering which created a temperature increase where raw data showed none. Earlier measurements were being lowered, and recent measurements were being increased to show an upward curve.

The explanation given was that earlier measurements were made in the afternoons, and later, the time of measurement was switched to mornings. So a correction was made by lowering earlier measurements.

Never do weather stations make a single measurement per day. A temperature has no meaning apart from the highs and lows. It takes more than one measurement to determine highs and lows. Only highs and lows have been recorded for at least as long as fake global warming was measured.

An issue which has actually been argued for quite awhile is the "urban heat island effect." It means temperature recordings are getting warmer due to development around the measuring stations. To compensate for the result, temperature measurements need to be lowered, and disputes arise over how much. But then is the argument goes the wrong way. Recorded temperature measurements need to be lowered, not increased, where there is a heat island effect.

Satellite measurements showed no significant increase since they began in the seventies, but satellite results were required to be altered to align with the fake land measurements. And then the claim is that there are problems that need to be corrected with land based measurements. Maybe the satellite measurements should have been the determining influence, but the fakes cannot live with the result of the satellite measurements.

Very little of the earth's surface can actually be measured through weather stations. The gaps are filled in through contrivance, as indicated by the exposed emails called "climategate." The claimed global average temperature changes are totally contrived.

So a study was conducted by meteorologists in 2010 finding these results:

The TV Station KUSI in San Diego stated it this way: "Skeptical climate researchers have discovered extensive manipulation of the data within the U.S. Government's two primary climate centers: the National Climate Data Center (NCDC) in Asheville, North Carolina and the NASA Goddard Institute for Space Studies (GISS) at Columbia University in New York City. These centers are being accused of creating a strong bias toward warmer temperatures through a system that dramatically trimmed the number and cherry-picked the locations of weather observation stations they use to produce the data set on which temperature record reports are based."

Renowned meteorologist Joseph D'Aleo stated it this way: "NOAA is seriously complicit in data manipulation and fraud. ..."NOAA appears to play a key role as a data gatherer/gatekeeper for the global data centers at NASA and CRU."

D'Aleo and Anthony Watts drew these conclusions in their study (9): "The startling conclusion that we cannot tell whether there was any significant "global warming" at all in the 20th century is based on numerous astonishing examples of manipulation and exaggeration of the true level and rate of "global warming".

That is to say, leading meteorological institutions in the USA and around the world have so systematically tampered with instrumental temperature data that it cannot be safely said that there has been any significant net "global warming" in the 20th century."

Itemizing conclusions, they stated:

1. Instrumental temperature data for the pre-satellite era (1850-1980) have been so widely, systematically, and unidirectionally tampered with that it cannot be credibly asserted there has been any significant "global warming" in the 20th century.
2. All terrestrial surface-temperature databases exhibit very serious problems that render them useless for determining accurate long-term temperature trends.
3. All of the problems have skewed the data so as greatly to overstate observed warming both regionally and globally.

4. Global terrestrial temperature data are gravely compromised because more than three-quarters of the 6,000 stations that once existed are no longer reporting.
5. There has been a severe bias towards removing higher-altitude, higher-latitude, and rural stations, leading to a further serious overstatement of warming.
6. Contamination by urbanization, changes in land use, improper siting, and inadequately-calibrated instrument upgrades further overstates warming.
7. Numerous peer-reviewed papers in recent years have shown the overstatement of observed longer term warming is 30-50% from heat-island contamination alone.
8. Cherry-picking of observing sites combined with interpolation to vacant data grids may make heat-island bias greater than 50% of 20th-century warming.
9. In the oceans, data are missing and uncertainties are substantial. Comprehensive coverage has only been available since 2003, and shows no warming.
10. Satellite temperature monitoring has provided an alternative to terrestrial stations in compiling the global lower-troposphere temperature record. Their findings are increasingly diverging from the station-based constructions in a manner consistent with evidence of a warm bias in the surface temperature record.
11. NOAA and NASA, along with CRU, were the driving forces behind the systematic hyping of 20th-century “global warming”.

12. Changes have been made to alter the historical record to mask cyclical changes that could be readily explained by natural factors like multidecadal ocean and solar changes.

13. Global terrestrial data bases are seriously flawed and can no longer be trusted to assess climate trends or VALIDATE model forecasts.

14. An inclusive external assessment is essential of the surface temperature record of CRU, GISS and NCDC “chaired and paneled by mutually agreed to climate scientists who do not have a vested interest in the outcome of the evaluations.”

15. Reliance on the global data by both the UNIPCC and the US GCRP/CCSP also requires a full investigation and audit.”

This was January 23, 2010. Not a word of it was seen or heard by most persons, while the charade of climate change goes on, and critics are excluded from the media under the pretense of protecting the truth from contamination. Real truth is not produced through the safe keeping of the wise. Real truth is strengthened through criticism. Only fraud needs to be sheltered from criticism.

Secondary Effects are Unscientific

Climatologists claim warming by a greenhouse gas results in secondary effects, mostly due to increased water vapor, and these effects are twice as large as the primary effect. Since there is no real primary effect, there are no secondary effects.

Secondary effects are not measured; they are theorized. The theory would be ridiculous even if there were a primary effect.

Natural variations in temperature are extreme. If they were producing twice as much secondary effect, everything would be frying. A second absurdity is that water vapor in the air is not determined by air temperature but by ocean temperature. The third absurdity is that any secondary heating which is greater than the primary heating would produce hysteresis, which means thermal runaway.

The claim that secondary effects produce most of the global warming resulted from a need to increase the 1°C supposedly caused by carbon dioxide into a 3°C effect; so 2°C was tacked on as a secondary effect.

The assumption was that the historical record was indicating that if CO₂ in the atmosphere were doubled, an increase in temperature of 1°C would occur. But critics were saying the increase would have to be 3°C before they would be concerned. And abracadabra, another 2°C showed up. It was said to be a secondary effect. The historical record included secondary effects. So there was an inherent contradiction in adding another 2°C as a secondary effect (called feedback). It was rationalism in contempt for facts and logic.

From season to season, temperatures typically vary by 25-40°C. If 1°C triples to 3°C, why does not 25°C triple to 75°C? Perhaps only long term averages are relevant; but not quite. Temperature changes do what they do in hours for daily variations and weeks for seasonal variations. The lag is due to heat stored in solid earth or ocean water.

If the secondary effects are primarily due to water being vaporized, as claimed, dry air should be producing a lot less heat than humid air, like maybe one third as much heat. But we see the opposite, as desert air is the hottest, and ocean air is the coolest.

The claim is that global warming due to carbon dioxide increases the holding capacity of the atmosphere for water vapor, and water vapor is said to be something like 100 times as strong of a greenhouse gas as carbon dioxide.

(Numbers are hard to pin down, since there is no objective reality to it.)

Extending from that starting point, increased holding capacity is said to result in increased water vapor. Specifics are non-existent, as the modeling is never published beyond the equivalent of a news blurb.

Climatologists err in claiming the amount of water vapor in the air is determined by holding capacity. If so, the air would always tend toward saturation. No one knows what the global average humidity is, but a usual guess is somewhere in the vicinity of half saturation. Saturation is typically 3% for warm air, so an average is usually considered to be 1-1.5%. Do the modelers have a better number? Without it, how can their results have less than about 50% error. They used to claim 15% error, but now they give a range with various degrees of certainty. (The errors are additive for hundreds of effects which they claim to model.)

Humidity is primarily determined by ocean temperatures. Air gets dryer the farther it gets from the oceans. Cooling draws moisture out of the air by creating precipitation, which includes uprising over mountains. Changes in holding capacity due to supposed effects of greenhouse gases will not occur over oceans, as air temperature over oceans equilibrates with the surface temperature of the oceans. This means greenhouse gases will not determine how much moisture enters the air—the essence of the claimed secondary effect.

The forces which remove moisture from the air would also swamp supposed effects by greenhouse gases. Simple changes in temperature do not remove much moisture from the air, only precipitation conditions do. Precipitation

conditions involve dramatic effects including lower air pressure and collisions with cold fronts. The process of precipitation then releases massive amounts of heat—as much heat as absorbed in the evaporation which put the moisture in the air.

A 1°C global air temperature increase would disappear in such major forces associated with precipitation conditions. But climatologists supposedly have the effect calculated and modeled over the next hundred years. Weathermen can't say much about it for more than a few days. Why don't climatologists reveal their superior predictive abilities to the weathermen? When they publish nothing more than a summary and number, they produced nothing more than a summary and number. They start at the endpoint and juggle numbers to get there.

One of the basic pretenses of physicists including climatologists is that they can read any effect through any amount of noise. They are dealing with miniscule effects, which they supposedly can calculate in disregard to major effects which overwhelm their process. Miniscule effects do not survive major opposing forces.

Hysteresis

If 1°C caused 2°C additional increase due to feedback, the additional 2°C would cause another 4°C increase, and these increases would keep compounding. But the claim is that the secondary increase due to water vapor feedback cannot increase more than 2°C.

Putting a cap on feedback or secondary effects is an impossibility and contrivance. The claimed maximum would have been reached long ago due to the compounding effect, and no further increase would be possible at this time, if there is a 2°C cap on it. There is no concept of why the cap would be

any different now than in earlier times. Why would the cap have changed now due to human activities? This concept is nonsensical. Putting a 2°C cap on secondary effects is an oxymoron or self-contradiction, because nothing can have two temperatures simultaneously. A cap says 2°C above some temperature, but the starting point disappears due to the secondary effect. The effect would have to be a force for increase, which could not have a cap on it.

Putting a cap on feedback is assuming and implying that there was a normalcy that was stable before humans influenced the result. Only nonscientists are supposed to be that ignorant of science, but supposed scientists make such claims. Temperatures change 1°C about every 100 miles north or south. When and where is the temperature 1°C above normal and creating the 2°C feedback? There is no such thing as a normal starting point, so there is no such thing as a feedback increase.

The effect of a feedback increase is called hysteresis. It's a force, not a number. In electronics, hysteresis is caused by positive feedback from the output of an amplifier to the noninverting input. It causes the output to go rapidly to one of the voltage rails. A form of this is used for digital outputs, because it locks rapidly at either the plus or minus rail with nothing in between. The input must cross a threshold voltage to change the output.

There is no rail or maximum for temperatures. If temperatures are limited for some reason, that limit cannot be set by some hypothetical starting point, such as a 2°C cap above a hypothetical primary effect. There is no such temperature as 2°C above itself. In other words, an upper limit for temperature would have to be determined by some external requirements, not a hypothetical starting point called a primary effect.

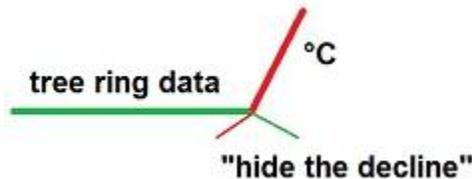
If a secondary effect can influence itself, it creates a dramatic event. An example is a nuclear reaction. In electronics, thermal runaway is such an

example. It burns up components. Combustion is another example. In the atmosphere, no such events have ever occurred, not the least reason being that nothing in the atmosphere can cause heat to generate more heat than it started with, as falsely claimed for greenhouse gases.

The concept of secondary effects is an absurdity patched into the analysis for the purpose of showing more heating than could be attributed to carbon dioxide alone.

Hockey Stick Graph

The pretense of humans upsetting a delicate balance was dependent upon creating the impression in the minds of the public that nature was forever the way it is now. The "hockey stick graph" had that purpose. It needed a straight handling showing the invariability of nature followed by an upward spike showing the dastardliness of human activity.



An increase in temperature a thousand years ago called "the Medieval Warm Period" and a drop in temperature afterwards called "The Little Ice Age" needed to be obscured with modern, impeccable scientific measurements. Tree ring data from northern Siberia was used for that. It showed no change through measureable history.

The fakes couldn't lose, because tree ring data doesn't show temperature; it shows rainfall. Supposedly, the northern climate would make temperature more significant than rainfall. No one has conducted studies to show that

assumption to be true. (There is a common practice in physics of using the absence of a result, such as the Michelson-Morley experiment, as proof of something with no indication of whether such measurements were possible in the absence of a result. Real science requires a determination of the value and limitations of the method of measurement.)

Then an increasing temperature since the industrial revolution needed to be grafted onto the tree ring data, which by then was showing an aberrant decline, which could have resulted from anything. So "hide the decline" showed up in the climategate emails and became the song and dance of "deniers."

What rationalizers say about the flat handle which omitted the Medieval Warm Period and Little Ice Age is that those things only occurred in the northern hemisphere. One problem is that the tree ring data was only collected in Siberia, which is in the northern hemisphere. Why was it flat? If the global average were flat, the opposite must have occurred in the southern hemisphere. Both hemispheres constantly changing doesn't point to the stable average and delicate balance that fakes promote.

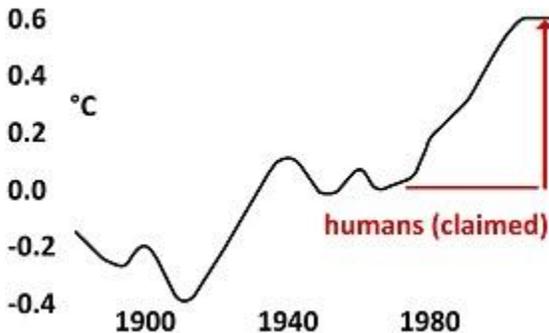
It's impossible to determine a global average atmospheric temperature due to technical limitations. There is nothing for measurements over the oceans, very little in the southern hemisphere or "developing countries," very little over the poles, and worst of all, the weather stations were not designed for climate, because they have nothing for uniformity or proper standards including maintenance. Under these conditions, satellite measurements would be a major improvement; but they showed no significant change. So satellite measurements were altered to conform with contrived land-based measurements.

One of the disgusting things about this whole subject is that science doesn't work that way. Science is supposed to be based upon reproducible measurements. With everything being altered, tweaked and guessed at, there are no reproducible measurements. If temperature measurements need tweaking, better measurements must be produced instead of pretending that someone's hidden wisdom is science.

Measurements with thermometers show that atmospheric temperatures vary wildly from year to year for no identifiable reasons. Even the past seventeen years, where the average is said to show no significant change, the actual measurements vary wildly from year to year, and only the average shows no significant change.



This means scientists don't have a clue as to the factors influencing atmospheric temperatures; and there is nothing in atmospheric temperatures that says a thing about so-called global warming.



These graphs show how wildly atmospheric temperatures vary when using the same instruments each year. What global average is doing, scientists don't have the slightest ability to determine.

Intimidation of Scientists

Numerous scientists are prevented from getting grants or publishing and often fired for being critical of global warming claims (10). Criticism is being disallowed in science and journalism. Scientists have no problem with criticism; only frauds do.

This mentality of science promoting and protecting some cause is the height of fraud. Science cannot promote and protect. It can only acquire evidence through measurement.

If there were such a thing as separating good science from bad, global warming would not exist, nor would relativity or the misdefinition of energy. Only the power of truth allows scientific knowledge to evolve forward.

Science is a measurement business, not a political or religious business. There are no mechanisms in science for differentiating good values from bad. In fact, there are no mechanisms in science for separating good quality science from bad quality science. Each scientist determines the quality of science, and there is no agreement on the subject. Bad quality science is simply ignored and falls to the wayside.

Truth evolves in science, or it doesn't exist. Truth cannot be arbitrated, and the only persons who try are corrupters.

Here are some quotes of scientists:

Tim Ball (11), climatologist. Reported by Toronto Sun, February 13, 2010: "If people knew just how deep and dark this conspiracy is — yes, conspiracy —

they'd be amazed," he explains. "More and more academics are standing up to refute climate-change theories, but it's still dangerous to do so. It can mean the end of a career, the targeting of someone by well-organized fanatics."

Zbigniew Jaworowski (12). reported by Lawrence Solomon, Financial Post
Published: May 04, 2007

"...Because of the high importance of this realization, in 1994 Dr. Jaworowski, together with a team from the Norwegian Institute for Energy Technics, proposed a research project on the reliability of trace-gas determinations in the polar ice. The prospective sponsors of the research refused to fund it, claiming the research would be "immoral" if it served to undermine the foundations of climate research.

"The refusal did not come as a surprise. Several years earlier, in a peer-reviewed article published by the Norwegian Polar Institute, Dr. Jaworowski criticized the methods by which CO₂ levels were ascertained from ice cores, and cast doubt on the global-warming hypothesis. The institute's director, while agreeing to publish his article, also warned Dr. Jaworowski that "this is not the way one gets research projects." Once published, the institute came under fire, especially since the report soon sold out and was reprinted. Said one prominent critic, "this paper puts the Norsk Polarinstitut in disrepute." Although none of the critics faulted Dr. Jaworoski's science, the institute nevertheless fired him to maintain its access to funding."

Bill Gray (13), a climatologist at Colorado State University. Reported by channel 9 news KUSA TV in Colorado: "There's a lot of chicanery involved with pushing this global warming business," he said.

Gray, who has gained fame through his hurricane forecasts, says he has been a skeptic of global warming for two decades.

"We're persona non grata in a lot of circles," he said. "I've been told I'm no longer a credible scientist and I've lost grants ... I've had trouble getting papers published."

Professor Philip Stott (14). Reported by The Telegraph, January 30, 2010: "There are many more scientists who think the way I do...But they don't want to stick their heads above the parapet. They don't want to lose their jobs."

Professor Lennart Bengtsson (15), climate scientist. Reported by the Telegraph, May 15, 2014: "I have been put under such an enormous group pressure in recent days from all over the world that has become virtually unbearable to me. If this is going to continue I will be unable to conduct my normal work and will even start to worry about my health and safety."

There is no place for pressure in science. It is not science under such conditions. Incompetents in science cannot understand the process of science. They cannot understand that their subjective concerns are not supposed to be part of science. They cannot understand that the process of science takes care of itself when done in a valid manner. They cannot understand that truth takes care of itself through rationality. They cannot understand that they are not the protectors of truth. Truth has no masters; it evolves through the interactions of realities.

Absurdity of Ocean Acidification

One of the emphatic concerns which keeps climate change alarmists on edge is acidification of oceans. As oceans absorb carbon dioxide, they supposedly get more acidic. What might the pH of the oceans have been during dinosaur years, when there was five times as much CO₂ in the air as now? would sea creatures have been dying off?

Supposedly, the shells of sea creatures will dissolve if the pH of the oceans gets lower, because calcium carbonate dissolves at lower pH. Calcium carbonate is a soft substance. It doesn't create sea shells without a lot of other things with it. Seashells are like teeth, hardened with numerous substances. Sea shells also have coatings like paint, often proteinaceous.

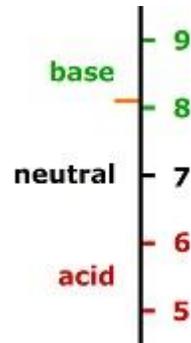
To claim that unmeasurable reductions in pH are killing sea life is mindless. Evolution has been creating the things for half a billion years, and they are going to die when someone sneezes? Someone just doesn't grasp what biology and evolution are, and they supposedly conduct laboratory experiments showing the dangers to sea creatures from a miniscule amount of CO₂ in the air.

Rationalizers have been using the word "precipitation" in regard to the formation of calcium carbonate in the shells of sea creatures—the purpose being to use physical chemical properties for analysis.

Physical chemistry is vastly different from biochemistry. The purpose of reducing complex biological products to physical chemistry analysis is reductionism which guarantees an improper result.

Every atom and molecule in biological systems is controlled through enzymes, structures and environments to produce a defined and complex result. Shells include oxides, zinc, magnesium and other exotic elements in addition to calcium carbonate, to control hardness and resistance to acids, combined with proteins and other organics for structure and protection (similar to paint). The result is nothing resembling precipitated calcium carbonate.

The pH of the oceans can never get significantly lower than 8.1, which is thirteen times more alkaline than neutrality. There are thirteen times more

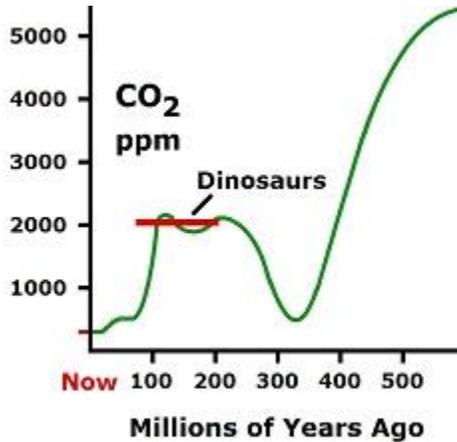


hydrogen ions (which create acidity) in neutral water than in the oceans. This pH cannot change under usual conditions, because it is buffered by calcium which combines with CO₂ in the water to form calcium carbonate. No one has ever measured any other pH in the oceans beyond isolated environments. The talk of acidified oceans is nothing but contrivance and incompetent science.

Sometimes, fake scientists will say the pH of the oceans was 8.25 before human influences, and now it is 8.14 (more acidic). They don't have the slightest ability to determine what it was before human influences, as shown by the ridiculous claim that human minutia could influence the result. Life would never have existed for billions of years, if the climate were that finicky and biology so vulnerable. Fake scientists and gullible persons assume that nothing ever changes, and climate was never any different. The miniscule effects being viewed as catastrophic are beyond belief.

Gullible persons are supposed to assume that such claims are measured science. If you look at the details, you will notice that nothing was measured, it was theorized. Not even proxy measurements will produce such miniscule resolution for the difference between 8.25 and 8.14. Throughout global warming "science," guessing and theorizing are promoted as measured science.

The oceans have had four billion years to absorb carbon dioxide. Why are they not acidic, when 100% of that time the atmosphere had more CO₂ in it than before human influences by all assumptions? No one ever claims that there was less CO₂ in the air than at the start of human influences. There was 5 times as much CO₂ in the air during dinosaur years, and 20 times as much when modern photosynthesis began. So why weren't the oceans more acidic then?



If carbon dioxide kills sea creatures by acidifying the oceans, why aren't they all dead? How did they survive 5 times as much CO₂ in the air during dinosaur years? Even the previous ice age cycle (100 thousand years ago) would have had more CO₂ in the air, because the graphs show a continuous downward slope. Fake scientists have to be total idiots to claim the slight increase in CO₂ caused by humans is detrimental to sea creatures, when CO₂ has never been this low in the past 500 million years.

Weather Claims Ignore the Obvious

Weather is primarily controlled by the oceans. The first thing this should mean is that greenhouse gases could not have much influence on weather, even if they were creating global warming.

Oceans have a large influence on air temperature, since the surface of the earth is seventy percent oceans. Air sweeping over such expanse acquires a similar temperature. But even more important is humidity. The temperature of the ocean surface determines the amount of water vapor that enters the air moving over it. When the ocean surface warms up, a lot of precipitation results, as El Ninos show. And as the ocean surface cools down, the air gets dry, as La Ninas show.

Since air temperature has no significant ability to influence ocean temperature (due to lack of heat capacity in air and huge heat capacity in oceans), the average air temperature increase which greenhouse gases are supposed to create would have no significant influence on weather.

Yet all weather effects are attributed to global warming by activists. Often, scientists will say that severe weather events, such as hurricanes or tornados, were not caused by global warming, but to no avail, as journalists and activists swamp scientific statements with their propaganda.

There was a major weather shift in North America starting around 1980. It was caused by warming of the surface of the Pacific Ocean. In the northern plains, where weather is seldom influenced by Gulf of Mexico air which sweeps northward over Iowa and Illinois, the result was that the corn belt moved about a hundred miles further west due to increased precipitation. The warmer Pacific Ocean air had much more moisture in it. One of the results was warmer winters and cooler summers due to increased cloudiness.

Around 1998, the surface of the Pacific Ocean started to cool back down, and precipitation on the northern plains returned to the normal pattern of sporadic dryness and storms with cold winters and hot summers.

Changing Weather is not Global Warming

A lot of nonscientists think they can look out the window and see global warming. This is probably why society cannot be told that the science of global warming is not there. They can see it out their window.

Extreme incompetence in recent science promotes the problem. Scientists claim that another ice age will be caused by some mysterious cooling effect resulting in snow not melting and reflecting away sunlight creating more cooling. It's stupidity.

There is a law of physics which says energy cannot be created or destroyed. Where then is the cool-down supposed to come from before snow accumulates to reflect away sunlight? Scientists have the cooling occurring before the snow accumulates to reflect away sunlight.

There are significant changes in solar intensity, which apparently caused the "little ice age" of several centuries ago. But these cannot create an ice age, because they don't create enough long-lasting snow for reflecting away sunlight. The summers melt the snow. And there is less snow during such cool-downs, because cold air does not hold much moisture.

Ice ages have been occurring at 100 thousand year intervals for the past million years. The general assumption is that the earth's orbit changes in cyclic ways to cause ice ages. Those cycles are too trivial and complex to be of much significance. When the earth tilts, it still gets the same amount of solar radiation, only the location changes. And why have the recent ice age cycles been occurring for only one million years?

The cause of recent ice age cycles is a water clock in the Pacific Ocean. It has recently been cycling about every 80 or 90 years. Shifting of tectonic plates created the present conditions. As oceans heat up and rise between ice ages, warm water from the Pacific Ocean flows over the Bering Strait and melts Arctic ice. The water flows out the Arctic into the Atlantic. It can stop the ocean conveyer in that area, which it did a few years ago causing some panic before restarting. After several years, the Pacific Ocean cools back down, and the Arctic freezes over again.

With each cycle, the oceans get warmer, as constantly occurs between ice ages. The sun's energy penetrates into oceans about 10 meters (30 ft), and it does not escape easily. So it accumulates between ice ages. Only an ice age can cool the oceans back down. As ice forms on land, the ocean level drops

about 130 meters (400 ft). As the ice melts, cold water flows back into the oceans.

An ice age begins when warm Pacific Ocean water flows over the Bering Strait melting Arctic ice and warming the Arctic area to such an extent that a large amount of snow falls in northern areas. Warm water causes a lot of moisture to enter the air through evaporation. In the north, the result is a lot of snow. If the snow cannot all melt during the summer, it reflects away so much solar energy that a precipitous cool-down occurs causing the next ice age.

During the eighties, the Pacific Ocean was getting so warm that it put a lot of moisture in the air and caused a lot of precipitation in the northern USA. The increased precipitation caused the corn belt to shift about a hundred miles further west allowing corn and soybeans to be grown where there were normally prairie grasslands. The winters were warmer, and the summers cooler due to increased precipitation and cloud cover. This condition continued sporadically during the nineties and two thousands. These changes were attributed to carbon dioxide in the air by global warming alarmists. Several years ago, they were saying, if this heat-up continues, the Arctic ice could melt by the year 2050 and cause some sort of disaster. Over the next few years, most of the Arctic ice melted, as warm Pacific Ocean water flowed over the Bering Strait and melted the Arctic ice. There was a heavy accumulation of snow in northern Canada, but not enough to trigger the next ice age, as it melted during the summer. Alaska, of course, was warmed immensely, as the normal ice was replaced by warm Pacific Ocean water.

All this is attributed to global warming caused by carbon dioxide by global warming alarmists, while it is caused by endless cycles of a water clock. Arctic ice melted some time around 1900, as plans were made for a shipping route through the "Northwest Passage." It was navigated by Amundsen in

1903-1906. But ice soon closed it back up. Scientists do not claim that humans were causing global warming at that time.

Heating of the Arctic by warm Pacific Ocean water causes a lot of heat loss from the planet due to ice thawing and remelting. The heat radiates into space at a greater rate than occurs when the Arctic is cold. For this reason, there is a cool-down of ocean temperatures that follows heating. This cool-down resulted in the drought of the thirties in the USA. The drought lasted about ten years. There appears to be a drought beginning again in the USA, as the Pacific Ocean has gotten colder, at least on the surface. If this cycle is similar to the last one, the drought will probably last ten years again.

These cycles get more extreme each time due to solar energy accumulating in the oceans. The next ice age will be triggered when the Arctic gets so warm that more snow accumulates in northern areas than can melt during the summers. Notice, it is warming of Arctic ocean water that causes the ice age to begin, not some coldness transplanted from who knows where.

The short cycles appear to be quite variable. What is consistent is the amount of time required for oceans to heat between ice ages. There needs to be enough heat in the oceans to cause a lot of precipitation to occur in northern areas where snow accumulates.

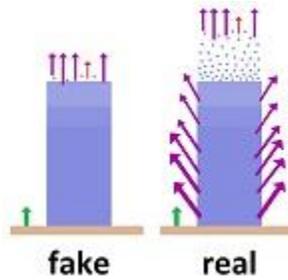
Summary

The primary affect of carbon dioxide was supposedly calculated through radiative transfer equations plus modeling which converted radiation into a global average temperature. The claimed result was that about 1°C temperature increase would occur upon doubling the amount of CO₂ in the atmosphere. A fudge factor was produced for calculating this quantity (heat increase = $5.35\ln C/Co$). Then secondary effects were modeled claiming that

the primary effect would approximately be tripled to 3°C, mostly due to increased water vapor in the air, which is said to be a much stronger greenhouse gas than CO₂.

Saturation was skipped over implying that radiative transfer equations took care of everything influencing absorption of radiation by carbon dioxide in the air. The problem is, saturation cannot be overcome. To claim some math gets heat out of the result shows that the math is wrong. Even if Heinz Hug was wrong about the distance for saturation, which he claimed is 10 meters based upon measurements which he and others did, the problem of saturation cannot be overcome, because the molecules get too thin at any distance. There would be 4 million air molecules surrounding each CO₂ molecule which does the heating, if Heinz Hug was right in showing saturation to occur in 10 meters. Even if he were off by a factor of a thousand, there would be 4 thousand air molecules surrounding each CO₂ molecule which does the heating. To get 1°C average temperature increase would require an equivalent heat for 4000°C for each of the CO₂ molecules.

To then model the radiation, whatever it's level, for converting radiation into heat could not produce a correct result, because no mechanism is known for converting radiation into heat. The location shifted several times, and a different mechanism is required for each location. The current assumption seems to be (it varies from person to person) that the radiation which escapes from the top of the atmosphere is diminished upon increasing CO₂.



Two absurdities are that the top is endlessly beyond the troposphere, and most radiation which cools the planet leaves from the troposphere—more from the bottom than from the top, because it's warmer and more dense.

Why would the official scientists not have measured saturation distance, when it is extremely easy to do and the central concern? They undoubtedly measured it many times over. Since there is no evidence of them doing so, they obviously didn't like the result and used a method of erasing the question, which is the only reason for doing radiative transfer equations.

The modeling goes back to the seventies, and the primary effect was modeled in 1998 producing the fudge factor. If a real mechanism were used or known, the description would not vary from person to person and year to year.

The secondary effect requires the same modeling assumptions as for the primary effect, since water vapor functioning as a greenhouse gas is assumed to produce most of the secondary effect. Water vapor is assumed to be a much stronger greenhouse gas than CO₂ (more or less 100 times stronger), which means it saturates in a much shorter distance. In other words, the saturation problem is much more extreme for water vapor than CO₂, and yet water vapor is said to produce twice as much heating as a secondary effect than the CO₂ does as the primary effect.

Whatever is being done in the dark holes of radiative transfer equations and modeling atmospheric effects, it couldn't be anything resembling correct science, because the contradictions in the claims cannot be resolved through math or modeling.

The procedures and publications used for this subject are so far removed from proper scientific methods that they should not be viewed as science. The reason is that no one can determine what was done to verify the results. It's like not filing tax forms and saying, just trust us. The government wouldn't get much for taxes, if no forms were filed. This leaves nothing but the impeccable standards of climatologists to base reliability upon, while they shove out anyone who criticizes them, preventing them from getting grants or publishing and often firing them. Real science does not require a suppression of criticism. The end result is to base the entire subject on the claim that 97% of the scientists agree, while no one in science is allowed to disagree. It's like having the Mafia do the banking with no bookkeeping, since they can do no wrong.

Creationist say dinosaurs drowned in a flood ten thousand years ago, because the Bible says so. They have a geologist who says rocks can form in 500 years, and that's why fossils are found in rocks on mountains. It's the same time and station for carbon dioxide. Activists feed us their imagination, because they don't have a clue as to what scientists are saying, but it couldn't be wrong, because scientists supposedly agree with them. But with climatology, even the scientists don't know what other scientists are doing, not only because it isn't published, but because there isn't enough objective reality to it to even guess what they are doing beyond fakery and propaganda. No two scientists produce the same description of a mechanism or related complexities.

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Chapter 4: Clueless on Electrons

Chapter Summary

Physicists have kinetic energy being transformed into chemical energy in claiming fossil fuels are created through pressure and in claiming ATP is energized by rotating proteins. Nothing can increase chemical energy but radiation, because acting upon nuclei cannot increase the motion of electrons. Chemical energy is in the motion of electrons which orbit nuclei. How could physicists not know this? They are so absorbed in contrivance that they don't really study the science of a subject.



Quantum Mechanics is Fantasy

Quantum mechanics is largely a study of electrons. Physicists should know a lot about electrons by now. But the basic assumptions and starting point for the subject are so ridiculous that they stopped all further progress in its tracks.

Max Planck was a theoretical physicist attempting, around 1900, to determine the amount of energy produced by light or radiation. He acquired the assumption that radiant energy contained units of fixed amounts, and those units are now called photons or packets. It looks to me like the reason why physicists accepted that theory is because it reduces to a mathematical constant, while no other analysis of the problem does.

Packets of energy are absurd by all criteria. Packets have length, width and height; energy does not. Energy is basically the ability to create motion. There is no concept of creating motion from packets. There is no momentum

involved, like a bean bag. It's supposed to be radiation. How can radiation be contained in a packet? It can't.

Physicists admit that the photon concept is in conflict with the wave theory of light; and yet they cling to both concepts after more than a century of contradictions. Science doesn't work that way. Unresolvable contradictions are not science until the contradictions are resolved. Until then, it's just a study of the problem, not a conclusion.

Here's what the problem is: Electrons which spin around nuclei will shift to a higher orbit only when they acquire a fixed amount of energy. Radiation will provide that energy, but only if it is the right wavelength. Perhaps then, each wavelength has packets of energy of different sizes. And maybe not. It's hard to imagine that physicists couldn't have come up with better theories. But they are drawn to reductionist mathematics, and packets of energy get them there.

What really happens is that electrons need a certain amount of energy to get to a higher orbit, and only the right wavelength of radiation will provide that energy, because the radiation must bump the electron numerous times and on the same side of its orbit each time. If the electron is bumped on both sides of its orbit, one bump neutralizes the other. Only the right wavelength will bump the electron on the same side of its orbit each time.

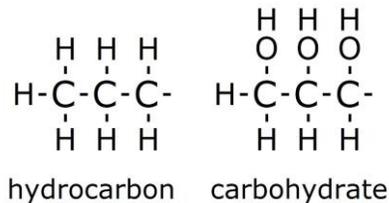
Scientists know that radiation decreases in energy with the square of the distance that it travels. The photon theory says the energy of radiation stays the same regardless of how far it travels. What could be more ridiculous. Only wanton reductionism could produce such a concept. But this concept is the essence of quantum mechanics. It's so ridiculous that it prevents physicists from making any progress in understanding what electrons do.

Claimed Fossil Fuels are not Fossil Fuels

This ignorance shows up in many places. A simple example is the claim that so-called fossil fuels were created from biological materials under heat and pressure. A truism is that neither kinetic energy nor heat can be transformed into chemical energy.

Fossil fuels are called hydrocarbons. They have two hydrogen molecules attached to most of the carbon atoms with no oxygen. Biological materials are mostly carbohydrates. There are two hydrogen atoms and an oxygen atom attached most of the carbon atoms. The greater oxidation of carbohydrates means they are in a lower energy

state than hydrocarbons. Heat and pressure cannot increase the energy state of carbohydrates to that of hydrocarbons.



Heat and pressure can only act upon nuclei; they cannot act upon electrons. Therefore, they cannot increase the energy state of electrons. And therefore, they cannot increase the energy state of carbohydrates. Chemical energy is in electrons, not nuclei.

Nothing but radiation can increase the energy of electrons or create chemical energy. Nuclear reactions are sort of an exception, but they are so complex that it is hard to say that they increase the energy of electrons apart from radiation. Regardless, nuclear reactions have nothing to do with fossil fuels.

Where then do fossil fuels come from? They would have been created with the origins of the planet. Oxygen, hydrogen and carbon would have combined to form water and hydrocarbons. The oxygen would have gotten used up

before the hydrogen and carbon resulting in some hydrocarbons forming. It was only later that additional oxygen was added to the atmosphere.

Scientists are theorizing that oxygen was added to the atmosphere only after photosynthesis began, as oxygen is a byproduct of photosynthesis. It seems unlikely that biology evolved to the point of photosynthesis without oxygen in the atmosphere. Respiration would be needed to get rid of the accumulation of biomass. So respiration should have evolved from the beginning of biology, which is quite a bit before photosynthesis could have evolved.

It seems more likely that the atmosphere would have acquired oxygen from perchlorates which were mixed into the outer crust of the earth and released with some delay. Perchlorates are solids under appropriate conditions, but they easily break down into oxygen and other molecules. Salt would have been the end point for the chlorine, and this is probably why the oceans have so much salt.

At any rate, hydrocarbons were created very early in the earth's formation, and only the ones deep in the ground survived the harsh conditions of the early formation of the planet. Coal took various forms as hydrocarbons mixed with other things including vegetation. If peat evolved into a type of coal, then it has no more energy than the plant material had.

ATP Synthesis

Another place where physicists get chemical energy wrong is in the study of ATP synthesis. Since ATP is about energy, it is studied by biophysicists. If they studied any biology with the physics, they couldn't have gotten it so wrong. They have kinetic energy restoring the chemical energy of ATP. A truism is that kinetic energy can never be converted to biochemical energy.

Biochemical energy is in covalent bonds, which means electrons orbiting the bonded nuclei. The energy is in the motion of electrons. Kinetic energy is in the motion of nuclei. Nothing can be done to nuclei short of a nuclear reaction which will add energy to electrons.

The ionic bonds of inorganic chemistry are different from the covalent bonds of organic chemistry. Ionic bonds are not understood, but they are weak and do not involve electrons orbiting nuclei in a close and strict manner. They are subject to electrochemical influences which organic molecules are not.

The linear motion of electrons (such as copper wires) is a totally different question. Yet the childish rationalizing on this subject includes a lot of reference to batteries claiming that the chemical energy of batteries is derived from the mechanical motion of the generator (or alternator). Batteries are not a form of chemical energy; they are electrical energy. The difference is that chemical energy is in electrons which orbit nuclei, while electrical energy is linearized for flowing through wires, not around nuclei.

Only the radiation of photosynthesis can increase chemical energy in biological systems. All other reactions reduce the amount of chemical energy, as heat is a byproduct of energy transfers.

ATP is the universal energy carrier in biology. It donates chemical energy to biochemical reactions. It gives up its energy by splitting into ADP and inorganic phosphate (Pi). To become reenergized, another source of chemical energy is needed. During respiration, the primary carrier of the energy is hydrogen attached to NAD, which is at a higher energy state than ATP. In fact, three ATPs are usually reenergized from each NADH.

What biologists know about the process is this: NADH feeds a high energy electron into the cytochrome system. An electron flow through three

cytochromes energizes three ATP molecules. Biologists do not know exactly what cytochromes do. Biophysicists virtually ignore the cytochromes and concoct an absurd alternative.

The structure of cytochromes provides much evidence of their function. Cytochromes are somewhat circular structures containing a large number of double bonds creating properties much like aromatics, and they have a metal in the center, usually iron and sometimes copper. These characteristics point to a quasi linearization or free motion of electrons (with no mechanical energy involved). Copper and iron seem to linearize or free-up the motion of electrons.

An important thing about cytochromes is that you can give or take a few electrons, at least one. This is what creates the extremely high efficiency of energy transfer. Almost no energy is lost in generating three ATPs. Electrons can be traded in this system. A high energy electron can be fed in, and one of just the right amount of energy can be taken out for energizing an ATP molecule. Biophysicists have a totally unrecognizable method of getting ATP energized.

During respiration, hydrogen ions (protons) are pumped across a membrane into an area where they form an osmotic pressure. They then use that force to turn rotating proteins which control the reactions. The rotating proteins move reactants into place and remove the finished product as ATP.

Biophysicists claim that the high energy electrons are used to create the osmotic pressure of the protons. No such mechanism exists. As protons turn proteins, ATP is said to be energized by "binding force" from the rotating proteins. This says kinetic energy is converted into chemical energy, an impossibility. It also uses as much energy as it transfers, so there can be no increased energy in the resulting ATP.

ATP is commonly used to transport hydrogen ions (protons) across membranes. This is called the hydrogen ion pump. It is used to control pH inside of cells by excreting excess acid (hydrogen ions). It would also be the way in which the osmotic pressure of protons is created for ATP synthesis. It means some ATP is used up creating the concentrated mass of protons called an osmotic gradient.

Therefore, according to the theory of biophysicists, the same amount of energy would be required to create the osmotic gradient as gained in the resulting ATP, and there would be no net gain in the process. It takes the energy equivalent of an ATP molecule to move a proton into place and the energy of the proton to synthesize an ATP molecule.

What really happens would be that an ATP molecule would be used to pump a proton into its gradient, but the proton is then used only to turn the rotating proteins. One proton would turn the proteins through numerous revolution, as very little energy would be lost in keeping the proteins rotating.

The purpose of the rotating proteins is to move reactants into place and out of the way again. Every biochemical reaction would benefit from rotating proteins for moving reactants around. Otherwise, simple diffusion is required for moving reactants, and it would be much slower.

Using rotating proteins is way too demanding for most biochemical reactions, as there are a large number of proteins involved. But it's a mechanism worth the trouble for respiration, because the rate of respiration determines the amount of activity animals can produce and the speed that they can move. When muscles are heavily used, they switch from respiration to fermentation and produce ATP, because respiration cannot keep up. This means respiration is pushed to its limits in animal activity, and rotating proteins are needed to maximize the rate of respiration.

Biologists could not have butchered the subject the way biophysicists did. Biologists (or at least biochemists) account for the amount of energy involved in each reaction. Biophysicists didn't bother. Not only did biophysics have kinetic energy converting into chemical energy, they contrived a new method of transferring energy, which they called "binding force." Such a degree of arrogance and wanton disregard for established scientific knowledge only comes out of physics. It's a mentality that has been nurtured in physics for three hundred years.

Even if the energy of a battery is said to be chemical energy (arbitrary terminology), the energy is not defined by electron orbits around nuclei, as it is with ATP. With batteries, it is only linearized motion that the generator increases in energy. To then say this represents how energy is added to ATP is absurd. This means mechanical motion cannot increase biochemical energy, even if the linearized motion of electrons in a battery is increased by mechanical motion.

The battery analogy is not the only problem with the ATP analysis of biophysicists. They left out cytochromes. They have binding force of rotating proteins doing what cytochromes do—transferring high energy electrons to ATP. And they have no net gain in ATP—using one molecule of ATP to create the proton gradient for each molecule of ATP energized by the rotating proteins.

Even if biophysicists say the electrons pass through the cytochromes on their way to the rotating proteins (Corrupt scientists go to great effort to obfuscate rather than explain.), they leave no relevant function for the cytochromes. The source of energy in NADH energizes three ATP molecules. But if all it does is create the proton gradient, it can only energize one ATP molecule.

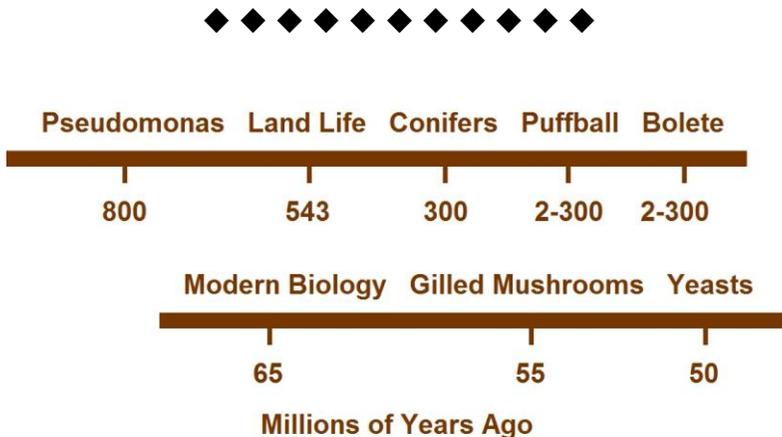
Respiration only distributes the energy which it gets from NADH. Getting energy out of binding force is not a redistribution process but a transformation process. Transformation means one form of energy is converted into another form. In this case, biophysicists have transformation from biochemical energy (ATP) into mechanical motion (kinetic energy) to turn the rotating proteins, and then the kinetic energy is transformed back into biochemical energy, as binding force supposedly energizes ATP.

Chapter 5: Corrections on Evolution

Chapter Summary

Scientists get very little right about early evolution, missing anything that cannot be studied in a laboratory; and they don't study broad enough areas to understand the complex interactions. They assume an asteroid destroyed the dinosaurs, but it was grass which overcame oppressive brush of nonwoody plants eliminating dinosaurs and shaping modern biology.

Even if an asteroid or volcano speeded up the extinction, it was grass which shaped the result and would have produced the same result eventually. The nature of the transformation shows the influence of grass in promoting modern biology while eliminating vast amounts of primitive biology.



Soil Formation

Scientists are mystified by the Cambrian explosion of life. About 543 million years ago, the number of species vastly expanded. The most likely explanation seems to be that a planet exploded between Mars and Jupiter where the asteroid belt exists, and good quality clay was layered onto the

surface of the earth. Numerous critical minerals were probably added to the earth's surface also.

Since the Cambrian explosion of life occurred first in the oceans, it was probably the deposition of minerals in the oceans caused by the planet exploding that created the initial result. There was probably very little for usable minerals available to biology prior to that time.

Apparently, iron was drawn out of the Precambrian oceans by primitive microbes. Precambrian soils, created through ocean sediments, have red and yellow streaks due to iron and sulfur used as energy by ancient microbes.

There are two reasons why scientists cannot draw these conclusions. One, they don't assume that a planet exploded, at least at this time. And two, they assume soil was produced by plant roots breaking down rocks. This means there was no soil until long after plants with roots evolved, which was around 450 million years ago. The concept is totally ridiculous, as plants with roots cannot grow on rocks; they need soil.

Apparently, shale was the closest thing to soil to be formed while the earth was created. Oceans could erode the shale creating soil-like sediments. This material probably did not get to the land surface until recent times, because major upheavals of continental plates would be required.

Of course volcanoes contribute something to soil, but these minerals need improving through biological activity and mixing with other soil. More significantly, there were no volcanoes until about 300 million years ago, because the tectonic plates were extremely thin. They keep getting thicker as the planet cools. Volcanoes cannot be produced until the tectonic plates are thick enough to get damaged as they bump into each other, basically by sliding over and under each other. Since tectonic plates were very thin prior to

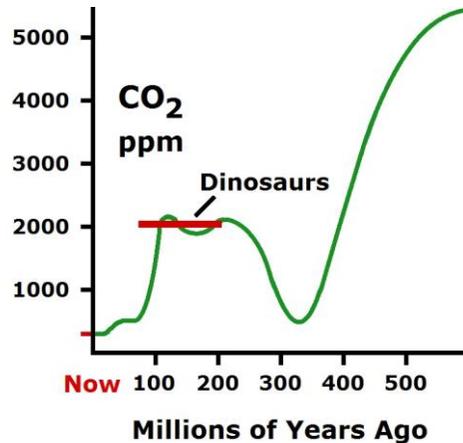
300 million years ago, there would have been nothing for mountains, and the terrain would have been close to flat.

The beginning of volcanoes 300 million years ago is indicated by the CO₂ graph which shows a restoration in the CO₂ level at that time. Oceans continually absorb carbon

dioxide and tie it up as calcium carbonate and limestone. Almost all CO₂ was removed from the air 330 million years ago. In the nick of time, volcanoes added back significant CO₂. Now the CO₂ level is again

dangerously low, as oceans

continue to tie it up, while volcanic activity is decreasing due to extremely thick tectonic plates which do not easily allow lava to get through.



Conifer trees evolved about when tectonic activity began creating volcanoes, 300 million years ago. The driving force for conifers was apparently the formation of hills, which allowed plants to separate into nonwoody types in the low areas and woody conifers on the hills. Dinosaurs ate nonwoody plants only.

Biologists cannot produce a realistic explanation for the size of dinosaurs. There is always environmental pressure creating significant evolution. The obvious force for dinosaur size was that walking through brush is extremely difficult. It takes a lot of power, which takes a lot of size. Nonwoody brush would have had no open space under a canopy, as modern forests do. So dinosaurs would have had no choice but to tromp through heavy brush. The

brush would not only have provided food but would have also protected eggs and young dinosaurs from predators.

How Modern Biology Began

The theory that dinosaur extinction was caused by an asteroid impact lacks too much. Even if such an asteroid were involved, it would have been a minor part of the process.

Dinosaurs were due to be replaced, as evolution does not stand still. It constantly gets more specialized and efficient. Dinosaurs should not have lasted long with their extremely crude characteristics and cumbersome size. It was the nonwoody brush that locked dinosaurs and much of their ecosystem in place. The brush kept mammals small, as they had to move under and through the brush.

All the while, the flowering plants were slowly and invisibly setting the trap for dinosaurs—not only the dinosaurs but the nonwoody brush as well. The white knight, the Robin Hood, saving biology from the scourge of nonwoody brush was grass. The most significant property of grass is that it absorbs water above the ground in addition to through the roots. This allows grass to thrive on much less precipitation than other plants. The long, pointed leaves allow dew drops to run down to the base, where moisture is absorbed. To outcompete other plants, grass formed an impenetrable mat on the surface.

Very few nonwoody plants survived the evolution of grass, and dinosaurs went out with the nonwoody plants. Dinosaurs could not survive grass, because they had to eat nonwoody plants; and grass would have exposed their eggs and young to predators. If an asteroid impact was involved with the extinction of dinosaurs, it would have been a minor contribution to what would have happened anyway.

The evolution of grass is visible in a newly discovered dinosaur (*Anzu wyliei*) which looks like a large chicken due to its thin, long legs. Long legs and light weight are needed for walking through grass. This dinosaur was one of the last to exist before they all became extinct. It means grass was significantly developed when dinosaurs died out.

Grass shaped modern biology. Mammals could walk over it and through it, which freed them to diversify. Flowering plants found space around the grass and sometimes within it. They evolved into a new type of woody plants which became broadleaf trees. Flowering plants evolved sugary substances, which allowed yeasts to evolve from filamentous fungi. Fungi also evolved into modern mushrooms which could grow within the grass. All this began 65 million years ago.

The official story is that the extinction of dinosaurs left "space" for mammals to evolve. How could space be relevant? A dinosaur takes up a few cubic feet of space, and the earth's surface has quadrillions of cubic feet of space. Are we supposed to read something into space? Is that supposed to be science—reading something into a word? That's the point. Power mongers replaced science with word salad which goes on and on.

Mammals were exploiting dinosaurs, as they would have been relying upon dinosaur eggs as a primary source of nutrients. After the dinosaurs were gone, most mammals had to adapt to eating grass. Predators could then follow the grass eating mammals.

Evolution of Mammals

When significant terrestrial life began, shortly after the Cambrian Explosion in 543 BP, fish were soft bodied, as bones had not yet developed. When a planet exploded in the asteroid belt and left good quality soil on the surface of

the earth, amphibians formed and moved onto land. They created internal bones. It took gravity on land to cause bones to form.

Evolution biologists can't figure out why evolution created extreme diversity during the Cambrian Explosion. They can't seem to quite grasp that evolution does not create diversity. Evolution does not shape evolution. Environments shape evolution, and environmental change is required to create diversity. The extreme diversity during the Cambrian Explosion had to result from environmental change.

How then did fish acquire bones? They would have gotten bones from amphibians which migrated back into the water. Then the boney fish migrated back out of the water onto land (400-300 million years ago) and evolved into mammals. This pattern is evidenced by recent studies which show the limbs of mammals evolved from fish fins.

The amphibians which stayed on land evolved into reptiles. Reptiles are not as advanced as mammals, because they did not go through the drastic environmental changes of migrating back into the ocean and back onto land, as mammals did. The experience of going back into the oceans and back out created much more evolutionary change for mammals than reptiles experienced.

This pattern of migration is indicated by the two dots which humans have below their front teeth. The dots can be felt with the tongue. The dots are remnants of hooks used by ancient fish, which means mammals evolved from boney fish.

Going into the oceans and back out did not in itself shape the evolution of mammals. Instead, it made the DNA more prone to evolution, presumably by stripping proteins away from a large part of the DNA so it could evolve more

freely. The amphibians which evolved into reptiles did not undergo as much change as mammals, as their DNA would have been less available to evolution.

The proteins which protect DNA did not disappear from the mammalian line; they mysteriously acquired the ability to allow evolutionary change while continuing to resist undesirable mutations.

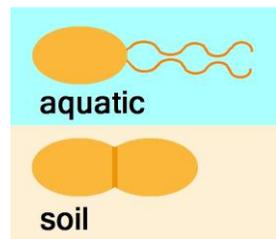
Evolution does not occur as significantly or rapidly in the oceans as on land, because the oceans are extremely stable. It takes environmental change to produce evolutionary change. Tides create more change near the shoreline.

For this reason, most of the diversity in the oceans resulted from land creatures continually adapting to the oceans throughout evolutionary history. Mammals are still adapting to the oceans and creating a wide variety of sea creatures.

Pseudomonas fluorescens and ATP

One of the most astounding products of evolution is the bacterium *Pseudomonas fluorescens* (*P.f.*). It never branched on the evolutionary tree; it just kept adding more functions. About a 800 million years ago it swam in an ancient sea using two polar flagella which rotate. It produces a fluorescent, blue-green pigment in water. The pigment glows for insects, which see at a higher frequency than humans, causing them to pick up the bacteria and carry them around on their feet.

Polar flagella would have evolved before terrestrial life began, 543 million years ago, because exotic structures were easy to produce during early evolution. Filamentous fungi show extremely



frivolous structures which evolved early in evolution, such as innumerable variations of the clamp connection. Not only was there less competition and related demands early on, but less specialization allowed more varied alternatives. All biological life is differentiating itself out of existence through over-specialization, which is why so many species die out when environmentally stressed. Biological life could end in 10 million years or less due to over-specialization.

There is another type of flagella called peritrichous flagella, which surrounds some bacteria. That flagella is designed for moving through viscous liquids, and it is more recent. The difference stems from modern biology creating viscous liquids with nutrients, while in the ancient world water with few nutrients was the primary liquid for biology. Scattered nutrients in an ancient sea gave *P.f.* a more versatile nutrition and physiology. Now days, bacteria specialize more, because they have specific habitats with consistent nutrients.

Evidence of *P.f.* moving out of an ancient sea onto land is in the fact that it is the most common and well adapted soil bacterium. *P.f.* adapted to soil better than any other bacteria, because it was the first bacterium in the soil.

Pseudomonads are linked together in pairs under nonaqueous conditions, which is the basis for the name. This allows one of the bacteria to break open and release enzymes near the other one. Whereas molds produce enzymes on their surface, bacteria have to break open to release enzymes.

P.f. breaks down proteins in the soil, which is highly significant where ground freezes. Ice crystals break apart most cells in the soil including some plant roots, fungi and insects. *P.f.* is the first bacterium to act upon the resulting cell debris in the spring. But it will also grow on extremely diverse nutrients. The isolation medium for it is glycerol and nitrate. Nothing else noticeable grows on that combination.

Under nonaqueous conditions, *P.f.* produces a pink, nonwater-soluble pigment. This pigment shows up when growing *P.f.* on glucose and agar. Most bacteria would die for a pigment, but pigments are usually too extravagant for them. *P.f.* has two. Pigments allow insects to see and land on bacteria; so they to pick up the bacteria and carry them around.

Also indicative of evolutionary age is symbiosis. The oldest species accommodate their environment the best. *P.f.* is like a slave for plants feeding them organic nitrogen. For example, when grains such as wheat are planted in the spring, the leaves start to turn yellow due to a shortage of nitrogen, because *P.f.* hogs up the nitrogen early in the spring. After about a month of growth, the leaves turn dark green, as nitrogen becomes available. *P.f.* autolyzes (self-destructs) and releases nitrogen to the grain in the nick of time.

Plant roots excrete acids from the TCA cycle, which increases bacterial growth around them and induces some autolysis by the bacteria to feed on them. Mushrooms can then exploit the nitrogen along with the plant roots. With autolysis providing complex nitrogen, a diverse population of bacteria develop around plant roots. Even morel mycelium is drawn to plant roots because of the bacteria, while its normal growth pattern is to spread over several meters of space in sandy soil feeding on *P.f.*

The polar flagella of *P.f.* uses several proteins to create the rotary motion, and chemical energy as ATP is required. Respiration now uses similar rotating proteins to create ATP. This parallel structure would have once been called convergence of evolution. But it is transposed evolution. Respiration would have acquired the rotating proteins from the locomotion of *P.f.* The transformation would have occurred within the cells of *Pseudomonas*. The bacterium has highly varied nutrition and physiology.

The rotating proteins are not essential for ATP synthesis; they simply speed up the process by moving the substrate molecules into and out of the reaction site faster. Without the rotating proteins, diffusion would be required for moving the molecules around. Every metabolic reaction would benefit from rotating proteins moving the reactants in place, but the process is too elaborate for anything but respiration. Speed is important for respiration, so organisms can get more done faster without running out of energy.

Such extreme evolution cannot occur where metabolic activity is highly active and complex. There are too many interdependent activities to allow such drastic changes. But there are no competing influences for the evolution of locomotion. So the rotating proteins could freely evolve without disruption while producing locomotion. Then adapting the rotating proteins to respiration would be simple enough that it could occur without disrupting essential metabolism. *Pseudomonas* could gain energy through other methods while the new form of respiration was evolving in its metabolic machinery. Respiration through simple diffusion would have existed before the rotating proteins were added. The upgrading of respiration would have occurred about 700 million years ago plus or minus 100 million years.

The new form of respiration involving rotating proteins was so advantageous that it was carried into the cells of soft-bodied fish as bacterial parasites. These then evolved into mitochondria.

Yeasts and Fat Production

Another example of transposed physiology is fat production. There was no fat as energy storage before modern biology began and dinosaurs died out. Storage molecules as starch or fat did not exist. All evolution was being held back by nonwoody brush.

When dinosaurs died out, grass shoved out the nonwoody brush and freed up evolution for all species. As plants produced sugary substance, yeasts evolved from molds. Yeasts acquired a round shape, which improves absorption in liquids; and they gave up the most demanding characteristic of molds, which is the ability to tolerate dehydration while growing on surfaces.

The primary feature of yeasts is that they repress TCA enzymes while glucose is available. This allows them to metabolize glucose rapidly preventing competitors from using it. The acetate resulting from glucose metabolism is channeled in three directions. Some is excreted as acetic acid and some as ethyl alcohol. These substances inhibit growth of bacteria and molds. Production of acetic acid and alcohol are phenotypic variations. Oxygen does not have to be absent to produce alcohol. But unlimited amounts of these substances cannot be produced, so acetate is also channeled into fat production. Fat is created from acetate molecules linked together. Yeasts often store up to 40% of their cell mass as fat.

When glucose gets used up, yeasts induce formation of TCA enzymes and re-metabolize the acetic acid, alcohol and fat which they created earlier. Other species do not have repressible TCA systems. Their TCA systems are in place all of the time.

The fossil evidence of yeasts only goes back 50 million years (1). This would be when plants produced sufficient sugar to promote yeast evolution. Fat would presumably have been nonexistent prior to that time. The bone structure of dinosaurs and early mammals indicates that these animals were not producing fat. They are too tall for fat production. Dinosaurs could have benefited from fat, because they needed a lot of weight to go through the thick brush. If they had fat, they would have been shorter and heavier like elephants.

The early mammals were also longer legged than they would have been if they stored fat. Modern mice are much shorter, because they are heavier due to fat storage.

It was the repressibility of the TCA system which allowed yeasts to evolve fat production. No other species would have been using repressible TCA systems, and therefore, it is most likely that no other species would have evolved fat production.

After yeasts evolved fat production, the related genes would have been transferred to other species by viruses. If this path of evolution is correct, animals would not have had fat during the first several million years of modern biology beginning 65 million years ago. Evidence of the evolution of fat may be visible in the fossil records. It would show up as a shortening of leg length for mammals. Mammals should have gotten shorter and heavier-boned when they acquired fat production.

Cottonwood and Willow Trees

Another line of evidence of the evolution of fat is in cottonwood and willow trees. These trees stopped evolving significantly very early on, because they found a highly exploitable niche by drawing water from stable sources such as lakes or rivers. Their seeds are very small compared to modern seeds. Modern seeds store a lot of energy as oils. If fat production was possible when cottonwoods and willows evolved, they would probably have had larger seeds. Their small seeds indicate that fat production did not exist when they evolved.

Cottonwoods and willows are more primitive than other trees in that they do not measure stress forces. Modern trees measure stress and widen where stress forces are greatest. As a result, all locations on the trees have an equal

probability of breaking. Ancient trees including conifers do not measure stress. Their branches do not taper significantly beyond the effects of aging. Aging produces less taper than the measurement of stress. So conifers and cottonwoods have long branches without much taper.

The willow adapted high flexibility to cope with stress. But the trunk of the willow is not flexible. As a result, willows are often found collapsed onto the ground and still growing. In other words, it is the primitive nature of these trees which resulted in small seeds, not some unseen advantage.

The Puffball

The oldest existing mushroom is the puffball. It would have been something similar about 200 to 300 million years ago. Conifer trees evolved about 300 million years ago. It is quite likely that puffballs evolved at the same time.



There are always environmental forces creating evolutionary change. What happened at that time is that tectonic plates were getting thick enough to create significantly sized hills as they bumped into each other. Rain water running off the hills discouraged the growth of nonwoody brush and left open space for new plants to evolve. Conifers filled that space on the tops and sides of hills, while nonwoody brush stayed in the lowlands. The conifers would have created a favorable environment for mushrooms.

Plants were producing a lot of round aggregates of cells back then and appeared to be evolving into fungi. (See "The Biology and Evolution of Fossil Plants", 1993. Thomas N. Taylor and Edith L. Taylor.) My impression is that numerous different fungi evolved from plants independently after terrestrial

life began. So why do they have similar cell walls if independent? This question would have been unanswerable a couple decades ago, but what scientists have learned from genetic engineering is that horizontal transfer exchanges genes between all species. Viruses, bacteria and fungi serve as the carriers. This is noticeable in wildflowers. They all seem to have a combination of the same basic scents, even when they are not related. Horizontal transfer apparently carried some of the same genes throughout the wildflowers. This means that plants could evolve into a myriad of fungi by picking up the cell wall genes from other fungi. By evolving from plants instead of other fungi, more versatility was possible. Evolution cannot go backward from more specialization to less specialization. Restarting evolution from plants would be like starting from stem cells allowing greater diversity than all fungi evolving from one point.

The puffball is extremely hardy. It likes to emerge from car trails on dry prairies. It can determine where trails are by sensing carbon dioxide. Grass is shorter there allowing spores to disseminate easier. The ground gets dry and hard very rapidly after rains, because capillary action is high in fine textured soil. So the mycelium grows for awhile during rains, and then becomes almost spore-like between rains.



These varied puffballs all appear to be phenotypes of the same genotype, because they appeared near each other within a few months. They would all be growing from the same mycelium, because puffball mycelium is so widely scattered that two sources almost never come together. It appears that the puffball can change its phenotypes without going through genetic

recombination, unlike other species. It's possible that the mycelium sectors as a method of creating phenotypes. This would be like cells changing phenotypes to create tissues but then going beyond the tissue to create individual phenotypes.

The puffball produces no visible gene exchange. In general, ancient species do not need much gene exchange, because they acquired very high survivability through versatility. Highly stable phenotypes appear to be a major element of the versatility of the puffball. It's lack of gene exchange creates a need for a few stable phenotypes which presumably always appear together.

Puffball mycelium stays in one location for several decades, slowly expanding under the ground each year without ascocarps emerging for decades. The mycelium can travel a hundred meters along a car trail before puffballs emerge, and then they come up all along the mycelial trail. Not emerging while the mycelium expands appears to be a means of preventing predators or diseases from developing against the species. Such extremely ancient organisms produce that sort of versatility. The new locations are widely scattered and random. My guess is that the spores are pressure sensitive, so that only those that get high in the atmosphere can germinate. This assures a wide and random distribution as a method of preventing predators and diseases from adapting to them.

Perhaps other airborne mushroom spores require atmospheric conditions, of which low pressure is the only apparent mechanism, for evading diseases. *Agaricus* avoids growing in the same area from year to year. What keeps the spores from germinating in the vicinity of the mushroom which produces them? It might be atmospheric conditions being required to precondition spores for germination. *Coprinus comatus*, however, liquefies to drop some of

its spores in the same area, which means its spores do not need to be exposed to atmospheric conditions.

The advantage of reducing gene exchange is that mycelium patches can be widely scattered to prevent insects and disease from developing against the species. Without much gene exchange, a few highly specialized phenotypes can take care of the need for variation. The puffball is so advanced that it gets by with almost no gene exchange and only four phenotypes all springing from the same mycelial patch. By contrast, the morel produces unlimited phenotypes by randomly remixing a large number of characteristics creating nonfunctionality for most of the resulting phenotypes. Each spore pair of the morel is a different phenotype with little probability of any two being the same.

There are, of course, a wide variety of genotypic variants evolving for the puffball in response to the highly varied ecology that modern biology created. Throughout biology, there is a central line of evolution for types and a constant splitting off into branch types, most of which die out rapidly. With diseases, the branch types tend to be more deadly, while they die out rapidly, as small pox did. Long term survival requires a degree of compatibility with other species, which tends to promote symbiosis.

Boletus edulis

Also ancient is the mushroom *Boletus edulis* (*B.e.*), which is highly valued by chefs. *B.e.* does not have gills. Instead it has tubes under the cap with spores in them. A few spores would drop



straight down, but the primary form of dissemination, at least originally, was animals eating them. So the spores have an attractive flavor for animals.

When *B.e.* evolved, mammals were small and shrew-like. Nonwoody plants produced that result. These plants would have created a very thick brush. Dinosaurs had to be large to walk through that brush. Mammals had to be small to go under it. Mushrooms could not grow in that brush. The surface of the ground under the brush would have had a thick layer of undecayed debris. Puffballs probably grew around the edges of the brush feeding on bacteria associated with plant roots, while *B.e.* adapted to the roots of conifers.

Wind cannot easily get into conifer forests, so *B.e.* could not exploit wind very well for spore dissemination. One reason why *B.e.* did not evolve better spore dissemination is because it must be perennial to grow in tree roots, so it is stuck in a fixed location from year to year.

Since *B.e.* evolved in response to conifer forests, it probably has the same evolutionary age as conifers, which is 300 million years. It's possible that puffballs evolved on low hills before conifers, since they are not dependent upon tree roots. This would make the evolutionary age of puffballs more than 300 million years, but there is no evidence of exactly when puffballs evolved other than having ancient characteristics similar to *Boletus edulis* including tissue which does not easily dry out and evolving away flavor from young tissue, so animals do not eat it.

Almost all terrestrial biology changed drastically as the dinosaurs died out. The drastic changes were caused by grass. Grass shoved out most of the nonwoody plants freeing both plants and animals from the oppressive brush that hindered growth for most species.

Grass is usually short enough to allow other species to grow above it including woody plants, flowering plants, mammals and mushrooms. Mushrooms could now use wind which blows through the grass, and they evolved gills for that. Gills allow spores to stay in place until wind sweeps them out and carries them long distances.



Flowering plants were so rare during dinosaur years that none had been detected until a few years ago. But they were in place ready to take advantage of the marvelous ecology which grass created.

Apparently, not all of the endomycorrhizal mushrooms (those growing within tree roots) began during the dinosaur years. Chanterelles grow within conifer roots, and they have ridges which function like gills with increased exposure to take advantage of the reduced wind in conifer forests. They probably evolved with modern mushrooms, as the exposed spores would have similar requirements. Truffles grow on oak roots, while oaks and other broadleaf trees did not exist during the dinosaur years.



Coral mushrooms have spores which are even more exposed than the Chanterelle. Their exposed spores indicate that they would have evolved at the same time as gilled mushrooms, because the microstructure and physiology required for such exposed spores would be the same for gilled mushrooms, chanterelles and corals.



Some variants of *Boletus edulis* appear to not have changed significantly as modern biology replaced the primitive biology of the dinosaur years. *B.e.* has a bulb at the base of the stem, which does nothing to strengthen the stem, as it curves inward at the bottom. It's function would be to allow small shrew-like mammals to stand on the bulb while eating spores under the cap. Mice still eat the spores allowing the bulb to persist without evolving away. The spore area of *B.e.* has more flavor than the rest of the mushroom, and Europeans sometimes use the spore area separately for cooking.

These two boletes would appear to be minor variations in genotype, but they could be phenotypic variants of the same genotype. *Boletus edulis* appears to produce phenotypes which adapt to conditions. Such ancient evolution appears to produce phenotypic variation which looks like genotypic variation due to a high degree of stability in response to environmental demands. It produces biochemical variations like a chameleon. In shaded areas, the color can be darker. The spores vary from white to brown.



When spore dissemination is limited, as with the

bolete or the morel, changes in genotype tend to occur in local areas. But when spore dissemination is very good, as with the puffball, minor differences in genotype cannot develop, because one genotype will prevail over the others. Then phenotypic differences get more exaggerated, which appears to be the case with the puffball.

As *Boletus edulis* gets large, the bulb on the stem disappears. This is because larger animals are then depended upon, and not a single molecule is wasted on a form that is not needed with such an ancient mushroom.

Structural tissue is the same, and very unusual, for *Boletus edulis* and puffballs. The tissue has a gummy texture without fibrous material. This means water and nutrients must diffuse from cell to cell, which is a slow process. Therefore, it takes two weeks for the *Boletus edulis* sporocarp to form, but only one or two days for *Agaricus*.

Bolete tissue is very slow at drying. As a result, boletes often survive for two months, while *Agaricus* tends to dehydrate and disintegrate in a few days.

Both the bolete and the puffball evolved away all flavor from the structural tissue, so animals will not eat it. Chew marks are often observed on the surface showing that animals walked away after one bite. It is usually squirrels which chew into the top of boletes, while mice eat the spore tissue under the cap. When *Boletus edulis* gets large, squirrels chew the edge of the cap, where they encounter the flavor of the spore area.



The flavor of *Boletus edulis* increases as the mushroom dries, and the structural tissue picks up flavor upon drying. This effect probably evolved to enhance the tendency of animals to eat the mushroom as it ages. When *Boletus edulis* is dried slowly it acquires more flavor than when it is dried rapidly, which indicates that a biochemical process is involved in enhancing the flavor.

Gilled mushrooms cannot evolve away flavor, because there are too many molecules which would need to change, and evolution progressed to more specialized functions. Therefore, gilled mushrooms have to produce a toxin, if they need to keep animals from eating them.

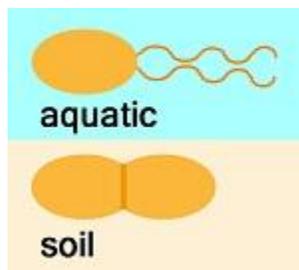
Bacterial Evolution

Pseudomonas fluorescens (P.f.) is 600-700 million years old in its recognizable features. Evolutionary age is not highly definable, since all species branch infinitely all the way back to pre-life chemicals. But a concept of age exists based upon recognizable characteristics that go back in evolution. P.f. has recognizable characteristics that go back that far. Its polar flagella would be that old. Before that, the bacterium would have existed in some form for at least a billion years.

The age of the polar flagella of P.f. can be determined from the evolution of modern respiration. There are a group of rotating proteins that speed up respiration allowing animals to move faster than they could with simple diffusion supplying the energy. Those rotating proteins evolved from the polar flagella of P.f. This relationship can be stated as an unquestionable fact of evolution due to the similarities and physiology. One state must evolve from the other state, no options about it. The reason is because polar flagella were free to evolve without interference; while respiration proteins could not have evolved on their own due to demanding physiology. The physiology of

respiration is locked into cell structure and requirements for energy which left no room for drastic alternatives. On top of that, the new form of respiration did not work its way into the old form of respiration. Instead it entered the cell as whole bacteria which transformed into mitochondria. This addition to cell structure allowed the new form of respiration to be added to the old form while maintaining a variety of methods of producing energy as ATP.

Since P.f. has a history of at least a billion years as a bacterium, the evidence of its age is unmistakable. A lot of evidence of age builds up over a billion years. P.f. is the most versatile bacterium in existence beating all others by a mile, except for Streptomyces, which are in a class of their own. P.f. produces two pigments, while other bacteria which need a pigment cannot afford such a luxury. P.f. has numerous forms allowing it to adapt to several major environments. It is the best adapted bacterium to fresh water, where it produces two polar flagella. It is the best adapted bacterium to the soil (ignoring Streptomyces), where it recycles nutrients from thawing ice. It is the best adapted bacterium for blowing in the wind, where it forms a spore-like state contaminating laboratory cultures much like mold spores.



As P.f. adapted to various environments, it branched off into all of the other gram negative bacteria while leaving the original state as the main stem of gram negative evolution. All of the diversity of gram negative bacteria traces back to P.f., which probably includes Escherichia coli (E. coli) which entered the intestines of animals from their beginning, which would be about 500

million years ago. Since P.f. is much older than E. coli, E. coli would have evolved from it.

Yet there is the claim by some persons that the gram positive bacteria are older than the gram negatives. Those persons do not give a credible explanation. It is widely known that P.f. goes back in some form at least a billion years. To get gram positives back farther would be assuming they include cyanobacteria, which is stretching the concept of gram positive bacteria too far. The concept of gram positive bacteria became highly developed while cyanobacteria were being called blue-green-algae.

The modern form of gram positive bacteria (apart from Streptomycetes) clearly evolved with modern biology beginning 65 million years ago with the die-out of dinosaurs. Two major indicators are the simplicity of their characteristics and their affinity for carbohydrates. Biologists are unfamiliar with the transition that occurred 65 million years ago. They don't know that there were no storage molecules before then including starch, fats or free sugars. Circumstantially, there could have been traces of such evolution beginning in obscure locations such as flowers of rare plants, but this physiology was not spreading to other species to influence other organisms. When flowering plants began to produce sugary substances after the transition, 65 million years ago, the result was the evolution of yeasts and modern gram positive bacteria, as they adapted to the sugary solutions.

Modern gram positive bacteria have an affinity for carbohydrates, while gram negatives have an affinity for nitrogen containing molecules. The reason is very obvious. Before the transition 65 million years ago, gram negative bacteria had to destroy other cells for nutrients, and they are designed to do that. Their cell walls chew through other cells upon contact, which makes them the dread of biology. Modern gram positives do not do that. They feed

upon readily available nutrients of the carbohydrate type which are released by dead vegetation. Some of them later became pathogens, which might not look like a vegetarian diet, but other similarities show the same origins.

Microbiologists are not aware of this difference in nutrition—affinity for carbohydrate vs. nitrogen containing molecules. Here is a major source of information which has been out of view of microbiologists: Many plants and most mushrooms protect themselves from the scourge of gram negative bacteria by causing gram positive bacteria to form on their surface. Excretion of carbohydrate would be the method of promoting gram positives on the surface. A highly visible example is green beans. After sitting around for awhile, they get coated with a buttery substance on their surface. It's edible and doesn't have much flavor. It would be a coating of gram positive bacteria, probably *Bacillus cereus*, though I have not tested it to find out what species it is. Microbiologists do not know what the evolutionary habitats are for *B. cereus* and *B. subtilis*, but circumstantially, those similar bacteria would have evolved on the surface of plants being promoted as protection from gram negative bacteria, while variants would have evolved on decaying vegetable matter.

A highly informative bit of evidence is the morel mushroom. It has no such protection having evolved from a single-celled yeast a few months ago. As the morel ages, gram negative bacteria invade the tissue. Persons who eat old and deteriorating morels get sick from them, as the invading gram negative bacteria have an endotoxin in the cells walls. That type of toxicity never occurs with other mushrooms, as they protect themselves from gram negative bacteria, though some of them produce their own toxin for protection against predators.

There are some very complex gram positive bacteria, such as *Listeria*, which appear to go back in evolution farther than the other gram positives. *Listeria* would have evolved from *Streptomyces*, since it has a soil-adapted stage.

Streptomyces are filamentous bacteria which are highly specialized in breaking down cellulose in soil. They have been breaking down cellulose in the soil for 450 million years. They would have been the evolutionary source of modern gram positive bacteria which evolved on carbohydrates after the biological transition 65 million years ago. *Streptomyces* would have evolved from fungi, which have cell walls similar to gram positive bacteria. The modern gram positive bacteria would then have evolved from *Streptomyces* when modern biology began.

A major element of the biological transition 65 million years ago was the development of flowering plants and sugary substances that they produced. Both yeasts and gram positive bacteria evolved on the sugary substances. The gram positive bacteria also fed on the yeasts, while the yeast protected themselves by excreting acetic acid and ethyl alcohol. The yeasts sort of won, but the gram positive bacteria diversified and adapted to other plant material.

These changes modernized biology in very dramatic ways. Not only did mammals rise up to dominate the animal world and flowering plants emerge from obscurity to dominate the plant world, the gram positive bacteria rose up out of the soil as *Streptomyces* and moved into the plant and animal world as modern gram positive bacteria, first as scavengers and then as pathogens.

1. Thomas N. Taylor and Edith L. Taylor. *The Biology and Evolution of Fossil Plants*. 1993. Prentice Hall, Englewood Cliffs, New Jersey.

Chapter 6: Other Major Errors in Physics

Chapter Summary

Relativity does not have a valid starting point, which means nothing which follows is valid. The starting point and basis for relativity is the claim that the receiving point of light supposedly determines the velocity of light, so effect precedes cause. Effect can never precede cause. Then light is given infinite velocities to correlate with the infinite velocities of receiving points. And since one velocity cannot be infinite velocities, the word velocity is changed to reference frame, which supposedly can be infinitized. It can't.

The starting point of relativity is like a gate for entering a world of too much magic, where millions of lines of equations can be produced without a flaw. Out of the magic comes fusion energy, which doesn't exist, a fabric of space-time, which replaces the force of gravity, and a childish equation for limiting any velocity to that of light. These results have no relationship to real analysis. They are concocted out of thin air using a quagmire as a pretended source.



Relativity

The starting points of relativity are not valid. No matter what else is supposed to exist in the infinite and unprovable scramble of relativity, it cannot be correct when the starting point is not correct. One of the starting points is to have receiving points determine the velocity of light. The velocity is supposedly determined after the light has traveled. Effect becomes cause. There is never a validity in replacing cause with effect. It defeats the purpose

of science, which is to increase knowledge. Having effect replace cause is not knowledge; it is a contradiction in logic.

Related to this starting point is the use of infinite reference frames for velocity of light. The purpose in using infinite reference frames is to substitute for infinite velocities of light. Crossing out velocity and replacing it with reference frame does not fix the problem. Reference frame cannot replace velocity unless it does exactly what velocity does. Yet the substitution has the purpose of getting the velocity of light to do something it does not do, which is to have infinite variation.

The background for this rationalism is this: The velocity of light is said to be invariable, at least in the analysis of relativity. The questions raised are why and relative to what. Supposedly, an etheric medium cannot be the cause or reference for the velocity of light, because the Michelson-Morley experiment said so. Emitting points cannot be the cause or reference, because there are infinite emitting points with infinite velocities. Therefore, it must be receiving points which determine the velocity of light. But there are infinite receiving points with infinite velocities. So velocity was changed to reference frame while claiming that infinite reference frames exist to account for the infinite velocities supposedly representing the invariable velocity of light.

Relativity is more than an error in physics; it is a total contrivance so unrealistic that it has no relationship to objective reality or the rest of physics. There is not an analysis that can be applied to relativity, because it is totally devoid of rationality. Relativity is a format for making claims without scientific accountability. The counterclaims made here are therefore based on common sense, not some analysis of relativity.

The usual starting point of relativity, at least for the uninitiated, is to set up a situation with two trains moving in opposite directions. Someone moving on

one train has a complex relationship to someone moving on the other. The complexities are then muddled to a point of nonsense for the purpose of insulating relativity from rationality and pretending physicists, or relativists, are so brilliant that they can see valuable knowledge where others see nothing. Einstein set that standard by using hair-brained analogies which say nothing and pretending to extract some bit of brilliance out of them.

What does relativity have to do with $E=mc^2$? Absolutely nothing. What does relativity have to do with nothing moving faster than the speed of light? Absolutely nothing. What does relativity have to do with space-time as a fabric which replaces gravity? Absolutely nothing. These are the three main products of relativity: 1) $E=mc^2$, 2) nothing can move faster than light and 3) space-time is a fabric which replaces gravity.

Where then did Einstein get the claim that $E=mc^2$? He paralleled the equation for kinetic energy, which says $KE=\frac{1}{2}mv^2$. Kinetic energy is supposedly proportional to mass times velocity squared for any moving object. So Einstein claimed that matter can be converted into energy in proportion to the mass times the velocity of light squared.

The problem is, the formula for kinetic energy can be mathematically proven to be in error, as shown in chapter 1. It means Einstein paralleled an erroneous formula. How could $E=mc^2$ have anything to do with relativity when it has no relationship to anything but an erroneous equation? It shows that relativity is nothing but a format of garbage for making preposterous claims.

One of the consequences of the erroneous claim that the energy in matter is proportional to the velocity of light squared ($E=mc^2$) is that it creates an unrealistic expectation for the ability to derive energy out of matter. If Einstein paralleled the correct definition of energy, the velocity of light would not be squared. The equation would have been $E=mc$. There would be

enormously less energy in matter when not squaring the velocity of light. That velocity is an extremely large number. Not squaring it reduces the amount by a factor of that large number.

For example, one kilogram times the velocity of light squared would be $1\text{ kg} \times (300,000,000\text{m/s})^2 = 9 \times 10^{16} \text{ kg}\cdot\text{m}^2/\text{s}^2$, while not squaring the velocity of light yields $1\text{ kg} \times 300,000,000\text{m/s} = 3 \times 10^8 \text{ kg}\cdot\text{m/s}$. The unsquared number is $1/300,000,000$ times smaller.

Those two results are not exactly comparable, because one is in units of m^2/s^2 , while the other is m/s . Those differences do not resolve. There are certain things that are not valid with exponents, and physicists have never accepted this fact. It's not valid to represent something real with mathematics which do not represent something real—like squaring velocity, when nothing can move at velocity squared.

Squaring produces a two dimensional result. Light cannot be two dimensional. For example, if a five pound object moves at a velocity of one foot per second, the combination is five foot-pounds per seconds. If the velocity is squared, the result is five foot-pounds squared per second squared. Squaring the one still equals one, but it is a two dimensional one. There has to be a difference between a squared number and a nonsquared number. For the number one, the change in dimension is the only difference. If the number three were squared, the result would be nine—but that means nine blocks, while each side is still three. This shows that squaring adds a dimension.

Kinetic energy cannot be two dimensional, because mass cannot move in two directions simultaneously. Light moves in three dimensions as it expands, but not two dimensions. If Einstein would have cubed the velocity of light, he would have had even more problems. Actually, light consists of multiple hollow shells which can't be represented with a simple exponent. At any rate,

paralleling the equation for kinetic energy would not be appropriate for light, because it equates the one dimensional motion of matter with the three dimensional complexity of light.

The absurdly large number resulting from squaring the velocity of light shows that physicists have no real knowledge of matter being converted into energy, and such a conversion is probably not possible at all. If physicists were observing matter being converted into energy, they could not have gotten the quantity so ridiculously wrong. It means physicists have not observed matter being converted into energy. They contrived the concept out of Einstein's equation and nothing else.

Hydrogen Fusion

Einstein's erroneous equation, $E=mc^2$, results in a problem in the attempt to create energy out of hydrogen fusion. There is no significant energy in hydrogen fusion. After decades of attempting to create hydrogen fusion and failing, the most recent attempt was completed a few months ago using 192 lasers to ignite the process. Everything worked flawlessly, except no significant energy was yielded (1).

Physicists expect a lot of energy to result from hydrogen fusion because of Einstein's equation, $E=mc^2$. If the equation were to parallel the correct definition of kinetic energy and stated as $E=mc$, there would be 1/300,000,000 as much energy (though defined differently) as physicists expect. But in fact, there is no credible evidence that hydrogen fusion will even produce that small of an amount, as the phenomenon has never been produced or observed in laboratory testing. Physicists claim the sun gets its energy from hydrogen fusion, but their theory would be wrong, as there is no credible science to anything related to the subject of fusion energy. The sun probably gets its energy from fission reactions instead of fusion. When there is uranium and

similar materials in the earth, there would also be such materials in the sun. To claim it is hydrogen that does it all is nothing but contrived garbage.

The important thing about this whole subject is that the erroneous definition of energy corrupts the whole subject of energy. The elaborate rationalizations of physicists are dependent upon every element being correct and precise to minute detail. With ninety percent of it corrupted by the erroneous definition of energy, they have nothing but contrivance. If they were describing anything real, the errors would show up as contradictions. It's nonfalsifiable due to total contrivance.

Hydrogen bombs have the same problem. All indications are that there is no such thing as a hydrogen bomb. A fission reaction is used to start a hydrogen bomb, while there is no credible indication that a fusion reaction actually occurs. The Wikipedia entry for thermonuclear weapon states that most of the energy is in fission reactions. (Wikipedia: "While it is colloquially referred to as a hydrogen bomb or H-bomb because it employs hydrogen fusion, in most applications most of its destructive energy comes from uranium fission rather than fusion.") Most could only mean all. If a minor element were fusion, why bother. If fusion is supposed to be the end-all for bombs, why so trivial of a result? Why not more energy from the fusion? Once it gets started, why not add enough to produce the main effect?

It's not credible that a fusion reaction even gets started in a hydrogen bomb, because physicists have never achieved the result under laboratory conditions, where every element can be controlled. A bomb is extremely random and chaotic. To claim they got the random chaos of a bomb down to spotless perfection, while they can't do it under laboratory conditions is not credible.

It means physicists are claiming to produce a hydrogen bomb, while they aren't. They lie about it, because they don't want to admit the failure, and they want to glamorize their wizardry pretending to be successful.

The Velocity of Light

Another of the products of relativity is the claim that nothing can move faster than the speed of light. The basis for the claim is an equation which shows the square root of a negative, when a velocity exceeds that of light, while there is no such thing as the square root of a negative.

The all-important question is where did the equation come from. Supposedly, it has something to do with the Michelson-Morley experiment of 1887. The experiment was an attempt to detect an etheric medium in space

$$\gamma = \frac{1}{\sqrt{1-(v^2/c^2)}}$$

for conducting light waves. Nothing was detected. Failures are common in science, but you don't build upon them. It's like jumping into the ocean and saying the Titanic is not there. There are any number of reasons why the experiment could have failed to detect the "aether," even if it existed.

The result was the construction of a logic which said the constant velocity of light could not be determined by starting points, since they have numerous velocities; and since it could not be controlled by an aether, it must be controlled by the receiving points of the light. Receiving points have various velocities also and are no different from starting points in that regard. So there was no credibility in the rationalizations. But even worse, cause followed effect, while it must always precede effect. It's like being stopped for driving 80 miles per hour in a 70 mph zone and saying the velocity won't be determined until getting to the destination.

This logic led to the claim that the infinite velocities for receiving points are taken care of by using a different reference frame for each. In other words, light supposedly always travels at the same velocity relative to receiving points which move at different velocities because the reference frame shifts for each receiving point. It is not valid to use more than one reference frame for light, because it is the same thing as multiple velocities, and light would not have a definable energy with multiple velocities.

Look at this perversion again. The velocity of light is always the same. It is supposedly determined by receiving points, which have multiple velocities. Something with multiple velocities causes something to have only one velocity. Objects with multiple velocities cause light to have one velocity relative to unrelated observers. But it is a shifting reference frame which converts the multiple velocities to one velocity. Receiving points move at multiple velocities, and each is a reference frame. Yet light has the same velocity for each and the same velocity for unrelated observers which have different velocities. By calling the different velocities different reference frames, the infinite velocities become one velocity.

Why should anyone have respect for such perversion being called science? Why should the public pay for it? Why should no one be allowed to criticize it? How could the rest of physics be credible when produced by the same persons who operate at such a trash standard?

The whole subject of relativity is nothing but irrelevancies. How does it prove that nothing can move faster than the speed of light? Nothing does. The equation is nothing but cheap crap which an idiot could have produced. You put the velocity in question over the velocity of light and subtract it from one under the square root sign. Physicists will rationalize their claims with millions of lines of relativity equations, but it's nothing but more corruption.

Relativity has that purpose—to contrive fakery which can never be proven wrong, because it has no relationship to objective reality. It's "non-falsifiable," as Popper stated of such scams. But physicists have to use starting points which defy the rest of science and rationality to get to their magical land of non-falsifiability. They first had to deny that the non-result of the Michelson-Morley experiment was a non-result. Then they had to put effect ahead of cause to get receiving points as the defining influence for the velocity of light. And then they had to use multiple reference frames for light to get the same velocity under all circumstances. Three elephants have to be ignored to get to the non-falsifiability of relativity.

Fabric of Space-Time

The third claim of relativity is that gravity is not really a force, it is a fabric of space-time. Based on what? Based on putting space and time on different axes of a graph. And what does that do? It creates the image of a vortex with a marble rolling around it. Just because you don't see the connection doesn't mean there is none. Relativity makes those types of connections.

Why do engineers use Newton's laws to evaluate gravity as a force, if it isn't? Because they just aren't up to the level of relativistic physicists. If all mass produces gravity, there should be a vortex for the marble which goes around the vortex of something else. How does a vortex go around a vortex? Why make it look like a marble which rolls, when it is a vortex?

There is one answer for all of the questions. Physicists know things that others don't know. Godliness turns contradictions into Einsteinian brilliance.

Physicists claim they prove Einstein to be correct every day. Their primary proof is that light bends around stars and galaxies, just as Einstein predicted it

would. They claim space-time influences light, while Newtonian gravity does not.

Optics is a branch of physics. It is based upon light bending as it passes through higher density matter. So light bends as it passes through gases near stars and galaxies. No one is claiming that space-time bends light in a prism. Why then should space-time bend light around stars and galaxies?

Sometimes the suggestion is made that a spacecraft could gain energy for moving through space by catching ions from the sun, sort of like a sailboat in space. Ions are made of mass with charge. The sun is constantly emitting mass. You don't see it, because it takes the form of transparent gas. But there is enough of it throughout the solar system to move objects, if they have a large enough sail. If stars are giving off mass, why wouldn't light bend while passing through the mass, as it does when passing through a prism?

Dark Matter

The basis of the big bang theory for the origins of the universe is a red shift which is noticeable in light from distant sources. Red shift means the wavelength of light is longer than it should be. The more distant objects have more red shift, which supposedly means they are moving away faster. This arrangement looks like an explosion to physicists, so they claim it all began with an explosion. Never mind the fact that such an explosion is physically impossible. Physics is not bound by the laws of physics. When the explosion occurred, most of the matter moved from the center of the explosion to its present location in almost no time, which is called inflation. It means the universe expanded without anything moving.

Galaxies spin faster than they should. This is the primary basis for assuming dark matter exists. The speed at which orbiting objects move depends upon

how close they are to the mass which they orbit. What does close mean? That depends upon the amount of mass. For a one gram object, close would be a few millimeters. For the sun, close is a few million kilometers. The difference is the mass. It means physicists can measure the mass being orbited by how fast objects rotate around it. When they do that, they find that there needs to be a lot more mass in galaxies to get stars to orbit them as fast as they are. They refer to the missing mass as dark matter.

As prisms show, light is slowed by passing through matter. Why then would not the red shift be due to matter which light passes through? If dark matter is actual matter, then it explains the red shift, and the big bang theory is not needed. Physicists don't want to contradict the big bang theory, so they won't attribute the red shift to dark energy.

Here's what physicists end up with. They apply Newton's laws to the rotation of galaxies and claim they need to have four times as much mass based on the speed of rotation. Why don't they just use Einstein's brilliance instead of Newton's laws? It seems that physicists need Newton's laws to solve problems, while space-time takes care of everything else. What is everything else? It's about 90% of physics. Some say relativity is 90% of physics. That's 90% welfare system and 10% work—Einstein's gift to physicists.

There are several major problems with the standards of physics. One is that underlying basics are not developed or reliable enough for drawing the monumental conclusions, as demonstrated by the misdefinition of kinetic energy. Secondly, physics standards are so shoddy that contradictions are ignored rather than corrected, as shown by the photon theory and wave theory of light. Thirdly, errors are promoted rather than corrected, as shown by the invalid origins of relativity and absurdities of inflation. In that mess,

physicists are contriving errors on top of errors to such an extent that nothing they say has any meaning until it is verified by something outside physics.

Physics is a mixture of Newton's laws and contradictory concepts. Newton's laws create a reliable basis for engineering based on concrete and verifiable evidence, while the rest of physics is nothing but exploited contrivance with no validity as scientific knowledge.

The Misuse of Constants

Physicists are forever creating constants, such as Joule's constant, Plank's constant or the Stefan-Boltzmann constant. There are very few real constants in nature. Most of the physics constants are nothing but fudge factors. Fudge factors are good in engineering, as they simplify the process. But in science, they do not produce basic knowledge. All knowledge in science is based on previous knowledge. No rounding off of concepts can be allowed without corrupting everything which follows.

Joule's constant states the relationship between heat and motion (sometimes called the mechanical equivalent of heat). It is in error, because the definition of kinetic energy is in error.

Plank's constant is an absurdity which states the amount of energy in a "packet" of radiation called a photon. Neither radiation nor energy can exist in packets, because they do not have length, width and height. Physicists admit that the photon concept contradicts the wave properties of radiation, yet they base the subject of quantum mechanics on the photon concept. Living with such extreme contradictions is not proper science. Physicists pretend that they will someday resolve the contradictions. Such extreme contradictions are not resolvable. Energy and waves can never be particles.

The Stefan-Boltzmann constant states the amount of radiant energy given off by matter at a particular temperature.

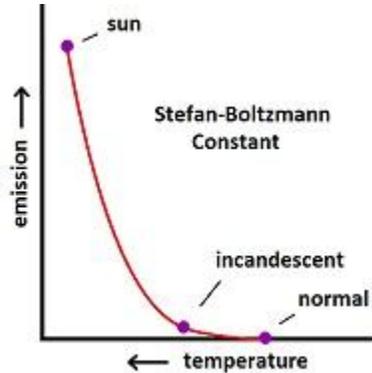
In actuality, not all matter is the same for this. But adjustments are made to the result to account for differences.

The correction factor is called

emissivity. One problem is that the amount of correcting that should be

done is not always known. This is why

such non-constants should not be called constants.



Another problem is that the Stefan-Boltzmann constant shows about twenty times too much radiation for normal temperature matter. This is because the curve for it has an exponent of four in one of the components, and this puts a sharp bend in the curve at normal temperatures. Powers of four are extremely unusual in nature—probably never existing beyond the geometry of shapes. One of the results is that the large amount of radiation at normal temperatures is used to rationalize global warming.

For example, the Stefan-Boltzmann constant indicates that in a dark basement, a concrete wall at 59°F (the global average temperature) would emit 390 watts per square meter of radiation. That's 49% as much radiation emitted from a dark, cold basement as falls on a black surface at the equator. It isn't happening. What physicists say is that emission equals absorption so there is no difference, and you don't notice the large amount of energy. One problem with that explanation is that biological materials would do a lot with that energy besides re-emitting it. Skin cells would be destroyed in the process. It isn't happening. Night vision equipment shows that there is very little infrared radiation given off by normal temperature matter.

The Stefan-Boltzmann constant is applied to the atmosphere by climatologists, even though there is no surface in the atmosphere, and a gas will emit much more readily than a solid. Climatologists say the earth is being cooled from a zone several kilometers up, because the temperature is -19°C , which will supposedly emit the 235 W/m^2 which is needed. How thick should the zone be? No explanation. What keeps radiation from leaving at other heights in the atmosphere? No explanation.

Dissociated Reality

The most significant problem with physics is dissociated reality. Every point in physics is insulated from every other point. A universe cannot be unified with separateness. All points must have consistent relationships for unified reality. You might think that all of the points get connected someplace. Where? They are all in conflict with each other, as shown by quantum mechanics, where physicists admit that the particle form of light is in conflict with the wave form of light. The contradictions are never resolved.

Worse than the pieces not fitting together is that the methodology is not valid. There is only one methodology in physics: Write complex math for a point until it is accepted by all relevant physicists, and then call it a law of the universe.

This method of proceeding is a throw-back to the scholasticism of the twelfth century, where dialectic argument was used as a method of justification. It was the wood stove that started all of this. Actually, it wasn't quite a stove but a method of heating buildings by burning wood on the side of the building and running the flue gases through porcelain channels which strung through the rooms. Before that time, buildings could not be heated, because a fireplace had to send all of its heat out the chimney, because the heat was mixed with the noxious smoke. So cold air coming in through a window would cool the

building, while the heat went out the chimney. Important persons would spend their time outdoors on horses, which was warmer than in buildings.

With twelfth century ceramics heating a building, intellectuals got together indoors to discuss subjects. Theologians needed something new to discuss, so they combined Greek logic with Christian theology and produced scholasticism. The result which prevailed through a dialectic process was called Christian truth. Physicists now do the same thing with mathematics.

Could a person write a mathematical equation for a horse jumping over a fence? There are too many things changing to encompass everything in one equation. The same is true of everything physicists apply their math to. Everything in the universe is influenced by complexities which do not fit into one math equation. Sometimes, the analysis can be broken into pieces, but this requires extreme simplicity. The motion of planets is an example. Nothing physicists do now days is simple enough to be broken into pieces. Engineering breaks into pieces, but it applies to human constructions which are made in pieces. Technology differs from nature in the ability to break it down into small pieces.

But physicists pretend that they can break every analysis down into isolated components, because they cannot apply mathematics to the subject until they do. They are driven to use nothing but math in physics, because they cannot add rationality to the abstract complexities through analysis. If they can't evaluate through rational analysis, they can't add valid math either.

There has not been an iota of correct physics produced since Newton's laws in 1687. With about 90% of physics being corrupted by the incorrect definition of energy, all of relativity being invalid and all of quantum mechanics being invalid, there is nothing left but Newton's laws and engineering. If someone did a correct measurement through physics, such as

the roundness of the earth, would that not be an exception? It would not be an exception, because no physicists are going to leave out their trademark exploits developed through the rest of physics. It doesn't happen. If subatomic particles actually exist, as quarks etc., is that not correct physics? Again, even if the particles exist, no physicist is going to describe them without endless amounts of physics which has been developed with erroneous concepts embedded within it. A measurement without such corruptions would not be called physics.

1. Hydrogen Fusion. Tim Folger. Fusion Energy Quest Faces Boundaries of Budget, Science. July 26, 2013, National Geographic.

<http://news.nationalgeographic.com/news/energy/2013/07/130726-fusion-national-ignition-facility-budget/>

Chapter 7: Gravity Wave Measurements were Contrived through Fake Science

Chapter Summary

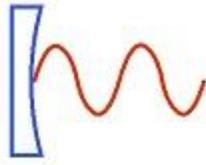
Claimed measurement of gravity waves in 2015 and again in 2016 was contrived. Supposedly, one tenth of an atto meter in a 4 kilometer path was measured. The detector was a heavy pendulum which was said to have moved slightly by a gravity wave caused by two black holes colliding 1.3 billion light years away.

A third claimed measurement of gravity waves occurred in early 2017. Two black holes supposedly collided 3 billion light years away. If the bump actually showed up on the mirrors for one second, was someone looking through a telescope at the collision for that one second? The bump on the mirrors does not indicate the distance.



A motion of 0.1 atto meters by a mirror was said to be measured by reflecting a laser beam off it. That distance is 2.87 billion times smaller than the distance between iron atoms in steel. It's 100 million times smaller than the vibration of atoms, which is a noise to signal ratio of 100 million to one.

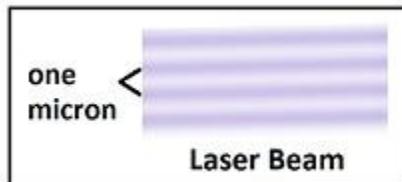
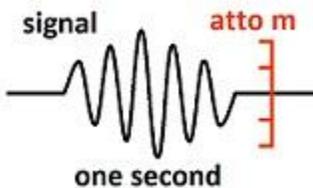
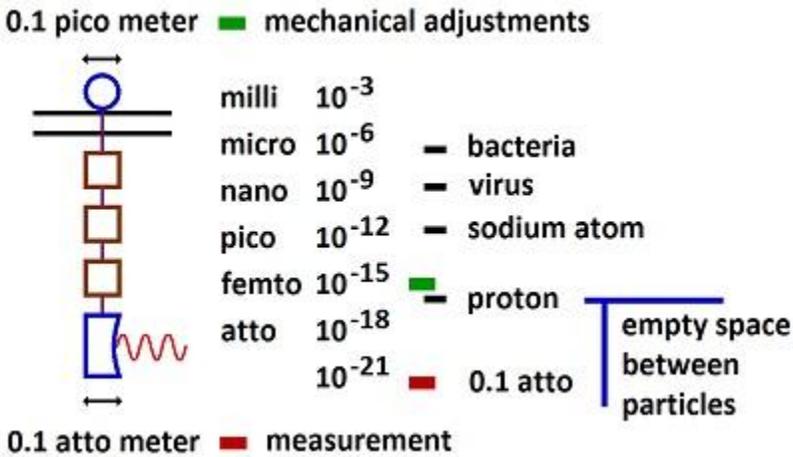
The distance variation being measured is 10 trillion times smaller than the wavelength of the laser beam detecting it. Such a miniscule change in wave position could not really be detected.



Physicists can't stretch this technology by factors of millions, billions and trillions. A factor of ten over commercial grade technology is where the boundaries are at. Wizardry doesn't remove the overriding motion noise of vibrating molecules.

With atoms vibrating at 10 pico meters, with harmonic, random and spurious effects, refinements are not going to occur at 0.1 atto meter, which is 100 million times smaller.

Scale of Measurement



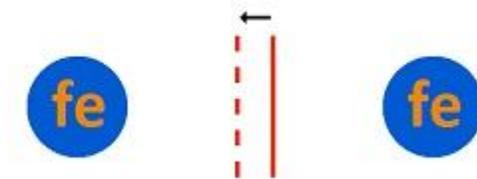
None of the claims will actually work at the 0.1 atto meter level of the supposed signal.

Six Proofs

1. One ten trillionth of laser light intensity was supposedly the variation being measured through interferometry.
2. The photodetector would produce 10 million to one noise to signal ratio.
3. Temperature change of 18 trillionths °C per second swamps the signal.
4. Inductive force for control of motion is not a control mechanism.
5. Motion control would have to look through the measurement detector, which would remove the signal.
6. Atomic vibrations are 100 million times greater than the signal. That's a noise to signal ratio of 100 million to one.

Space Between Iron Atoms

Notice that the moving, controlling and measuring is occurring in less space than the distance between atoms. The measurement is 2.87 billion times smaller than an iron atom (287 pico meters diameter). ($287 \times 10^{-12} \div 0.1 \times 10^{-18} = 2.87 \times 10^9$)

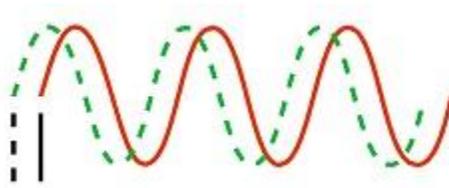


This image shows motion that is one tenth of the distance between iron atoms. Nothing can be controlled at that small of a distance. Now move the iron

atoms 287 million times farther apart, or make the movement 287 million times smaller. Nothing resembling it can occur.

Molecular vibrations occur at 10 pico meters for solids (2). That's 100 million times greater than the measurement. Nothing can be measured at a noise to signal ratio of 100 million to one.

Light Intensity Change is Miniscule



This image shows a shift in the laser beam of 20% of one wavelength. It would create a 20% change in light intensity on the detector of the interferometer. Now reduce it by a factor of two trillion. The result is claimed to be how much shift in the laser beam and change in light intensity was detected. The signal changing the distance and light intensity by a factor of one in 10 trillion was supposedly detected.

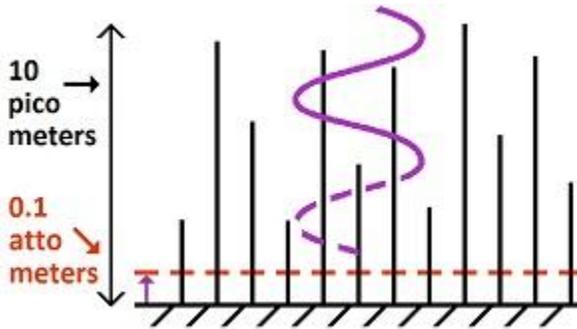
The description said 280 reflections were used to increase sensitivity. Dividing one half trillion by 280 is 1.8 billion. It means the change in distance and light intensity would be 1.8 billion times smaller than shown in this image. No wave is pure enough, and no detector is sensitive enough, for such a miniscule effect.

The claim of multiple reflections shows the underlying fallacy of the entire subject. It's the assumption that numbers can be multiplied out infinitely. When the noise to signal ratio is 100 million to one, the noise gets multiplied out more than the signal does. Every event increases the noise without purifying the signal. This problem is obvious in electronics, where the noise

cannot be imagined away. Physicists do a lot of pretending where their critics cannot measure and prove what they are doing.

Atomic Vibration Noise Motion

Atoms vibrate at 10 pico meters (10⁻¹¹ meters), which is 100 million times larger than the measurement of 0.1 atto meters. That's a noise to signal ratio of 100 million to one. Nothing can be measured when noise is greater than the measurement.



This image shows 10 pico meters of atomic vibrations as noise motion. The laser wave must reflect off the surface which is in constant, random motion at 100 million times the distance change being measured. (That's 10 picos divided by 0.1 attos equals 100 million.) The vibrating atoms would create a diffusion of the reflecting wave by 10 pico meters, if the wave were perfect to start with. But of course it would have any amount of undetermined diffusion to start with.

Physicists would respond with one of their common assumptions—that a measurement will only see the average and can therefore read through any amount of something that averages out. The fallacy is that the average does not stay consistent; it changes at the rate of the noise motion which includes harmonic and spurious changes including "popcorn" noise at all frequencies

between the 83 femto seconds of each vibration and the one second of measurement. The variations in noise motion would create a blur over the distance range of 10 pico meters totally wiping out the measurement.

A Nonfunctional Instrument

The detecting instrument would have been nonfunctional. The gravity wave was supposedly traveling at the speed of light. A detecting mirror had a path length of 4 kilometers. Length means distance between two points. The other point was a "beam splitter." Light travels 4 km in 13 micro seconds. This means the second point (beam splitter) would be moving the same way as the mirror with a time lag of 13 μ S (If the event were aligned exactly upon the horizon).

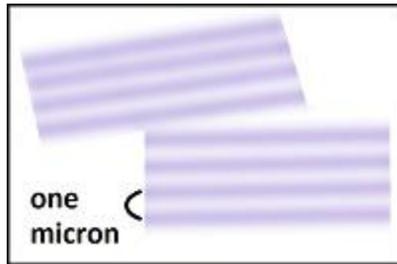
The event being measured was said to occur for one second (too convenient for reality without contrivance. Can you believe two black holes colliding for one second? Actual events of such magnitude would have strung noise for light years.). The one second was split into several sine waves. The effect being measured would only produce a result for 13 micro seconds for each change in direction of motion, since the second point would track the first point after 13 μ s of difference.

The original image of the signal (which appears to have been removed from the web site for LIGO) showed about ten sign waves, when including the tiny ones on the ends. This means each sign wave lasted about one tenth of a second. A measurement distance change could only occur for 13 micro seconds. Dividing 0.1 seconds by 13 μ S equals 7,700. This means only 0.00013 (0.013%) of each sign wave would have showed up on the instrument. That small of a part of a sine wave would not have been distinguishable as a sign wave. And the wave shape would have been spikes for each change in direction, not sine waves.

The Interferometry Was Impossible

The interferometry method used is too hypothetical, while realities would overwhelm the results. The laser wavelength was 1064 nano meters (rounds to one micron), which is 10 trillion times larger than the distance being measured. This ratio spreads the variation distance out by a factor of 10 trillion and dilutes the light by that much.

Total interference is required to remove background light. To get this result requires matching distances of two paths to exactness within one tenth of an atto meter. Such adjustments would be impossible regardless of noise removal. Not only is 10 trillionth of the laser light measured, the noise must be removed to 10 trillionth of the laser wavelength, and the positional difference in path lengths must be controlled to 10 trillionth of the wavelength of the laser beam after traveling over 4 kilometers and being reflected 280 times for more than a thousand km of total distance. The noise and adjustment errors are multiplied by 280 with the reflections.



Interferometry means two light waves interfere with each other to create an effect with light. When the waves precisely overlap, they cancel each other and become dark. Any change in the alignment, and some light appears. Change in distance the light travels will misalign the waves and create some light. The amount of light depends upon the amount of change in alignment.

The measurement is in the misalignment of two waves. A variation of 0.1 atto meter is said to be detected. The actual distance that the waves travel is of no relevance. It is not measured or analyzed. Only the offset of waves is detected.

The light waves are produced by laser beams which have a wavelength of approximately one micron (one micro meter). The change in distance said to be detected is 0.1 atto meter. That's 10 trillion times as much distance in one wave as the detected distance change. The laser beam is reflected 280 times, which increases the detection distance change to 28 atto meters. That's still 36 billion times less detection distance than the size of one wave of the laser beam. Such a miniscule influence over the laser beam would not really be detectable.

One problem is diffusion of light. Light cannot be created perfect or made perfect after it is created. The imperfections create diffusion. Then the reflection off imperfect mirrors 280 times adds more diffusion. Beam splitters would require heterogeneity of matter and light to spit a light wave.

The light detector is said to be a photo diode. The problem with silicone based devices is that they produce a lot of current noise, thermal noise, popcorn noise and drift. The silicone has to be spiked with dopants to create a diode, which creates a lot of variations.

Since obfuscation is the standard, a vacuum tube detector, called a photomultiplier, might be used. These puppies create super amplification, which should be good for a lot of contrived magic, except that the more the amplification, the less the resolution, while the degree of resolution is the problem in picking the signal out of 10 trillion times as much background light.

Interferometry is not a realistic procedure for highly demanding measurements due to the crudeness of light waves. At the macro scale, telescopes gathering light create the impression of high precision, but this is due to the accumulation of a large number of waves. At the micro scale, individual waves are used, and they are too diffuse and imperfect for high precision. But physicists exploit the vagaries to create the desired obfuscation and ability to contrive without accountability.

General Noise Elimination was impossible

The mechanical reduction of noise motion is said to leave 0.1 pico meter of noise (later changed to 0.2 pico meters), and a pendulum effect reduces the noise motion by another factor of a million to get to the 0.1 atto meter of measurement. If the mechanical noise reduction cannot function below 0.1 pico meter, then the path length cannot be aligned to 0.1 atto meter for interferometry. The interferometry requires alignment of the two paths within the measurement distance of 0.1 atto meters, which is beyond the sensitivity of the claimed mechanical motion used to remove noise—a self-contradiction.

All noise which does not average zero motion will not be removed by the pendulum. Earth noise will not average around zero motion. Mechanical control cannot move the pendulum to zero motion below its precision of 0.1 pico meters (not to mention the fact that the claimed induction force for mechanical control is not a control mechanism.) It means the pendulum is constantly moving.

Removing noise motion with the pendulum effect cannot remove molecular vibrations. Atomic vibrations for solids are said, on Wikipedia, to typically be 10 pico meters (10^{-11} m) (2). That means atoms moving at 100 million times greater distance than the measurement. Nothing can be measured through a noise to signal ratio of 100 million to one. This motion includes the reflective

surface causing it to look the same as the signal. Such motions include harmonics with random and spurious effects. These noise motions are 100 times greater than the claimed mechanical control over noise motion at 0.1 pico meters in addition to 100 million times greater than the signal motion.

Temperature Effects were a Wipe Out

If the reflecting mirrors are made of silica 1 cm thick, and the temperature changes by more than 18 trillionths of a degree centigrade per second, it wipes out the measurement. ($1 \times 10^{-19} \div 0.01 \text{m} \times 5.5 \times 10^{-7} = 18 \times 10^{-12}$) (The coefficient of thermal expansion for silica is $5.5 \times 10^{-7}/^\circ\text{C}$)

A laser beam supposedly adds heat to the surface to prevent temperature change. Absorbed by what in transparent silica with a reflective coating? The mirrors are designed to not absorb the measuring beam, and they are going to absorb a heating beam? Temperatures are not uniform when adding heat of such miniscule amounts through such thick material. There is no way to cool the mirrors. Any cooling would be unstable, imprecise and nonuniform. There is no air for controlling temperature, as the environment is high vacuum.

All five points that the measuring wave touches have to be controlled for temperature and noise including the starting point and end point. The temperature of the detector cannot be controlled with a radiation wave, because it absorbs radiation.

Controlling temperature requires measuring what is being controlled. There is no way to measure temperature change to trillionths of a degree centigrade.

There is no such thing as stable temperature, just as there is no such thing as water in a river which is not moving. Temperature is more fluid than water. It is always increasing or decreasing. Part of the reason is because heat is always being added or removed through radiation. All mass is constantly radiating in

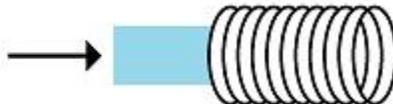
proportion to its temperature. Another cause of temperature change is heterogeneous materials, which cause variations in rates of temperature movement and radiation.

Mechanical Motion Free Space

The claimed mechanical removal of noise motion to one tenth of a pico meter is a contradiction of these facts: The mechanism has to move about 80 kilograms (176 lb) of mass, which is the weight of 4 objects, 20 kg each, which hang as a pendulum. All mechanical devices require some free space where motion occurs. In other words, if joints are too tight, nothing moves. An iron atom (crystalline) is 287 pico meter across, which is 2,870 times larger than the claimed, controlled distance of 0.1 pico meter.

How much free space does it require? Certainly more than thermal expansion. The coefficient of thermal expansion for iron is 11.8×10^{-6} per $^{\circ}\text{C}$. A one centimeter wide collar or shaft will expand 118 nano meters over 1°C ($11.8 \times 10^{-6} \times .01\text{m} = 118 \times 10^{-9}$) requiring at least that much clearance. This means its motion is not defined over at least that much distance. This distance is 1.8 million times greater than the claimed 0.1 pico meters of control for noise motion removal ($118 \times 10^{-9} \div 0.1 \times 10^{-12} = 1.8$ million). It means there is at least 1.8 million times as much undefined distance as claimed control distance, just for the removal of noise motion, and a million times more discrepancy in claiming to remove the difference between two paths down to 0.1 atto meter for interferometry.

Inductive Force



The descriptive material now says that positional control used inductive coil control like a speaker, implicitly meaning there were no levers or gears that require mechanical free space. Motion cannot be precisely controlled with such coil induction. Inductive force without levers or gears does not produce a definable position. It's the same thing as pulling with a spring. Solid connections are needed to define positions. The spring-like inductive force must overcome friction and inertia of acceleration, which both vary, and the position varies with the counter-force.

It's important to know what the problem of mechanical free space is, because it would be the only reason why inductive force was said to be used. No one uses inductive force without mechanics for position control anywhere in technology, because it is not a controllable mechanism. The only thing inductive force without complex parts can be used for is two position solenoids or switches.

On top of that, the use of inductive force for motion control did actually remove the problem of mechanical free space, because there must be a lot of free space around an inductor. Even though the direction is different, being parallel to the motion, there are still slight angular variations which wipe out the control over distance. But this effect is trivial compared to the ridiculousness of using inductive force to control position.

If a 10 centimeter rod within the inductor rotated 100 pico meters angular on each end (5 cm each from center), the end would shorten the distance by the claimed measurement of 0.1 atto meters. Not only is 100 pico meters not enough free space, the edges are going to rub and create friction with any amount of free space. But an inductor does not produce a definable position to reference to.

If the claim were that the inductor moves the mirror until the light goes dark on the photodetector, the adjustment would be removing the signal. But the inductor could not produce enough precision to do anything. It would jerk back and forth endlessly without matching any feedback requirements.

When physicists claim to use inductive force for the most precise measurement ever claimed, it means they are disregarding precision in exchange for a describable mechanism. It's physics by word salad instead of laws of nature.

Feedback Control is Impossible

Another problem is measurement for the feedback element of control. There is no method of determining what the desired position should be other than looking at the end result, which is the photodetector for the measurement. Correcting position at a higher frequency than the measurement removes the measurement. All alignment through the measuring device must be at such a low frequency that measurement occurs between alignment events. Since the measurement occurred over one second of time, alignment would have to not be occurring during that one second of time. Yet the claim is that adjustments were made at a frequency of 16,384 times per second.

The assumption is that a little noise motion with the mechanical device can be tolerated, and its precision is 0.1 pico meters, while the pendulum effect removes the rest of the noise. That type of logic is for visible effects in the millimeter range, not for a tenth of a quadrillionth (10^{-16}) less than that.

What happens is that the mechanical position control mechanism must look for a light change in the photodetector to see if its position needs to be corrected. There is no other method of feedback control at 0.1 pico meters, which is 2,870 times smaller than the distance between the iron atoms in the

steel. Accelerometers don't work at that level. So the mechanical position control device is trying to remove changes in light intensity at 16,384 times per second, while the signal is trying to produce one part per 10 trillion change in the light intensity for one second. That process breaks down and doesn't work.

The mechanical control over motion cannot respond to light changes in the photodetector, if it is only producing crude effects which are removed by the pendulum. Yet there is no other form of feedback information but changes in light in the photodetector.

Descriptions don't say what type of feedback mechanism is used for position control, but there is no position measuring mechanism that functions at thousandths of the distance between iron atoms. The mechanical position controlling mechanism must look at the signal on the photo detector to match waves for interferometry. If the scale was more normal, no match of waves would be required for interferometry, and the signal could read through any level of light that was stable, but not at 0.1 atto meter over 4 kilometers of path length.

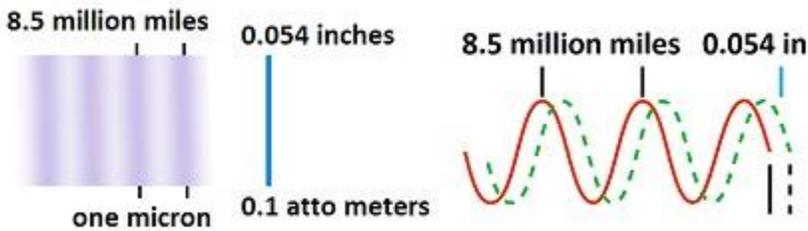
If accelerometers were removing motion independent of the output of the photodetector, every device would have to have less than 0.1 atto meter of absolute value position change, which includes all mirrors, splitters and the detector. There is no technology that works at that level.

Laser Beam Size

The motion is detected by a laser beam which bounces off a vibrating mirror. The laser beam wavelength is ten trillion times greater than the motion being detected. That's one micron (rounded) wavelength for the laser and 0.1 atto meter for the motion being detected. ($1 \times 10^{-6} \div 0.1 \times 10^{-18} = 10 \times 10^{12}$) If then, the motion is the ink line between New York and Los Angeles, the

wavelength of the laser beam is 36 times the distance to the moon. ($0.054 \text{ in} \times 10 \times 10^{12} \div 12 \text{ in} \div 5280 \text{ mi} = 8.52 \times 10^6 \text{ mi} \div 240,000 \text{ mi} = 36$)

The claim is that a laser beam equivalent to 36 times the distance to the moon in wavelength (one tenth the distance to the sun) would detect a motion equivalent to a vibrating ink line. The diffusion and random effects in the laser beam (noise) would cause such a small amount of motion to disappear in the light.



Limitations on Photodetector

Even if the laser beam were perfect and delivered the one tenth of a trillionth variation in its intensity, no detector can respond to such miniscule effects, because detectors have their own noise effects, which are parts per thousand for solid state and parts per million for vacuum tubes. At one part per million noise in the detector, the miss would be a factor of 10 million. ($10 \times 10^{12} \div 1 \times 10^6 = 10 \times 10^6$) That's one part per ten trillion resolution demand being met with one part per million sensitivity.

Concept Error

Here's a concept error that shows the fakery and stupidity of the physicists:

Physicists went to a lot of trouble to create a path length of 4 kilometers (about 2.5 miles) for the laser beam which reflected off a mirror for measuring gravity waves. They say in their presentation at LIGO that the long

path length takes longer for the light to get back, which gives them more time in the measurement.

The measurement is not based on time. It is based on a micro distance variation of 0.1 atto meters. A better path length would have been a meter or two. There was a lot of expense in creating the most perfect vacuum possible in a tube 4 km long.

Their error in thought came out of the Mickelson-Morley experiment of the 1890s, where the purpose was to determine if light moved at a different velocity parallel to the earth's motion relative to perpendicular to it. A greater path length would show more difference. But the LIGO experiment was not a study of the light. The laser light was only the yardstick, not the question being studied.

This error not only shows the stupidity of the physicists, it shows that they never actually went through a real process which produced a real result. A real analysis would have clued them into the error. It was only the total contrivance that allowed them to miss such an error.

One of the things this error shows is that physicists are total idiots. You might think their complex math shows they are geniuses, but the opposite is true. The math is only a snow job with no relationship to objective reality. Could anyone really believe that their math shows the existence of worm holes which are going to allow them to get to the next planet without the physical limitations of the laws of physics?

Physicists reduce everything to absurd math, because it's like a language which cannot be decoded. Physicists cannot check each other's math, because it doesn't reverse engineer due to the unlimited variations in the use of symbols. So they replicate a few confusing math equations and contrive the

results out of thin air. Out of it they get such absurdities as the Stefan-Boltzmann constant which shows 20-50 times too much radiation being emitted from matter at normal temperatures, as explained in the global warming section of this web site.

1. The project is called LIGO, described at:

<https://www.ligo.caltech.edu/page/vibration-isolation>.

2. Atomic Vibrations (10 pico meters), Wikipedia:

https://en.m.wikipedia.org/wiki/Atom_vibrations

(The 0.1 pico meter control over mechanical motion was modified on the web site for LIGO to 0.2 pico meter. This and other trivial changes on the web site are irrelevant to the criticism. The trivia is now scrambled and self-contradictory, so there is no need in trying to adapt to it.)

Chapter 8: Fake Technology

Chapter Summary

The big plans for converting electrical utility and transportation systems from petroleum to renewable electrical are rationalized on the basis of false efficiency assumptions for electrical energy. Applying basic principles of physics to the falsehoods shows the ridiculousness of the claims.



Renewable Energy Will Never Work

There's not enough renewable energy to replace carbon based energy.

Quack analysts claim 100% renewable energy is possible. They are skipping over the physics assuming efficiency can keep increasing and 15 mile per hour wind will never run out. They don't know any better. They just multiply numbers until they get what they want.

Renewable doesn't mean unlimited supply. Wind and solar are so dilute that not enough can be scraped up. It's slim pickings already. Most wind is too slow, and most solar is too dark.

Electricity is a specialty product which will not scale up to the transportation level. A massive increase in electric lines and infrastructure would be required. There is no space for it—within cities or the countryside.

The increase in transmission line length would be between a factor of 9,000 and infinity.

The British covered their country with windmills and only ended up with 15% of their electricity from that source. Now they are building nuclear plants. The Germans are building coal plants.

One of the problems is that activists assume extremely high efficiency for electrical energy. High efficiency supposedly translates into very little pain in converting to renewables. Activists have efficiency assumptions backwards. Electricity is far less efficient than other types of energy.

The simple facts:

- 1) Solar is going nowhere, because it is only used in the South West of U.S.A.
- 2) Windmills are going nowhere, because each one costs a fortune, and long lines cost even more.
- 3) Neither are going anywhere, because disruptive variations cannot be managed, and they waste resources trying.
- 4) Solar and wind are very dilute. Concentrating dilute energy is inefficient. It takes huge amounts of metal. Electrons have to be surrounded by a lot of metal or chemicals.
- 5) You couldn't cover the planet with enough wires to make it work. The electrical infrastructure would have to be multiplied by several thousand to produce 100% renewable energy, even if it were possible. There wouldn't be enough space between transmission towers for anything else.

Solar only gets sun power for a few hours per day. It must have 100% back up for most of the day. The back up is said to require natural gas electric turbine generators, because only they can be started and stopped easily. But natural gas is only available through fracking or imports. Before fracking, there was a shortage of natural gas. Fracking is expensive and only exists while oil prices

artificially high. When the price of oil drops, fracking stops, coal plants will be needed, and solar will be unusable.

Electricity is very inefficient, because it is lost to heat in every device and wire. The amount of energy from fossil fuels is six times electricity, while electricity produces more CO₂. It means electricity is less than one sixth as efficient as fossil fuels. Even if renewables could get rid of the CO₂, the inefficiency of electricity would produce overwhelming clutter—in fact, so much clutter that no one gets past 15% wind or solar, even without electric vehicles adding to it.

If these statements don't look credible because too many persons are saying the opposite, we need to take a look at the difference. First and foremost, who are these other persons? They are activists and journalists who have never studied an iota of science or engineering.

Activists assume there will be an electric take-over of the energy and transportation systems, because scientists have improved the chemistry of solar cells. That doesn't wash. The contrivers are omitting the fact that long transmission lines cost more than producing the energy, while solar energy would have to be shipped from the southwest to the other forty five states to get where they claim energy is going. Wind energy would also have to be shipped long distance.

There are a lot of ignorant scientists who should have never been scientists. Journalists and activists bring them to the surface and suppress the others. That doesn't mean activists have science on their side.

Non-technically minded persons don't understand the electrical wiring problem. Electrons require a lot of metal around them. Even now, electrical wiring is strung everywhere, but out of sight. And that's just for household

trivia. It has to be multiplied by tens of thousands for 100% renewable. Actually, everything hits infinity before getting there, so exact numbers don't exist. The numbers become self-contradictory, physical impossibilities before getting to 30% renewables as solar and wind. At around 30%, the energy would be so dilute it would require an extreme amount of lines and disappears in the lines.

Right now, there is an extreme shortage of grid scale transmission lines, because they cost too much. The problem is a national security threat, but the government will not require the problem to be solved, because the public would be up in arms over the environmental damage and clutter. That's before electric vehicles.

Long transmission lines are required for wind and utility-scale solar. Transmission lines generally cost as much or more than the production costs for the energy, and they lose energy along the lines.

For short lines, a minimum of 20% loss is built in; for longer lines it is 50%. The reason is because there is resistance in the metal which creates heat as a loss of energy. To reduce the resistance by half requires twice as much metal. To reduce loss from 20% to 10% would require two lines instead of one. To reduce loss on long lines from 50% to 25% would require two long lines instead of one.

This is why there is a shortage of transmission lines in the US. The distances that must be covered are too large. It's a losing battle between energy loss and massive lines. It doesn't pay.

Environmental damage and human disturbance are usually unacceptable for both solar and wind energy, even on a small scale. Scaling up would be prohibitive.

Solar and wind run into a barrier around 15% of electrical power, because electrical systems cannot tolerate more than 15% fluctuations, and backup systems are not perfect enough to remove fluctuations. No one can get past the 15% barrier with solar and wind combined beyond obfuscation over numbers and diversions.

The 36% wind energy in Iowa is not an exception. The lines are connected to a larger area which reduces the real average, while much of the energy goes into ethanol production.

Energy storage systems which convert to other forms of energy lose about 60% transforming in, and another 60% transforming back to electricity. Salvaging 40% of 40% is 16% recoverable.

Batteries are useless for utility scale electricity. Electric utilities require constant voltage. Batteries do not function at constant voltage, which means they are useless for electric utilities.

The only way to keep voltage constant with batteries is to have the same amount of power going in and out. Any difference changes the voltage. Computer chips will function at 1.3 volts while supplied by 5 volt batteries. This range allows battery voltage to go up and down between charges. Commercial utilities cannot allow voltage to change. Therefore, they cannot use batteries.

A Wall at 15% Solar and Wind

No one can get past 15% of their electricity as solar and wind on a large scale. Europeans are building coal and nuclear plants at 15% solar and wind because of the wall.

Supposedly, Iowa is an example of 36% wind power. The number has no meaning, because the grid is linked to lines going into Illinois and Wisconsin, where it is a small percent of the electrical energy, and some of it goes into ethanol production which presumably tolerates inconsistencies.

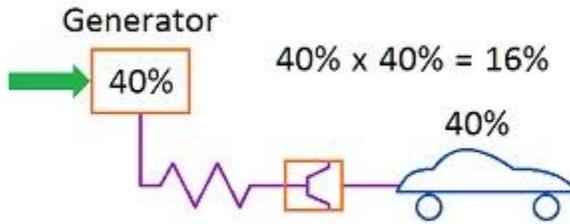
Of course, a large part of the problem is fluctuations. There is no realistic answer to the fluctuations caused by solar and wind. Existing infrastructure becomes taxed at 10% fluctuations, coping mechanisms might allow another 5% to the outer limits.

Transmission lines are a significant element of the limitations created by the 15% wall. In general, greens are unconcerned about costs and assume society should pay any price including more transmission lines. But the reality is that transmission lines are so expensive that consumers will not tolerate the expense of more transmission line.

As a general rule, transmission lines cost about as much as the generating systems for commercial solar and wind. It means, if transmission lines are constructed, they double the cost of installation. This problem has not been highly noticeable, because the small amounts of solar and wind at this time piggyback on existing infrastructure. When new lines must be constructed, they are so expensive that they never allow expansion to the levels required for going beyond the 15% wall.

In other words, even though the activists say, throw any amount of money at the problem, it never happens. Transmission lines are too expensive. In fact, a shortage of long transmission lines is creating a national security problem, while society will not invest in long lines because of the extreme expense.

Electric Vehicles Will Never be used on a Large Scale



An electric vehicle can never capture more than 16% of the energy in the source.

The maximum efficiency for a natural gas turbine generator is 40%, and it goes down from there.

The maximum efficiency of a functional electric motor is 40%, and it goes down from there.

Forty percent times 40% equals 16% maximum, recoverable energy.

Recently, there are strange claims being made for higher efficiency for electric motors. Who knows what the rationalization is, since efficiency is a ratio. But there must always be at least 60% loss of energy in a functional electric motor for inviolable reasons, which are these:

Electrical energy must be concentrated as much as possible in a motor. If it is spread out, the force drops, and more energy must be applied. Therefore, engineers always put so much amperage through such small wires in a motor that the resistive loss is around 30%. Inductive loss varies with conditions.

The net effect is that the highest efficiency achievable under laboratory conditions is said to be 60%. Under operating, commercial purposes, it's 40%.

These facts have been inviolable for more than a century. Efficiencies do vary; but they vary from 20 to 40%, not 40 to 60%.

Electric motors are designed to be as hot as possible, if heavy work is the purpose. To make them colder would require more wire, larger motors and more energy. Optimum is the maximum amount of heat the motor will handle.

The Physics of Electrical Efficiency

The US federal government has fake standards for the efficiency of electric motors requiring about 96% efficiency, and some talk exists of 98% efficiency. No functioning motors can get real efficiency above 40%; but efficiency can mean anything based upon definition and testing. There presumably is a test that shows 96% efficiency. The fraud is in claiming this number actually represents savings for society in energy and cost. Through whatever means the fakes are defining and testing for 96% efficiency, the consumers are not going to get more than 40% real efficiency for energy use and cost.

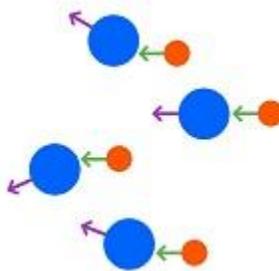
The fakes won't clarify for the public what they mean by 96% efficiency or how it is tested. So here is the physics which shows why the real efficiency never gets above 40% for functional, heavy working electric motors:

Electric motors transform electrical energy into kinetic energy. All transformations lose a lot of energy to heat, which is inefficiency—always far more than the 2-4% loss of 96-98% efficiency being described for electric motors.

To create kinetic energy from electrical energy, an inductive force acts upon electrons in copper wires which exert a force on the metal around them. Force acting upon electrons or atoms creates a lot of heat. Heat is the same thing as kinetic energy which has been randomized in direction at the atomic level.

Actual kinetic energy is linear motion. To get high efficiency, the motion must be almost all linear and very little randomized.

The randomization of motion at the atomic level cannot be prevented in creating linear motion. The number one reason is because all atoms and molecules are constantly vibrating when the temperature is above absolute zero. To get linear motion, every contact would have to be right in the center of an atom or molecule pushing it in the desired direction. But since the molecules are vibrating in every direction, many of the hits will be off-center and push an atom or molecule in some other direction. All of that "other direction" creates heat. It randomizes the motion of the atoms or molecules.



For this reason, it is impossible to get more than about 50% of the energy directed linearly in the transformation of energy into kinetic energy, usually less. A resistive loss is designed into electric motors to concentrate the energy. If resistive loss is 20% and it adds to inductive loss of 50%, the total is 70% loss, which is 30% efficiency. This is usually as efficient as electric motors get under optimum speed and torque. Efficiency goes down from there, as variation in speed and torque occur during use. Historically, the maximum efficiency of electric motors has been assumed to be 40% but that high of an efficiency probably requires light loads.

The rationale for 96% efficiency is probably based upon the misdefinition of energy. Contrived numbers are often used for the relationships between

different forms of energy, and they don't have consistent or stable derivations. An example is the Stefan-Boltzmann constant showing 20-50 times too much radiation at normal temperatures.

Compared To Other Autos

Considering a lot of other losses, an electric auto will convert 5-10% of the energy in natural gas into motion. A normal vehicle will convert 20-30% of the energy in gasoline into motion. That's 3 or 4 times more energy recovered with an internal combustion vehicle than an electric vehicle.

Electricity is a specialty product. It's not appropriate for transportation. It looks cheap at this time, but that's because it was designed for toasters, not transportation. Increase the amount of wiring and infrastructure by a factor of a thousand, and it's not cheap.

Electricity does not scale up properly to the transportation level due to its miniscule nature. Sure, a whole lot can be used for something, but at extraordinary expense and materials.

Using electricity as an energy source requires two energy transformation steps, while using petroleum requires only one. With electricity, the original energy, usually chemical energy, must be transformed into electrical energy; and then the electrical energy is transformed into the kinetic energy of motion. With an internal combustion engine, the only transformation step is the conversion of chemical energy to kinetic energy in the combustion chamber.

The difference matters, because there is a lot of energy lost every time it is transformed or used. Electrical energy is harder to handle and loses more in handling.

The use of electrical energy requires it to move into and out of the space medium through induction. Induction through space should be referred to as another form of energy, but physicists sandwich it into the category of electrical energy. Going into and out of the space medium through induction loses a lot of energy.

Another problem with electricity is that it loses energy to heat production due to resistance in the wires. A short transmission line will have 20% loss built in, and a long line will have 50% loss built in. These losses are designed in, because reducing the loss by half would require twice as much metal in the wires. Wires have to be optimized for diameter and strength, which means doubling the metal would be doubling the number of transmission lines.

High voltage transformers are said to get 90% efficiency with expensive designs, but household level voltages get 50% efficiency. Electric motors can get up to 40% efficiency, but only at optimum rpms and load. For autos, they average 25% efficiency. Gasoline engines get 25% efficiency with old-style carburetors and 30% with fuel injection, though additional losses can occur.

The result is this: A natural gas electric generating turbine gets 40% efficiency. A high voltage transformer gets 90% efficiency. A household level transformer gets 50% efficiency. A short transmission line gets 20% loss, which is 80% efficiency. The total is $40\% \times 90\% \times 50\% \times 80\% = 14.4\%$ of the electrical energy recovered (85.6% lost) before getting to the vehicle and doing something similar to the gasoline engine in the vehicle.

Electricity appears to be easy to handle sending it through wires. But it is the small scale that makes it look cheap. Scaling it up takes a pound of metal for so many electron-miles. Twice as much distance means twice as much metal. Twice as many amps means twice as much metal. Converting the transportation system into an electrical based system would require scaling up

the amount of metal and electrical infrastructure by factors of hundreds or thousands. Where are all those lines going to go? They destroy environments. Where is that much natural gas going to come from for the electrical generators? There is very little natural gas in existence when using it for a large scale purpose. Natural gas has to be used with solar and wind energy, because only it can be turned on and off easily for backup.

One of the overwhelming facts about electric transportation is the chicken and egg phenomenon. Supposedly, a lot of electric vehicles will create an incentive to create a lot of expensive infrastructure. There are reasons why none of the goals can be met for such an infrastructure. The basic problem is that electricity will never be appropriate for such demanding use as general transportation, which means there will never be enough chickens or eggs to balance the demand. It's like trying to improve a backpack to such an extent that it will replace a pickup truck. The limitations of muscle metabolism are like the limitations of electrical energy.

Electrons are not a space-saving form of energy. Electrons have to be surrounded by large amounts of metal. It means electric motors get heavy and large. When cruising around town, the problems are not so noticeable. But the challenges of ruggedness are met far easier with internal combustion engines. Engineers say it is nice to get rid of the drive train with electric vehicles. But in doing so, they add clutter elsewhere, which adds weight, takes up space and messes up the suspension system. Out on the highway, the suspension system is the most critical factor.

These problems will prevent electric vehicles from replacing petroleum vehicles for all but specialty purposes. The infrastructure needed for electric vehicles will never exist when limited to specialty purposes. This would be true even with the perfect battery which takes up no space and holds infinite

charge. Batteries are assumed to be the limiting factor in electric vehicles at this time due to their weight and expense.

A Problem with Fake Numbers

Bureaucrats determine auto efficiency through numbers which they derive in strange ways. They have themselves convinced that electric vehicles are five times more efficient than petroleum based vehicles. The real efficiency is similar for both, as explained above, when electrical losses are ignored, and about 5 or 10 times less efficient for electric vehicles, when total infrastructure losses are considered.

To shoehorn their false assumptions into place, bureaucrats try to get petroleum vehicle efficiency down and electric vehicle efficiency up to show a ratio of 1/5. They put petroleum vehicles somewhere around 15% efficiency, when they are 25-30% efficient, and electric vehicles around 60% efficient, when they are around 25% efficient. Even that combination is a 1/4 ratio; but with a lot of vagaries, the difference is supposedly 5 to 1.

What makes bureaucrats assume electric vehicles are 5 times more efficient than petroleum vehicles? It's not entirely clear, but they do have an energy conversion problem. They calculate kilowatt hours per mile for electric vehicles and compare it to miles per gallon for petroleum vehicles. They seem to think there is a lot more energy in kilowatt hours than there actually is, or less energy in BTUs of petroleum than there actually is, or maybe both.

Part of their problem seems to be that electricity is cheap to deliver compared to petroleum, while not-so-bright persons assume cheapness is the same as efficiency. Electricity is only cheap with the previous electrical infrastructure designed for toasters, not autos, and with coal or gas as the source. When crude was \$120 per barrel, not-so-bright persons could have gotten a lot of

false impressions on the efficiency of electrical energy. Now the cost of energy is changing, but the rationality is not improving.

There is not a correct relationship between kilowatt hours and petroleum BTUs due to a misdefinition of energy. Physicists cannot measure the actual relationship between kinetic energy and other forms of energy. They fake the results and contrive a floating value for the relationship between kinetic and other forms of energy.

Not the least problem is that physicists deal with the resulting errors by contriving. And they contrive, and contrive, and contrive. So all related facts become contrivances. Which means there is no way to pin down the real energy relationships.

But there is an analysis which is independent of those contrivances, and it is explained above. In that analysis electric vehicles function at about the same efficiency as petroleum vehicles in the auto, while 5 or 10 times that amount of energy is lost in getting electricity to the electric vehicles.

Engineers, outside the bureaucrats, generally agree that petroleum vehicles get 25% efficiency with old style carburetors and 30% with fuel injection, while other factors could lower it somewhat. The maximum efficiency for electric motors is 40% under ideal conditions at one optimum speed and torque. Electric vehicle motors are not so optimized, and average driving conditions take down efficiency, which should be 25%, but no one can say exactly. It's certainly not 40%, which might be maximum for electric motors at one ideal speed and torque. None of the uncertainties create much difference in efficiency for electric vehicles and petroleum vehicles inside the autos.

There is a loss within electric vehicles due to speed control. When the speed of an electric motor is controlled with dc voltage, there is a loss of about 40%

in the control circuitry. Ac voltage control can be more efficient with "light dimmer" type of controls, but inverters which convert battery dc into ac lose about 30%. Some fancy switching might reduce the loss a little. So it is quite likely that electric vehicles do not get 25% efficiency going from batteries to kinetic energy.

About The Author

I study unusual species which show extreme evolution. In graduate school I studied the yeast *Nadsonia fulvescens*, which is the only yeast adapted to growing on tree sap. When rain washes the sap away, the yeast forms a spore without nutrients available. It had to produce spores outside the cells, because shrinkage and hard cell walls required a smaller space. This yeast had the same control mechanisms as mushrooms. So I studied the morel mushroom. It evolved from a single-celled yeast 20 thousand years ago. I know of no other multicellular organism that evolved from a single celled organism in the past several hundred million years. Unheard of phenomena include reversion patterns from earlier evolution. It showed phenotypic variation as an adaptation mechanism. All organisms use this mechanism, but it wasn't understood, and it has been confusing scientists.

I got the graduate work published but not the rest. I was an outsider by then. Science can no longer tolerate outside influences, because extreme corruption requires heavy handed control.

A total lack of criticism, inside science and out, has resulted in corruption taking over science. In the past, only a few retired scientists dared to speak out, and they went unheard. Even they are now gone, as the internet changed the standards of public communication resulting in independent voices being buried in oblivion. There was more criticism possible when the paper medium was used.

Over the past forty years, I found endless errors in science and overwhelming forces promoting and protecting the errors. In 1997, I created a web site on the results, and it continually evolved. This book is a condensed version of the material on my web site.

The science of these issues is not accessible by the public. Promoters of global warming say the science is settled, but they won't tell the public what that science is. Some web sites produce a few paragraphs of rationalizations on some issue with no clue as to the degree of corruption at the core of the science.

I grew up in a small town in South Dakota. My dad was an auto mechanic. Near by, my grandparents had a farm, so I spent summers doing farm work. In high school, I studied vocational agriculture and then started college in agriculture before switching majors to microbiology.

Microbiology is a total and highly integrated subject. Molecular biology began in microbiology and still occupies a large part of the subject. You also study medical microbiology, virology and immunology. The basis of it all is physiology, which includes most of biochemistry. For these reasons, microbiology is the most completely developed and properly defined area of science. The reason why this matters is because a lot of scientists do not understand what science is supposed to be. Power mongers turn science into a propaganda tool with none of the standards which would correct errors. The need for controls, references and standards is recognized in microbiology, while fake scientists don't know what those things are.

I studied yeast physiology in graduate school at the University of Arizona.

The yeast that I studied (*Nadsonia fulvescens*) was very mysterious, as it formed a spore outside the vegetative cell, and cell material migrated into the spore leaving an empty shell for a "sporangium." My major professor suggested that I do time lapse



photography of the process looking for clues as to why the cell material was migrating into an adjacent spore instead of forming the spore within the

vegetative cell, as usually occurs. I got tired of the photography real fast and studied the nutrition and physiology of the yeast.

At that time, 1969, yeast sporulation research was in a state of chaos. Yeast scientists knew something was triggering sporulation, but they couldn't determine what it was. They tested every chemical on the shelf without results. In 1967, A. F. Croes (1), in the Netherlands, looked at the physiology and found indications that a peak in energy metabolism was triggering sporulation. I found additional evidence in nitrogen metabolism (2). Depletion of nitrogen causes a build-up of ATP, because it can't be used for synthesis without nitrogen, and the result promotes sporulation.

Along with the migration of cell material during sporulation, the yeast, *Nadsonia fulvescens*, produces spores without nutrients being available. In other words, it stores up energy and cell material and then transfers that material into an adjacent chamber called an ascus. Sporulation is inhibited by a repressor substance, acetate, which is a product of metabolism. These strange characteristics result from adaptation to growing on tree sap. Most yeasts grow well on tree sap, but they can't adapt to it, because it is transitory. *Nadsonia* adapted by forming a spore when rain washes the tree exudate away. Acetate repression maximizes growth by not allowing spores to form while nutrients are available. Forming the spore from previously stored-up material results in a shrinkage of cell mass. Since yeasts have hard cell walls, the material must move into a smaller chamber to accommodate the reduction in size. Only *Nadsonia* shows the migration of cell material, which indicates that it is the only yeast which forms a spore when nutrients are not available and therefore the only yeast adapted to growing on tree sap.

After graduate school, I moved onto the vacated farm where my grandparents used to live and did mushroom research. Since independent scientists do not

get funding, I had a lot of time to look into errors in science. In 1983, I found that energy was misdefined in physics. After arguing with physicists and getting nowhere, I developed a mathematical proof of the error, which of course got nowhere also.

I got into electronics designing numerous temperature controlling and measuring devices. In constructing an audio amplifier, I found that the usual design had an extremely problematic output due to an inadvertent voltage gain of about 50,000. So I designed a method of driving speakers without voltage gain, which greatly improved audio amplifiers. Of course, no one but a few hobbyists were interested.

Capacitance meters were extremely expensive and imprecise during the eighties, so I found a better way to measure capacitance. The usual way was too slow for measuring small capacitors. Meters measure the time interval required for voltage to rise, which means two measurements. A much faster way is to simply measure the current required to produce the voltage rise. Being much faster, the process can be completed during the short time interval that small capacitors do what they do. This method allows almost a millionth as much capacitance to be measured as the previous method. It probably helped engineers develop touch screen displays based on capacitance, as I was getting email from engineering students at the time.

I decided to study mushrooms, because my yeast results explain the basic physiology of mushrooms. Just as the yeast needs to store up cell material to create a spore, mushrooms store up cell material in the mycelium before using it to form a mushroom. This allows a mushroom to form in one or two days, while a month or more is required to build up the cell mass in the mycelium. Mushrooms must form rapidly to prevent dehydration or damage before the spores are released.

Mushrooms also show the need for an energy peak to promote differentiation, which means creation of the new form or mushroom. An energy peak is a method of determining that nutrients and cell machinery are adequate for completing the process. This physiology is visible in the composting method of growing mushrooms. After mycelium gets thick, a layer of peat moss is put on top, which is called a casing. When mycelium gets to the surface of the casing, a mushroom forms. The difference between surface and lower growth is oxygen availability. Oxygen produces ATP through respiration.

I thought about studying this process. When I looked into it, I found that a nearby professor was studying the morel mushroom. He talked me into studying the morel. The morel was extremely mysterious. It produces spores within the tissue (ascospores), as yeasts do. As

time went on, I found the physiology of the morel to be exactly that of a yeast, which could only result from evolution from a yeast. The morel was excreting acid to kill bacteria and feed on them. The acid tends to accumulate on the mycelium and kill it. But yeasts will tolerate more acid than bacteria, so the morel became dependent upon excreting acid, even while too much will kill the mycelium. The



morel evolved from a yeast so recently that it does not have good control over morphology. It also self-destructs as it dies off, as all bacteria and yeasts do, but which mushrooms never do. The process is called autolysis. It allows nutrients to be recycled by breaking large molecules into subunits for re-use as nutrients.

By 1997, I had a large amount of scientific information accumulated and no better place for it than the internet. About then, global warming became a

social issue, so I have been developing that subject explaining the science in terms the public can understand. Eventually, my limited resources prevented me from keeping a car running any longer, so I got on a bus and moved to Seattle. All I do now is maintain my web site, which requires a lot of updating on global warming, as arguments transform into social dogma.

I'm a pre-1980 type liberal. At that time, liberals were promoting equal opportunity, which means creating social structures and solving problems for the lower classes. When the lower classes have money to spend, economies thrive. The IMF does the opposite—putting the lower classes out of work and bankrupting economies.

1. Croes, A. F. 1967a. Induction of meiosis in yeast. I. Timing of cytological and biochemical events. *Planta*, 76: 209-226.

—1967b. Induction of meiosis in yeast. II. Metabolic factors leading to meiosis. *Planta*, 76: 227-237.

2. (Graduate Research) Novak, G. E. 1981. Edotrophic sporulation by the yeast *Nadsonia fulvescens*. *Can. J. Microbiol.* 27: 967-970.