Preface

Hello and Welcome to this story which is a story, within a story, within a story., It is about that which is most precious, valuable, and cherished. If it is lost it is hard (or so very hard) to redeem. Its the only possession that one really ever has. This possession is **health**. This story is about how we can create a system where *everyone* has *all* of the health care that they need to care for this possession. One of course, still has to choose; life.

The purpose of this story is to explain the path for the development of this health care system. I suspect that it is very different perspective than what you have probably seen. But it is the truth.

This project started off as a description for a businesses concept and plan and is one of the stories within a…. Then as the national health care discussion started it oriented itself likewise. Finally, from this, the final most essential story emerged. It emerged from humility.

Once the first two stories were written the "story" seemed so obvious, so transparent, that almost certainly this third story was already known. Sure enough, as I looked back in time, there it all was. It would be hard to imagine that the great physicists and natural philosophers of the last century did not know this story. Its clear that the keepers of ancient wisdom knew it as well. Its clear that Abraham did. Its clear, as one would imagine, that the Torah (Bible) knows. In fact every instinct, every spark, beckons "look inside" and we will fuse and finish and finish and fuse these stories together.

This story is written for someone who does not have a medical or science background.

It is currently being rewritten to more deeply and explicitly explain the third story and some of the concepts introduced in this current draft.

If you would like to see what has been done to date with the rewrite you can download this document at this link: http://www.tcen.com/draft.htm

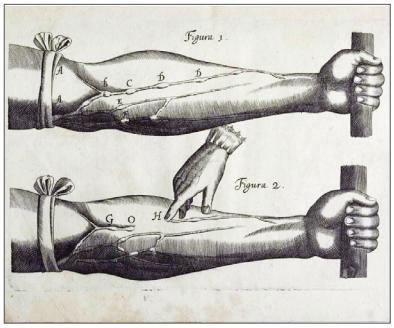
For reading this document some knowledge of Hebrew and Jewish mystical teachings is useful but not necessary. An introduction in a "nutshell" explanation is given for these constructs and much more information i.e. 3000+ years of commentary; can easily be found on the Internet and elsewhere. So there is no point in reiterating it in–depth.

DRAFT VERSION

It's A Wonderful Story

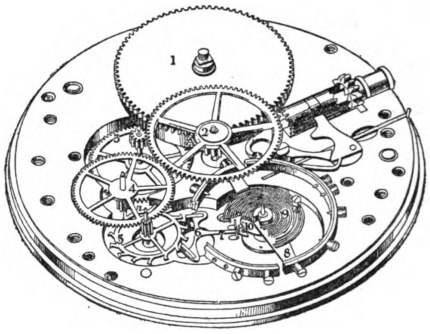
I HAVE A WONDERFUL STORY TO TELL TO YOU AND TO SHARE WITH YOU. It is a story about what is NOW possible. It is as story about joy and happiness. It is a story about enough. It is a story about the truth. Thus, as I am simply the servant; the waiter of the story, I think that it is appropriate and incumbent upon me to prepare you for what is about to unfold as you read through this story. As you read on, at some point, I think that you will be filed with a sense of great joy, happiness and peace.

Our story begins, relative to our usual time reference, a long, long time ago where the notion that one could understand the world and our body's workings was by examining how the parts that constitute these entities operate. Essentially, the fundamental, central and extremely powerful idea, is that if one understands the function of the parts, then one could understand the functioning of the whole. This view has the incredible advantage that by understanding how the parts work and work together; that if one now wants to influence the behavior of the whole, one need only alter the functioning of what seem to be the relevant part(s) of the whole. It represents a trificate (three way) manipulative mechanism for effecting the workings of the subject (object). One could alter a part to increase , decrease or "fix" (or repair) it so as to achieve a functional goal with the subject. Thus, what subsequently developed as a part of this view was a way to systematically explore the workings of the parts, a process that we would call the Scientific Method.



Exercitatio Anatomica de Motu Cordis et Sanguinis, p. 73; 1628 William Harvey

The cornerstone hallmark of the Scientific Method investigative method is that the observer (investigator) controls the observation environment. Specifically, one keeps all of the conditions that relate to the whole [subject] unchanged except for one, one part of the whole. One then observes what happens given this circumstance. Typically, there are two groups of observations made. Each group has like (ideally "identical") characteristics. In one group a change is made to one of the parts and in the other group no change is made. One then compares the two groups looking for any resulting manifest difference(s). With soulful persistence of repeating this process over time a dynamic "picture" of the interactive workings of the parts and thus the whole emerge. Eventually one learns "what part does what" and how changes in the part(s) effect the whole. An often used way to conceptually envision this is to use the analogy of the workings of the clockwork of a precision timepiece. Medical practices from Angioplasty to Vaccination are manifestations of this "Clockwork Body" conceptual view.



TIME TELLING *through the Ages*; p. 337, 1919; Harry C. Brearley

A "Clockwork Body" is like a clock made up of moving interconnected and interdependent "gears" all working together to "keep time", to keep the movement of the "clock hands" moving along in a meaningful functional way.

The arrangement of the "gears" are ordered in a very intricate and precise fashion and so when one starts to observe the clockwork body movement, one sees the orchestration of the "gears" that result in the functional action. The movement of the "gears" appear to be very complex but upon closer inspection one becomes aware that a more accurate understanding would be to describe the "Clockwork Body Movements" as intricate because we see that the "gears" and "springs" and "bolts" etc. are all variations of the same fundamental shapes and materials. This variation in shape, material and arrangement allows for the same basic "substrate" to be used to construct different functional parts. So as like in a clock where some of the "gears, springs etc." are arranged to move the "little hand", or hold a wound spring; in the body they are arranged to form different organs. The biologic process by which this occurs is called differentiation. Pluripotental (stem) cells differentiate into specific cell types that are then arranged to form all of our organs from arteries to our brain* to veins. So now that this awareness and process "stage" is set, let us now continue the story to explore and enjoy the "magic" of this clarity.

What happens next, over a period of 100 years or so, is that many very gifted women and men work hard to systematically explore the parts of the Clockwork Body model using the Scientific Method to discover how all of the parts work and work together and interact with the environment (e.g. clean water, sanitation practices). The result is a fantastic explosion in the number and scope of effective treatments that they develop. Their hard work and sacrifice really "pays off" as we can now intervene in the Clockwork Body in all sorts of great ways. Ways, that–increase–healthy growth through good nutrition,–decrease–childhood morbidity and mortality through vaccination and–repair–worn joints in 80+ year old "youngsters" so that they can continue enjoying an active life, bicycling and swimming etc., to go with their sharp; wise minds. What a wondrous site! –A population that is living longer healthy, active, purposeful lives than was ever possible or imaginable at any time ever before. A magnificent triumph for humankind! The Clockwork Body model coupled with the Scientific Method is incredibly effective. A resounding Success! This makes possible all sorts of remarkable experiences like parents "getting to" continue to be parents to children who are now sixty or more years old–"oh boy" what Fun!–And–So likewise, just as the lifespan increases, so do the health care interventions that make the former possible. In fact, it seems like there is no end to "in sight" to this expansion of health care services.

Indeed what starts to emerge is a picture of health care services being infinitely "Elastically" expansive and concomitant with this, the resource costs to provide these services do the same. However, now, a seemingly insurmountable challenge emerges to face the people. Health Care Costs are continuously rising. Rising to the point where they consume an ever increasing amount of the resources of the people. Also, the costs for health care become so great and the demand for care so high, that not all people can get health care. The compassionate and caring people throughout the land saw this great pain and become steadfast in their will to stop this *undue suffering.* So the people assembled to address this unacceptable situation.

A great land wide debate commenced. After all, health care is life care. Many noble, thoughtful and effective changes were proposed by astute, wise and caring citizens.

* It is important to note that while this "Clockwork Body" model can account for the substance of the brain it does not account for–the mind–consciousness.

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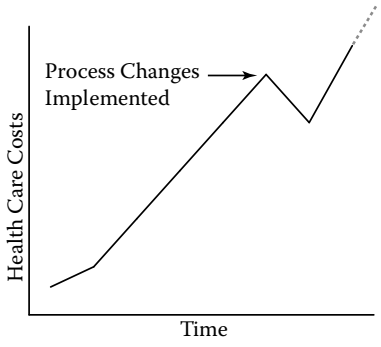
The people were determined to not let the unmet need and significant deficiencies in the delivery of and access to care continue to go on in the land. The national effort and aware focus generated some very clear paths that were needed to be taken. These "paths" took the form of medical system "process changes". And what was stupendous about this, was that these "process changes" all fit very nicely with and indeed were apart of the same perspective and world view as the "Clockwork Body"! What a wonderful integration and transfer of system effectiveness. These "process changes" would work out quite well because they represented—increase , decrease and or a "fix"–change that would be made to "parts" of the whole. The "process change" categories that took shape looked something like this:

Process Change Categories:

- Health Insurance Reform
- Access to Care
- Improvements in Health Care delivery efficiency
- Tort / Malpractice Reform
- Aggressive Policing for & Prosecution of Medical Care Fraud
- Prevention Services
- Payment scheme for Services Reform
- Initiatives that allow the health care team to spend more time with patients. To truly care for people it takes Time. Time. Time.



Now, as the people started to reach a consensus and decided on the specifics of the process changes in each category, it started to look like a good deal of effective changes would be made that would directly and quickly remedy significant deficiencies that had been identified in the health care system. Additionally, it was calculated that a very large amount of prior ineffective health care spending would be eliminated. However, even with all of these great changes a harsh reality still confronted the people. Namely, that the resources / cost for health care would still continue to rise as a percentage of the people's total resources (GDP). The reason for this continued cost increase was much more of a "sweet" than "bitter" paradox.

See, the "sweet" effective interventions (and their collective consequences) that resulted from the Clockwork Body and the Scientific Method continued and expanded *exponentially. The Sum result was more health care resulting in more life. As these methods "aged" they yielded ever more powerful and robust effects.* It was starting to look like the famous premise line from the syllogism "All men are mortal" was in need of an "adjustment" to "All men are relatively ..."

And the "bitter" was that for the–increase–decrease–or fix–"maintaining" of the "parts" there was required a constant and ever increasing amount of resources.

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As incredibly wonderful as theses methods were at giving people an unprecedented number of healthy years of life, it had one inescapable "Achilles Heal"—*it is an input only system.* To keep all of the parts functioning required a constant (and apparently increasing) amount of resources.

Also, when one "zoomed out" and looked at all of the "health care delivery" parts–agencies–the processes, programs and settings etc.–one saw a *fragmented* system where in many cases this same fragmentation was mirrored at the individual health care level. So, like a clock that needs ongoing "adjustments" to run properly, so did the parts of the health care delivery system. These parts needed a constant input for the–increase–decrease–or fix–"maintaining" of the health care delivery system. Furthermore, at the agency level and sometime individual level as well, the "picture" reminded one of a dike with leaks or trying to form a ball out of sand with your hands. "Patch" one area and a "leak" would arise somewhere else. Also, while looking "down" on this from the "zoomed out" perspective, one would see a constant "Action—Reaction Dynamic". In many cases, it would not necessarily be a straightforward "sea–saw" one side goes up as the other goes down function, but rather a more circumscribed, but none the less discernible action–reaction pattern(s). Essentially, the people found themselves in the lower right–hand corner of Diagram 1.

So it looked like "the people" were at an impasse. It seemed like no matter what was done the cost "creep" would continue.

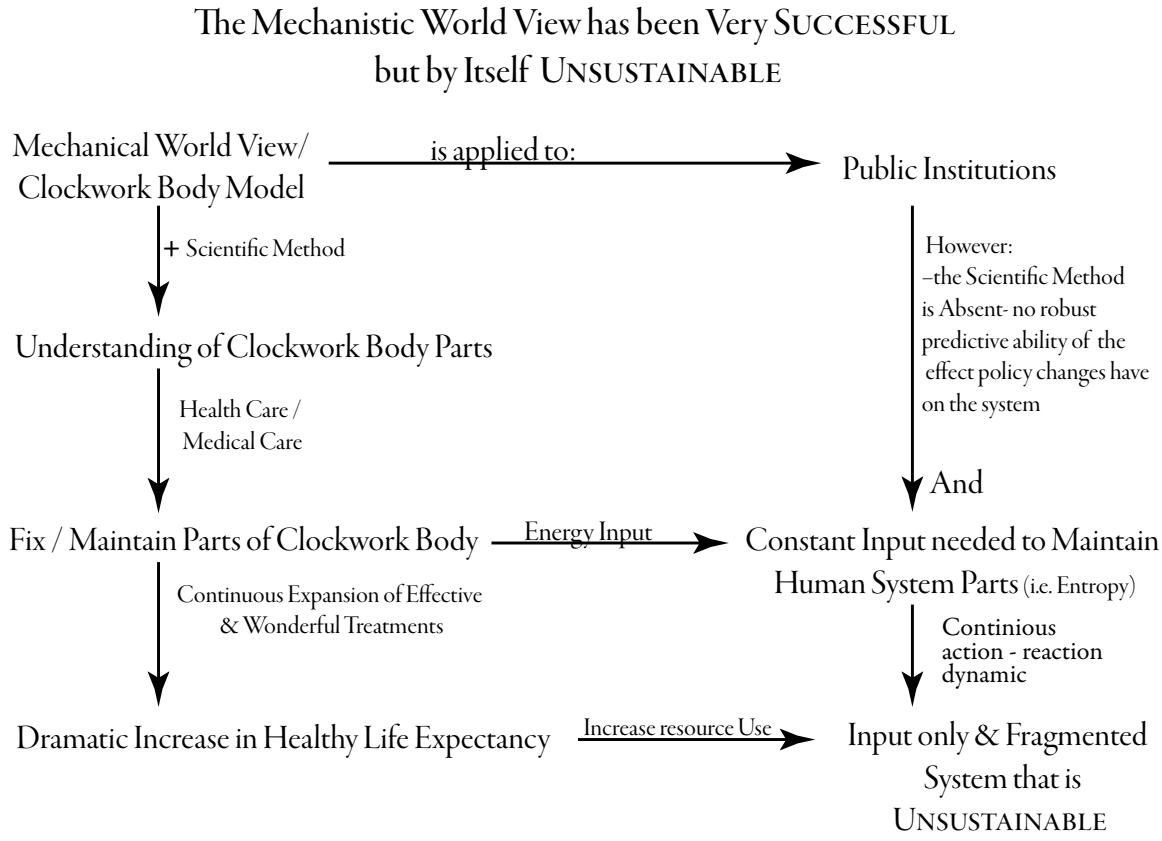


Diagram 1

It's A Wonderful Story

The perception was that more and more resources were being "Used Up". Or were they? Maybe not. On the surface of it, to ask : Are more resources being used up for health care? seems like a silly question. All of the evidence clearly suggests this. However, among the people, someone had asked himself this sort of question a "long time ago", say about 110 years ago.

The questioner, really observer, made a profound observation. He was one aware "cookie". He observed that everything that is here is always here. We get "tricked" into believing that a resource can be "used up". Put another way, *the notion that there is scarcity is an Illusion.* In fact, for all purposes the opposite of scarcity is true. *we live in a world of everlasting Abundance.* Wow ! Sounds "to good to be true", there must be a Pinocchio like "Pleasure Island" "catch". Well, maybe? but the "catch" is perhaps in what "the people" might not do rather than in the soul of what "the people" can do. What is possible now.

Now this "aware cookie" (as well as others of his time like David Bohm, Erwin Schrödinger and Robert Oppenheimer) must have realized that "the people" of the early twenty–first century would end-up "in" the lower right corner of Diagram 1 and that there was a solution. The big question mark for them in this regard might have been: I wonder if they will avail themselves of the solution? The way to "get out of the corner".

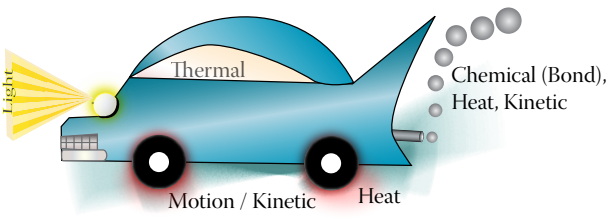
So let us take a look at this observation by first plainly stating it:

The aware "cookie" observed that: Matter and energy are neither created or destroyed. The term for this relationship is the "Conservation of Matter" or "The Law of the Conservation Of Matter" or "The Law of the Conservation Of Energy." Same "Law" just stated form the opposite sides of the profound and famous equitation of:

Energy (e) is Equal to the mass (m) of an object multiplied by the speed of light(c) squared.

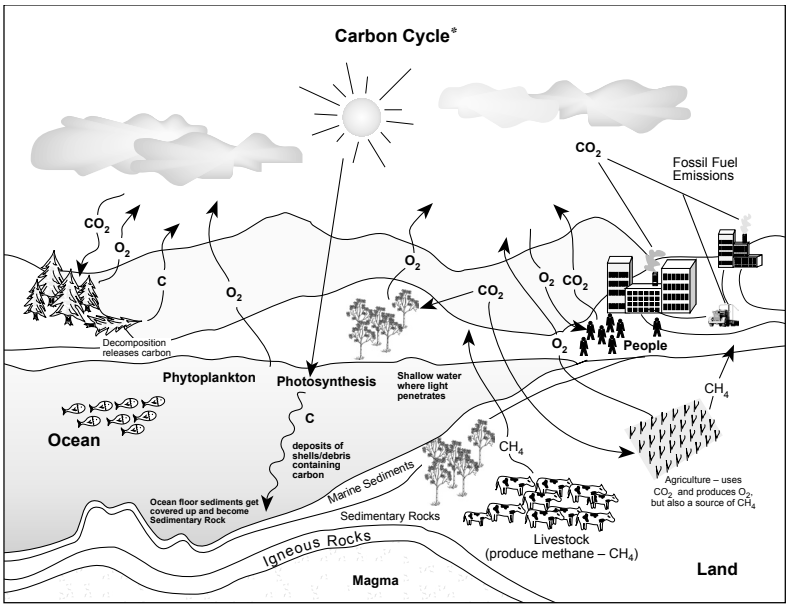
$$e=mc^2$$

So while it might appear that we "use up" energy, in reality what is really occurring is a dynamic conversion of the Status of the forms of energy and mass (matter): thermal (heat), kinetic (motion), light; and solid, liquid and gas as we engage in our daily activities. Thus, what we purchase with our dollars are products and services that are "formulations" of these energy / mass Status States. However, there is an important designation between the two. The value of the dollar fundamentally depends on trust, but also varies depending on a multitude of other factors, where as the "value" of the mass / energy relationship is fixed. It is governed by it's Law Of Conservation. Thus, energy can be viewed as independent of cost!



The energy of a gallon of gas will move a car the same distance no matter what the dollar cost of the gallon of gas and none of the energy is "lost" or "used" as you drive. All of the energy is still "there" it has just undergone a "status state" change i.e. heat/kinetic energy moved the pistons, that moved the axil, that turned the wheels–kinetic–motion and then at some point you apply the breaks and the motion is slowed and then stopped producing heat dissipated from the break pads.

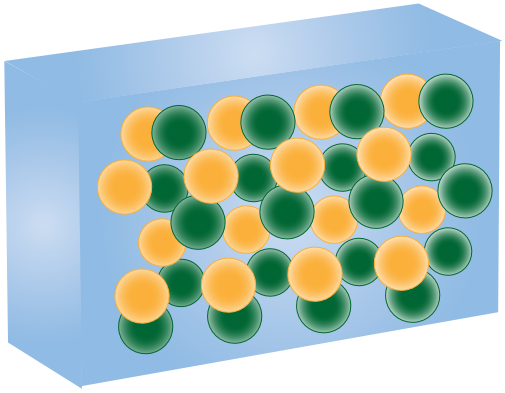
The rest of the energy is in the exhaust, to the battery, for the AC, lights etc.. Thus, you did not "spend" any energy but yet you did "spend" money to get the gas. This does not seem quite fair does it? Seems a little odd maybe? Or maybe a more accurate aware and clear way to ponder this circumstance, a circumstance that is a part of the "Right Lower Corner"–constant input–problem is to consider how the people managed their "systems".



NASA Series: Looking at Earth From Space, p. 71, 1994 Colleen Steele, WT Chen & Company, Kelly Kavanaugh | *or Carbon / Oxygen (O_2) Cycle

So to "unwind" the situation "the people" started looking at their "systems" from a different perspective. What if in addition to making "process changes" one now integrated the multidimensional "cyclic" concept of the "Status States" inherent in the Law of Conservation. As it turned out, a similar construct had been put forth with much earnest effort by many people (some who had received very high honors for bringing this life sustaining perspective to the people of the world) who where working to understand the environmental effects of and need for stewardship of nature's cycles like the water and carbon and nitrogen cycles. However, now, in addition to these very worthwhile environmental movements, it came to pass of a perception that the "cycle" that needed to be integrated, layered in; was the "Status State" dynamic inherent in The Law of Conservation. Environmental action to help manage the ecosystem with "nature cycles" was great, but again, it seemed to leave the people caught in the right lower corner of Diagram 1. For example, there was great concern among some of the people, as to how best, to manage the pollution and ecologic damage that resulted form the use of some of the earth's resources for the sustaining of their lives.

Indeed, it seemed that this action–reaction–concern, with—conflicting economic versus believed ecologic needs in particular—was a manifestation of the same manage and understand the parts "Clockwork Body" view and processes that resulted in this predicament. The whole situation of how to mitigate for example, polluting atmospheric gases, seemed intractable, especially if one considered it a global issue. Even if the people acted to say, limit their products of incomplete combustion emissions–carbon, nitrogen, oxygen and sulphur containing molecules–the positive attributable impact that this might have would be markedly blunted unless the people of the rest of the world followed a like policy. Reaching agreement in this regard was proving quite challenging and managing and implementing any such agreement would be a very significant undertaking in and of itself. One that would end up being quite resource intensive. However, it was clear that inhaling automobile tail pipe and other emissions was not healthy for the people–just ask anyone who has gone running by a river that runs through a big city.



Likewise, a similar health risk could be seen with creatures that live in the water when emissions caused "acid rain" changing the acid-base balance of their environment.

Again, it seemed like a leaky dike repair–ball of sand making–prospect of directly regulating these emissions. As the people pondered the situation it dawned on them that many facets of society and it's organizations, institutions and agencies were operating from this "Clockwork Body" view and trapped in the "lower right corner", a sort of Societal McBurney's Sign.*

What emerged was not so much as a "paradigm shift" as it was a "paradigm ordering", a perspective where the "Clockwork Body" view and Conservation of Matter "ABUNDANCE" reality are dispersed around each other. If one were to visualize this it might look like one of those play areas where a container is filled with soft softball sized balls and then children joyfully play in the ball filled container. However, in this case the balls are just one of two colors, say green and gold where the gold is the "Conservation of Matter Abundance" and the green is the "ClockWork Body".

* "Deep tenderness at McBurney's point, known as McBurney's sign, is a sign of acute appendicitis." <http://en.wikipedia.org/wiki/McBurney%27s_point> and for more information: <http://en.wikipedia.org/wiki/Charles_McBurney_(surgeon)>

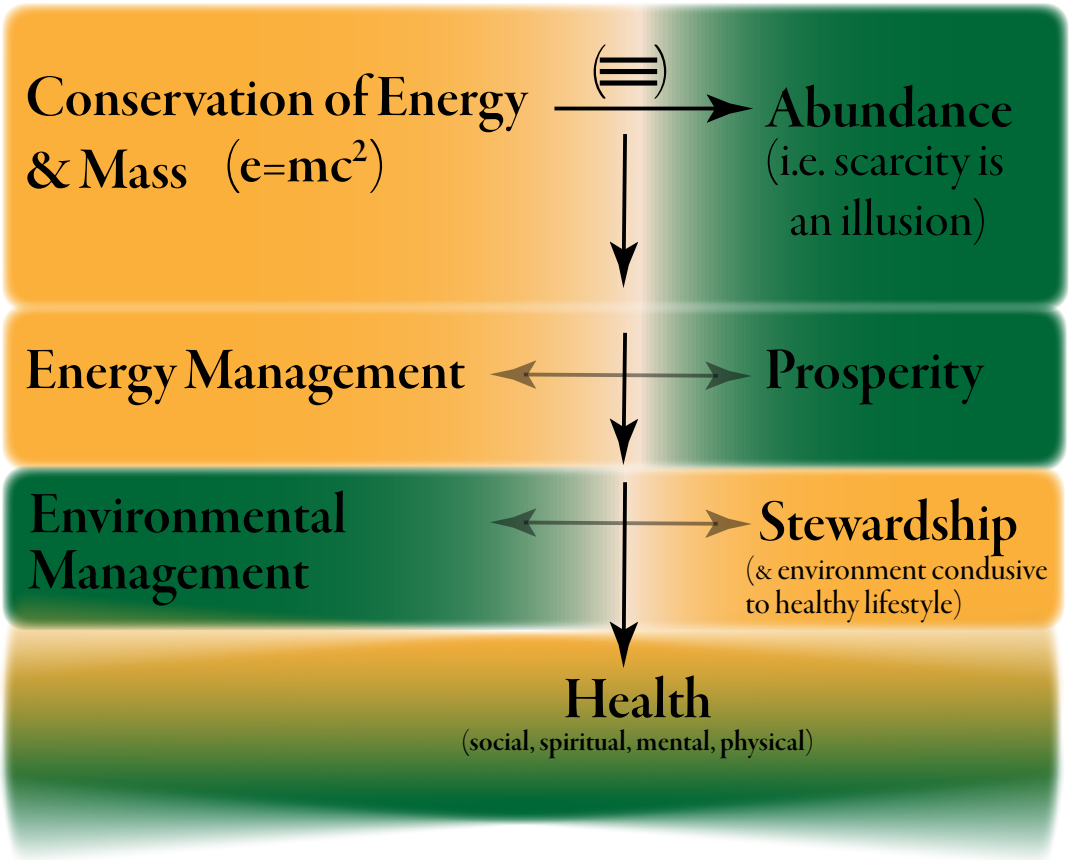


Diagram 2

This prospect was very inspiring. There now seemed to be a way to get out of "the right lower corner". A way to continue with the powerful and effective methods of the Clockwork Body" / Scientific Method combo and have environmental stewardship, prosperity and health. The overall picture looked like Diagram 2. where if one started from a premise of abundance as is implicit in The Law of Conservation, then what would follow is the need for Energy Management. As the people understood, input only systems trapped one in the "lower right corner" and since the energy input in reality was not "spent" just the people's dollars, then, if the people could manage the energy, prosperity would follow (more on this shortly). The entire "cost" of goods and services–as formulations of energy / mass "Status States"–would shift and be redefined. For one, with effective energy management a central determinate of cost–scarcity–as a result of an input only system–would, as we will see, start to abate.

The people were also quite aware of the detrimental effects that an input only system had on their environment and consequently deleterious effect on themselves. In fact they knew that if they continued to simply "consume" and spend and then to compound this situation with a growing population, that was living longer, that tremendous ill health and suffering would occur. Thus, this became a key motivator for the people to investigate methods of energy management. They had a wealth of knowledge about the effect that the environment has on health and were determined to apply this wisdom.

In fact they quite clearly understood that an major determinate of health was the "environment at large". Indeed if the people defined "environment" very widely—as the physical+social+spiritual + "life styles & health effecting behaviors" environment— then these factors could be attributed to around 60% of one's health.* So the people had the clarity of thought to understand that what was needed at this point was a way to manage energy so as to move toward a sustainable state of a healthy population.

So it came to be that the Accountants made the proclamation that in order to better manage the energy, that first we need an accounting system for it, a balance sheet , a "pro-forma" sheet, and robust predictive models / projection sheets. Seemed, like a reasonable thing to do; after all, plenty of the people's "real" dollars were going to be spent one way or another on "energy". Seemed like if everything that is here *is here* then one should be able to show where it is and which power sources and technologies were most suitable to a given situation. The last thing that was needed was to create another fragmented, uncoordinated "fix the parts" system where, as an example of many permutations on the same theme, one might imagine pulling up in your car to a "fuel" station and be confronted with 6 different "nozzles", that would pump 12 different "grades" of alternate fuels. A spaghetti–"refinery -distribution" situation were the list of unintended consequences is a direct function of the number of choices!

The Systems Ecologists were enthusiastic about this approach because for years they had been working on ecologic cycles, habitat dynamics, patters, interactions, independencies, and a classic the "food chain".

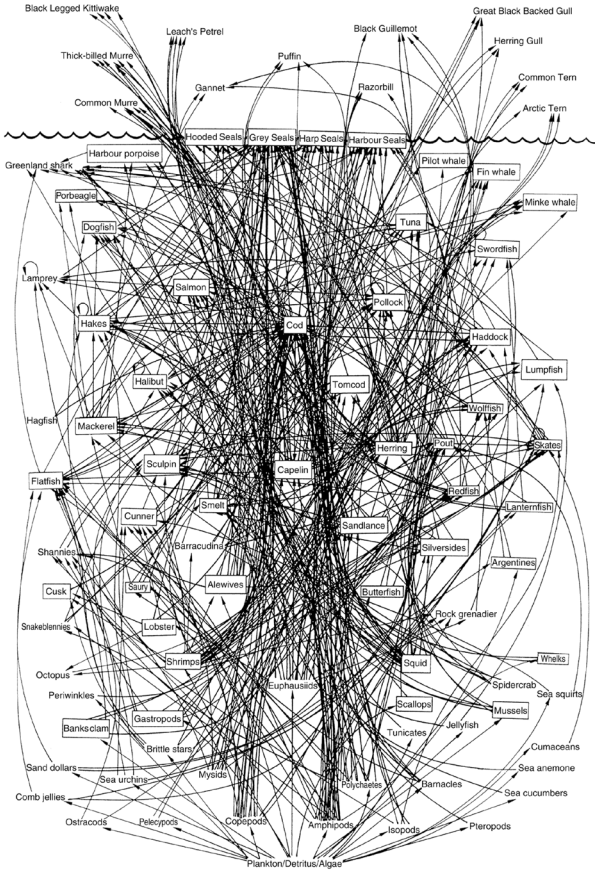
* The other 40% or so is made up of from genetic and medical care factors. The exact percentages that one should attribute to each category is not the main point (it appears that there are differences in these percentages–perhaps due to methodology–in credible articles published in journals like the "New England Journal of Medicine" and "The Journal of the American Medical Association") but rather that a significant percentage of the factors that determine health have to do with the "act of living", how one lives, and the qualitative nature of the greater environment that one lives in.

Thus, it was that the people had allot of transferable and direct understanding of these dynamics.

Likewise, the Epidemiologists, Biostaticians and Public Health Professionals liked this idea as they were experts at accounting for how the dynamics of the influences–exposures–to populations of people worked; how exposures to all types of situations had impacted health. Experts, at exposures that both preserved and or eroded health.

Well now this common theme propagated to other disciplines, with physicist being able to precisely calculate the various energy parameters, with the engineering imperatives being precisely understood by the engineers and the economists understanding the economic impact and so forth.

A partial food web for the Scotian Shelf in the Northwest Atlantic off eastern Canada



Marine Mammals: Fisheries, Tourism and Management Issues Marine Mammals and Fisheries: The Role of Science in the Culling Debate.p.40, 2003; David M. Lavigne

What emerged was a pattern of experts from many disciplines who could each make pretty good independent predictions about particular aspects of the variables effecting the dynamics of the "energy flow," but what was lacking was collaboration among this incredible pool of "intellectual capital" to "put it all together". What was needed was a map. An energy map and predictive model. Just like it can be helpful to have a map (or GPS) to drive from point A to point B and also be able to plan the trip; it seemed essential to have an "Energy Map" that would serve an analogous purpose so that the people could reliably navigate the "energy flow" could manage it and thus put it to better use, to realize the abundance that was the reality of existence. The computer scientists and technologists and engineers were confident that they could create the computer repository and AI brains to make the predictive models and "map" work.

The people knew that they would be continuing to rely on fossil fuels for some time but were determined to do what was most effective to move away from using these power sources (and others) in ways that resulted in pollution and detrimental effects on the environment. The people saw that by having an integrated, nation wide predictive energy / power "map" they could greatly facilitate, and indeed accelerate, the switch to alternate power sources. The open market and other institutions could use this map to then allocate resources in a systematic, most effective way to speed up the transformation because there would be robust Evidence about which technologies as being applied to harness different power sources were working best and where.

There would be an understanding of the intricate "energy" cycles and how to take advantage of these flows both (geographically) locally and nationally. And there would be a way to do ongoing Active Surveillance that would allow dynamic, timely updating and dissemination of the results. Thus, there would be ongoing "toggling" between what is really occurring in "the field" with various energy sources/technologies and what the computer models show.

Eventually, as the models are updated with new data and the algorithms refined, the computer models will begin to more and "mirror" "the field", and become increasingly robust (precise and accurate) with predicting outcomes. Thus, one could do "what if" virtual testing before implementing in "the field". Also, as a result of this modeling, one would also start to see that there is Enough of "everything"–jobs, resources etc.–for everyone every where. The realization that there has to be "enough" would become apparent as a view based on the Conservation of Energy was more commonly aligned with the people's common expectations and experiences.

What made this so powerful and effective was that many of the variables values were known with a good amount of certainty. That is, one could state that there is a 95% chance that "such and such" would happen, For those variables that were not, at the beginning, very well know (say only a 50% chance of the prediction being correct) over time they would become more predictable as new "field data" and improvements in the algorithms are made.

So as we look at Diagram 3 we see first that the legend tells us that lighter shades of green represent less certain (probable) events (there is a smaller chance that we can predict what the outcome will be) and darker shades of green represent more certainty (we are very confident in our prediction of the outcome). Over time the certainty–uncertainty will change as the situation changes i.e. one gets more, better data, improvements in the computer models, new technologies / products for the use of different power sources are developed etc. so this diagram just represents a depiction of a "slice in time".

Now this dynamic predictive "energy flow / cycle" map / set of models was a gigantic undertaking. It seemed like it could not be done; impossible, like science fiction, like trying to paint a picture of reality ahead of reality itself. As if one was drawing a series of pictures of a sunrise where the "play" of light from the sun on the horizon and landscape is accurately painted before the sun reaches that position.

At this time there was great hardship in and a pervasive "undertow" of tension throughout the land and the people were very concerned about their own and their children and their children's prospects for the future. But the people were determined. They had actually done a herculean task like this before under different, but in a same wise, time of dire need. So in like fashion they united together and the leader of the project, she suggested a name for it and the people agreed. It was a fitting name. A tribute.

She named the endeavour The Manhattan Project II. Whereas the first project had been about division, this one was about unity, where as the first one had been about destruction, this one was about building, whereas the first one was for to overcome evil–at a horror price–this one was to actualize an innate common good, whereas the first one had been used to combat oppression, this one was used to liberate for freedom, whereas the first one had been environmentally damaging, this one was for environmental stewardship, whereas the first one had been about killing this one was about living.

Both projects were to unleash the power of what was possible in their respective Now. So the people of the land united again to create the impossible as they had some 65 years ago.

A multidisciplinary team was assembled consisting of Physicists, Chemists, Engineers, Computer Scientists, Environmental Scientists, Economists, Lawyers, Medical / Public Health professionals, Mathematicians / Statisticians , Sociologists, Psychologists, Political Scientists, Historians, Geographers, Geologists, Philosophers and so on from other needed disciplines.

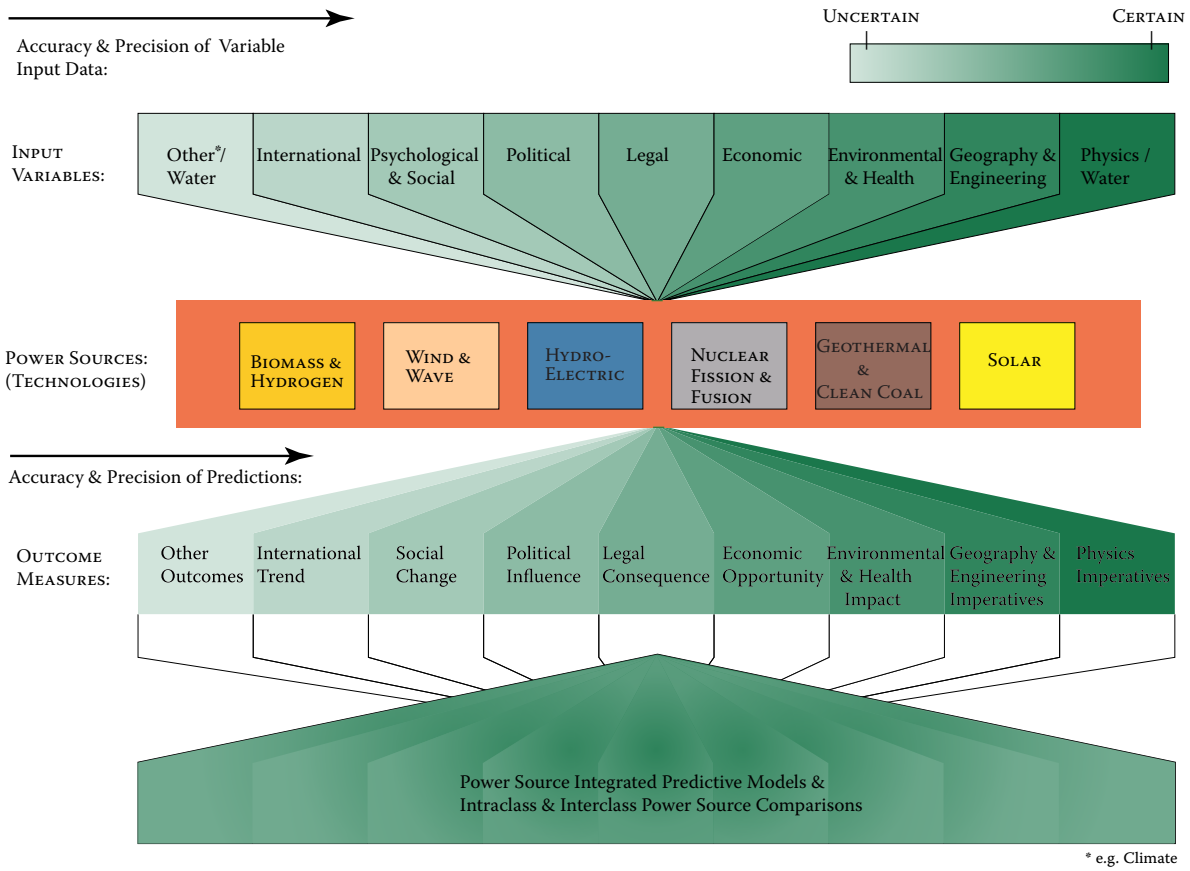


Diagram 3

Input influence variables are applied to each power/technology source to yield power/technology source specific outcome measures. These outcome measures are then used to construct predictive models. For example, one could do Intraclass (e.g. different types of Solar Power technologies) and Intercalss e.g. geographic Solar versus Geo–Thermal comparisons. Furthermore, an Intraclass comparison might be nested within comparisons so that one could also see the isolated effects of particular same class product [technology] types. These are just a few permutations of the types of comparisons that could be done. The main point is that by using a dynamic, timely and integrated Evidence based predictive modeling system one can increase the effectiveness of resource use and thus hasten the transformation to beneficial alternate fuel sources / technology products that lead to energy independence, prosperity, environmental stewardship and health.

It's A Wonderful Story

Finally, after much hard work, "heavy lifting" refinement and re-refinement and re-refinement again the models started to mirror reality. If a "what if" adjustment was made to the model and then resources were allocated to "make it so" the two would now match up. The people could now allocate their efforts and resources in an efficient , effective way to transfer away from harmful fuels. A "multiplicative" "feedback" factor started to "kick in". As the models got better at determining how to allocate resources (and R&D) both the effective outcome of the models predictions and the models themselves accelerated in their robustness. There was ever increasing Evidence as how to allocate resources. As the models accuracy and precision increased, the people became ever more confident in placing larger "bets" in terms of allocating resources for a particular energy /ecologic/ technology project. However, this was not all or rather was just the beginning.

Please recall, how the people had realized that energy is independent of cost. You cannot "spend" energy but rather the need is to manage it. Well now they were at this point of Energy & Cost Independence. The switch to alternate and renewable power was accelerating. So as the facilitated switch to alternative fuels expanded, reliance on traditional fuels dropped and so did prices. See now the "crossover point" was being reached both in the cost of the alternate power source technologies (the models selection process directed resources to the most cost effective ones given a favorable profile otherwise) but also in the cost of power itself. The "renewable" power sources were setting up a self perpetuating loop that drove the cost of producing goods down. In fact, at some point the "cost" of production approaches 0; "nothing".

Furthermore, demand for the manufacture, maintenance and research and development of energy related goods and services markedly increased.

The situation was now reversed. Instead of difficulty finding work there were work and position shortages. These job opportunities were distributed quite nicely across the land as one would expect or be able to predict looking at the energy "map".

Intensive efforts were underway to train people for these quality positions. In time, another "wave" started to "hit the beaches."

Soon–do to market cycles one sees with new technologies are adopted and become "2nd & 3rd generation" products–price on the recently developed technologies became very competitive to power sources that are used in other countries.

What we mostly *use* energy for is for energy to perform Work. The quantity of work done is a product of the force multiplied by the distance an object moves. In our "Clockwork Body" mechanical world we move objects to Shape them into items that we can use to our benefit. Please think with a very "wide angle" lens about this, including, most importantly, that we use energy to "shape ideas" in our minds–brains neurons. Everything from auto to art to farming to hospital to housing to manufacturing to machine shop to school classroom to working at a computer workstation to stock market to vegetable garden to the zoo is about using energy to shape objects–directly or indirectly–for our use. To have energy preform "work" for us to shape objects. So as the energy supply becomes "renewable" i.e. it cost virtually nothing; the "cost" to preform work–to shape objects–approaches nothing.

It's A Wonderful Story

So they started to purchase these technologies from the people. Thus, now the people of the entire planet were switching to a wide mix of energy sources at an ever accelerating rate and likewise, the drop in polluting [and polluting emissions] correlated with this. The world was now in a transition away from polluting fuels quite rapidly, "naturally" without to many "mandates" and regulatory interventions and with huge benefit to them as they were now also starting to reap the same benefits. The same conceptual model shift cycle that had started in the land of the people, was now starting to repeat itself around the world.

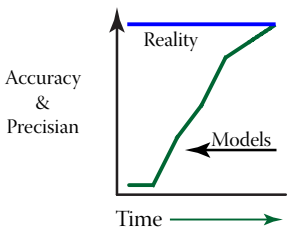
A cycle where the "cost" for shaping objects dropped, where the illusion of scarcely faded into a reality of enough, where renewable energy *naturally* resulted in environmental stewardship and this *naturally* resulted in improved health.

Now a "A Funny Thing Happened on the Way to Utopia", people realized that they had ENOUGH. It had to work out to be this way because everything that is here is here. So what is here then is and has to be ENOUGH. The people had stepped outside the cave, past the shadow myth monster cast on the cave walls. The shadow guard monster that etched SCARCITY into the mind. There was ABUNDANTLY ENOUGH.

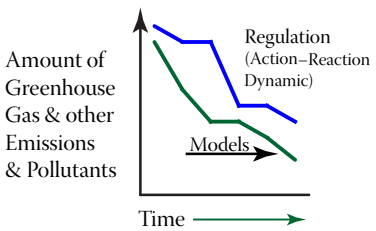
Enough now so that now all of the wondrous treatments that resulted from the "Clockwork Body" / Scientific method view could be provided to all of the people. Enough now, so that the health lifestyle "Built Environment" was now possible. Enough now, so that the environment was no longer in jeopardy, but was in synchrony with supporting health.

As this trend naturally expanded, the use of resources for preventable–lifestyle associated chronic and other–diseases dropped dramatically. Energy management was resulting in environmental stewardship and this in turn was directly impacting the people's health in very positive ways. Running along a river in a city was not as "exhausting" as it had been.

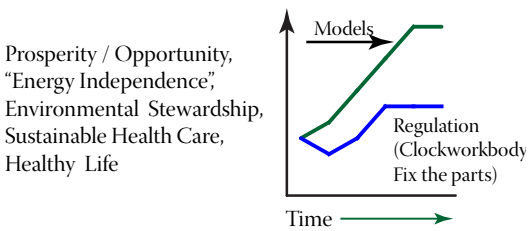
Also the skyline was not as interrupted as it once had been. The people seemed happy doing productive work that was more in synchrony with the environment. Stands to reason as the people are the environment; are the social and spiritual radiances which were expressed in their health.



Reality:
What data show is the true "Energy map".
Models:
What the models predict is the "Energy map".

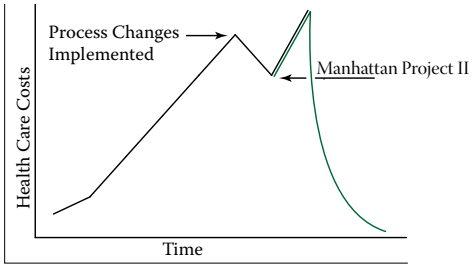


Regulation (Constant Action–Reaction Dynamic):
Outcomes form Legislation / Policy to limit Emissions & "incentivize" "alternate fuels".
Models:
Outcomes from directing effort / resources as indicated by the models.



Regulation:
Outcomes form an Increase, Decrease, Fix the parts ; Process Changes only approach.
Models:
Outcomes based on the use of the models as a "Road Map".

It's A Wonderful Story



As Jimmy Hendrix and Buddy Miles had sung in the album "Band of Gypsies":

"With the Power of Soul Anything is Possible"

Truly and Sincerely, your storyteller,

Andrew A. Litwin, MD, MPH

P.S. Up until this point in our story we have not accounted for consciousness/the soul. So in the next episode we will do this "accounting".

phone: 803.479.7760
litwinaa@theworks.com

Further Considerations:

(A more immediate application of this sort of perspective is to start to view medical care from an energy requirement perspective for the purposes of evidence based medicine and many other types of analysis. For example instead of considering the money cost of "X" one considers the energy or / power requirement (Joules / Watts) of a particular intervention. This way you have an absolute scale instead of a relative–money–one that needs an over time and other sorts of adjustment.

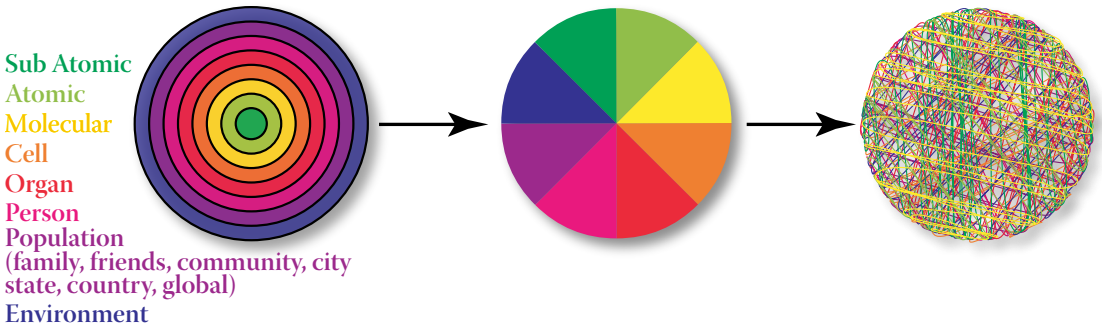
So instead of the money cost to immunize a child for their primary series one looks at the total energy requirement to do so. This energy requirement can then be considered to be "fixed" given some basic "standard condition" parameters. So now when we "run the numbers" we get a dialog that states (for example) by achieving an 85% immunization rate we anticipate an energy requirement savings of X number of Joules…The average energy requirement to care for a person in the Intensive Care Unit per day is X…Drug "A" resulted in X fewer Joules to treat Z disease than Drug "B" (p=.05) and etc. with many permutations on this. As a "zoom out" on this, one I think starts to "see" a general construct where by many if not all health care outcomes like "productivity, quality [or CQI- continuous quality improvement], effectiveness etc. can be quantified / analysis amenable with this energy view.

(As a "thought experiment "/ inquiry into the common experience of the observed entropy in our daily lives–the tendency toward disorder, the "story" starts to give one a hint that perhaps Entropy is an *illusion* as well. That is, as we develop a clear energy "map" a hence forth unknown ordering may emerge.

The clues that this might be true are in considering food webs(like on p. 9) that are also (one might think of as) energy flow maps. What one starts to see is an energy flow that is cyclic and sustained and thus ordered. From an ecologic perspective what one observes are sustainable energy cycles within cycles [cycles within cycles happening all of the time, all together, at all levels–an intra–inter connected 3-D mesh] down to the subatomic level–where (for one example /permutation of the interconnected set) the complimentary spins

are cycles within the atomic nuclear compliments that are within the atomic level cycles that are within the molecular level cycles . . . that are within the cellular ones (e.g. electron transport, Krebs cycle), within the organ system cycles (the carbon dioxide / oxygen exchange cycle is within the circulatory cycle that is within the cardiac cycle that is within the respiratory cycle that is within the plant photosynthetic cycle). . . on out(. . . planets orbiting around suns . . . etc.), to an intricate whole that continues on indefinitely in an ordered way (The sun being the constant energy input to the "local–earth" system as a whole.).

Also, David Bohm in his "Wholeness and The Implicate Order" (p4) mentions Newton's gravity where everything is falling–thus everything must be falling toward (or away from) something–implied is thus an inherent overall order. Furthermore, it seems that the construct that he develops in this book might indicate as well that as one "models" the entire "energy' flow (along the lines of something like the Manhattan Project II) what would start to emerge / discover is an ordering / flow / cycles that are key to creating a sustainable course. Indeed, it is along the path to understanding more completely the properties of the "energy web" that I think we evolve to next if we can. It is within this domain that the "opening" will unfold to reveal the conceptual and real models that will allow us to create the tools to "harvest" the abundance of energy that is, thus allowing us to shape our destiny.



"To Do" Edit Note: Even though many of the discoveries, concepts, ideas incorporated into this document are well known it might be appropriate to specifically state this fact. Thus, I think that there is a need to address how to state / put in acknowledgments / credits to people who's ideas concepts were incorporated, possibility of a named contributor (s) etc. if this document were to be published. A need to determine what is the "standard practice" correct / appropriate way to manage these issues with regard to this type of document where it's central intent is to provide an analysis of a situation based on our (society's) collective knowledge; "intellectual capital". I certainly want to give full credit to all those where credit is due.

Energy Concepts:

Energy is Neither Created or Destroyed The total amount of energy is the universe is fixed. Thus according to *this law* the total amount of energy, can, in theory, be calculated. One would just need to know the total mass of the universe and then use the formula:

Total Energy=mass of the universe×the speed of light squared
Total Energy=mass of the universe×34596000000 feet per second

This relationship between energy and mass that was conceived by Albert Einstein and is often written as: $E=m_oc^2$

[where E=energy, m_o=mass and c^2= speed of light to the second power (squared)]

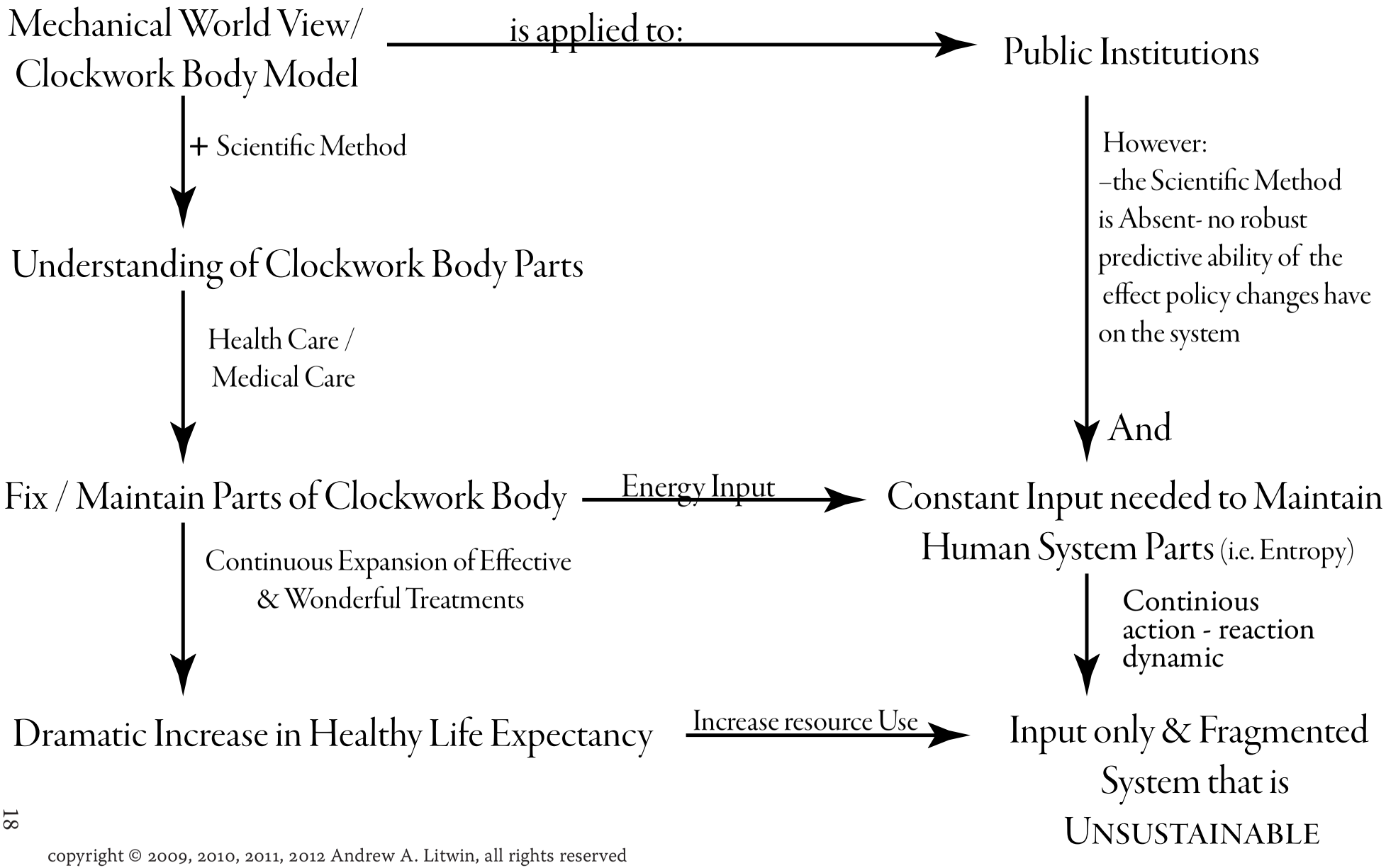
defines for us the size of the "energy pie" where for any give weight amount of mass–1 oz or 1 lb or the weight of the universe–corresponds to a fixed amount of energy and vise versa. What is important to note is that **no energy is created–"green" or otherwise; nor is it lost** or "wasted" or rendered inefficient. The only transformation that can occur with a fixed, finite, amount of energy is that it can be derived from, or is equal to, an amount of mass. Period. No exceptions to the rule. At the Internet Encyclopedia Wickapedia the concept is discussed *in a well written straight forward way by stating:

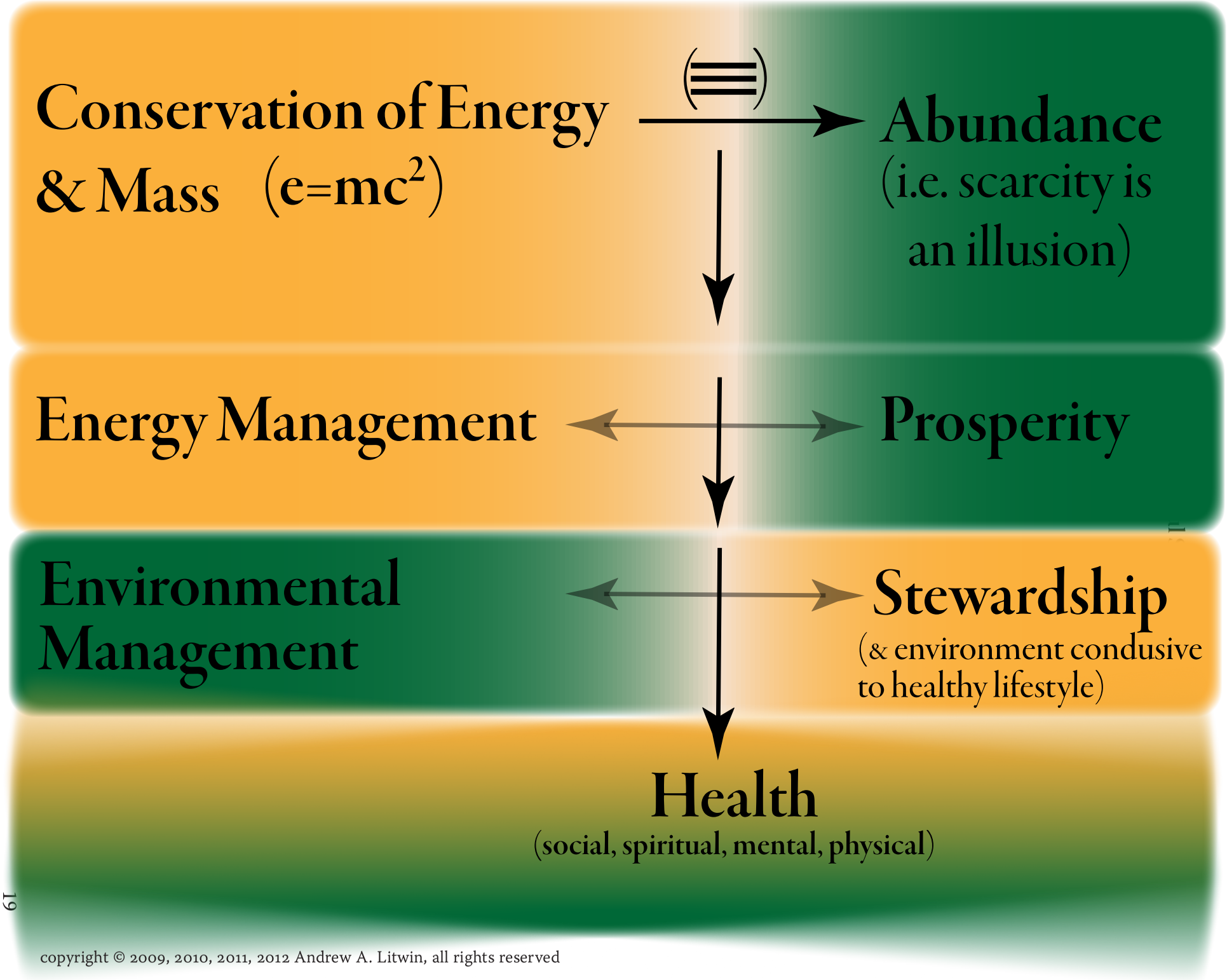
> The concept of mass–energy equivalence unites the concepts of conservation of mass and conservation of energy, allowing rest mass to be converted to forms of active energy (such as kinetic energy, heat, or light). Conversely, active energy in the form of kinetic energy or radiation can be converted to particles which have rest mass. The total amount of mass/energy in a closed system (as seen by a single observer) remains constant because energy cannot be created or destroyed and, in all of its forms, trapped energy exhibits mass. In relativity, mass and energy are two forms of the same thing, and neither one appears without the other.

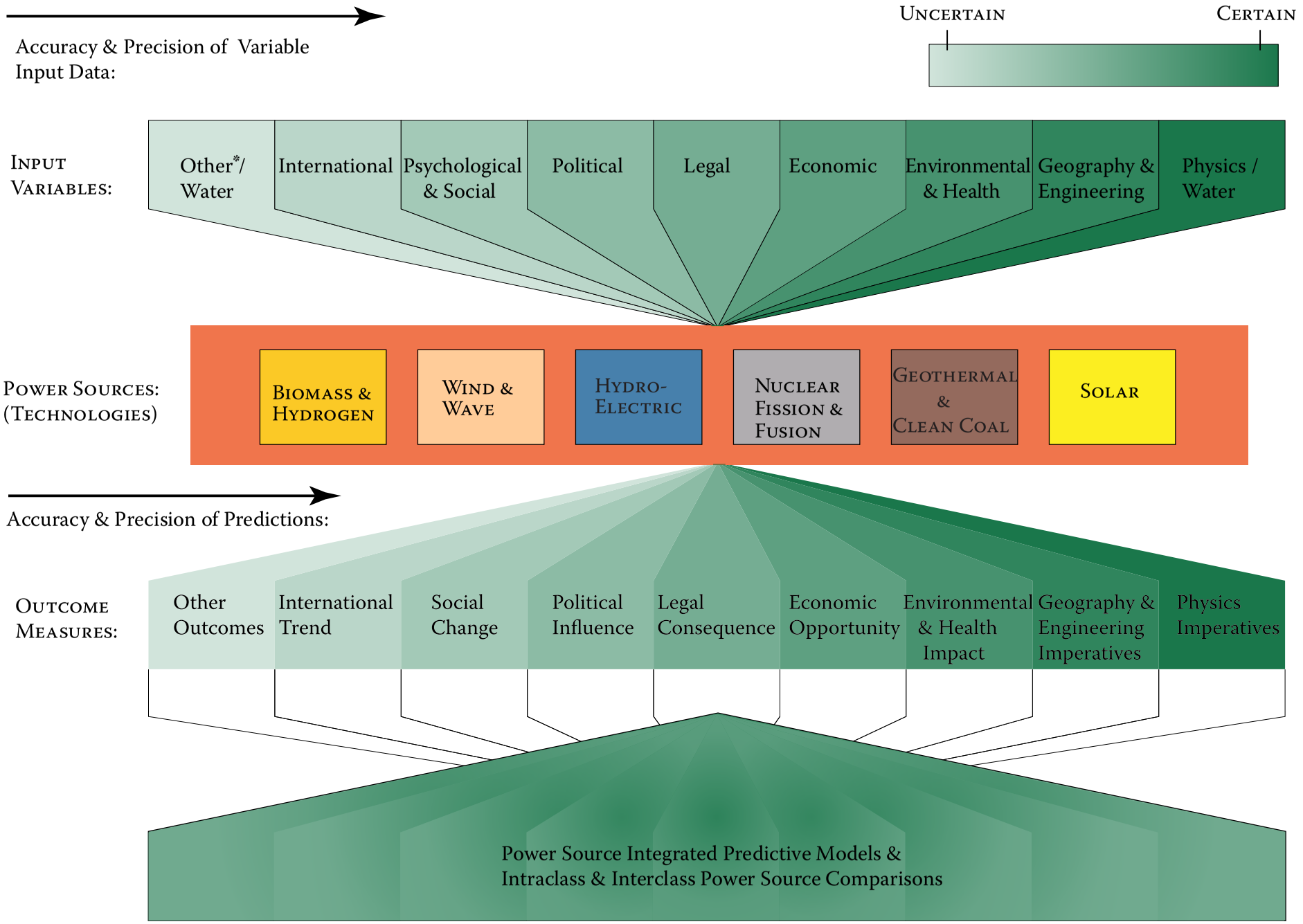
This Law is of central importance because it makes explicit that there is a Zero Sum game. There is no net loss or gain of energy or mass, just the potential of a transformation of one entity into an equivalent amount of the other. The sum "total" remains the same. Granted while the total "sum" is for all practical purposes of an infinitely large size, **no technology can "generate energy" of any sort. What technologies have the potential to do is transform one form of energy into another in an environmentally sound, scalable and economically profitable way.** For instance, an example of just the conversion aspect, could be with wind motion (kinetic) energy being converted into electrical power and then into light and heat energy.

* < http://en.wikipedia.org/wiki/Mass%E2%80%93energy_equivalence>

The Mechanistic World View has been Very SUCCESSFUL but by Itself UNSUSTAINABLE







* e.g. Climate