

# **Humankind's Viability\* Is Preceded by Rapid Population Decline**

## **Part I -- How do we know this?**

## **Part II -- How do we implement it?**

\*(Humankind's viability includes beyond survival of our genes, abilities to maintain and advance the science and arts.)

## **PART I -- How do we know this?**

Connecting puzzle pieces creates a picture. Connecting components of a mechanism creates a prediction. For example, forming a mechanism from four variables -- population, per capita consumption, technology, and resources predicts "humankind's viability." The mechanism tells if the human experiment is trending toward grace and beauty or self-destruction.

### **a) Basic mechanism**

Hunter and gatherer civilizations demonstrate parts of this mechanism. Existing in a world of unassigned space and resources, as their populations rose and created local scarcity, they dispersed throughout the world. When most space became occupied, new scarcity, created by rising populations, caused reallocations of already occupied space. It follows that rising population increases social conflict.

Technology provides more services from the same resources. Thus, if the other three variables in the system are held constant, increases in technology reduce scarcity, reallocations, and conflict.

Humans strive to increase wellbeing, which often means increased consumption. All other (three) variables held constant increases in "consumption" increases scarcity, reallocations, and conflict.

If a resource diminishes (as when we consume our forests and

fisheries above replacement, when we put wastes into our air, water, and land above their absorption capacities, or when we consume to extinction our oil and water reservoirs) again holding the other three constant it increases scarcity, reallocation, and conflict.

When you place all of these variables and connections into single mechanism, and release the constrains, they paint a distressing picture of our future. For example, when increasing consumption, and decreasing supplies causes gas to reach \$15 a gallon, some people in England will give up driving their cars and others in Ethiopia will have to give up eating. In the latter case, the cost of a day's food ration, driven up by rising energy and land costs, will exceed the price received for a day's labor.

Without a mechanistic view, when we look into civilization's rear view mirror, we see peoples, cultures, and civilizations have sprung to life, burned brightly and flickered out. We see each retired civilization replaced by a new one, where many people live higher above subsistence. Today, a plumber lives better than the richest ancient king.

Without a mechanistic view to guide our understanding, we focus only on the ever-rising wellbeing of winners. Losers of wellbeing, like the Native Americans, are not part of our image. Also not part of our image is any prediction that if technology falters, if we poison the environment, or the delivery of resources diminishes, many of the present winners and their progeny will slide ever downward in wellbeing.

#### b) New components of the mechanism

The view provided by the above mechanism seems robust, but is not complete. In the future new causal links are activated and old links become inactive.

On the upside Ray Kurzweil predicts an extremely rapid rise in technology in the 21st century. This rise makes meaningless the existing constraints between human wellbeing and resources.

On the down side, the above mechanism predicts a social conflict that damages our civilization's infrastructure and exhausts its

resources, thus removing the technological launch pad required to make the Kurzweilian transitions. The links that today are being added to the mechanism determine which of the above two predictions will be ours.

“Too much labor chasing too few jobs” creates losers of wellbeing by driving down the price paid for a day’s labor.

As total human footprint crashes into global carrying capacity, the “priming the pump economics” (which lifted all boats) converts into a zero sum game economics, where the winners of wellbeing do so at the expense of the losers of wellbeing.

As the costs and skills required to make weapons of mass destruction diminish, and as infrastructure becomes ever more interdependent and vulnerable to disruption “Wellbeing-losers” increase their power to disrupt civilization,

As disruption increases, as protecting against disruption increases, more productivity is diverted to defense. More constituent freedoms are relinquished in the name of security.

As more nations suffer the same scarcity and conflict problems, migration provides fewer opportunities of escape. The less the safety valve of migration the more intense the local social conflict.

The collision between footprint and carrying capacity creates a self-reinforcing feedback loop connecting “scarcity” and “conflict.” More scarcity makes more conflict – more resources used in conflict make more scarcity. The mechanism creates an inanimate driver that increases both scarcity and conflict.

As scarcity and conflict increase more quickly, they impact people and civilizations like car accidents. The injuries are unexpected, underestimated, and allow no in-process attenuation.

Worse, the accidents (triggered by big rises in energy costs or losses of parts of the supporting eco-system) will affect every nation on the global simultaneously. They will affect an expanding group within each nation. Instead of determining which sub-global civilization falls and which replaces it, the resulting reallocations

and social conflicts foretell the loss of humankind's viability.

#### c) The prediction

This mechanism describes how human community developed. It explains how the variables, global population, per capita footprint, resources, and technology fit together. How the four variables work together to create forces of reallocation. How the forces of reallocation determine who wins and who loses wellbeing, who fights whom, and who crumbles under the economic burden of defense. It describes if any civilization is an improvement over its predecessor or just another step toward the end of the human experiment. The description is not pretty.

#### d) The prediction's obscurity

It is clear from the front page of any newspaper, and the content of the nightly news, that the above mechanism's prediction of "loss-of-humankind's-viability" is in the background of human consciousness. There are many problems, global warming, famine, ethnic cleansing, access to health care, and ineffective public schools, which, almost everyone feels need addressing before we take on the forces driving reallocation.

#### e) Behaviors that don't change the prediction

Many of us, in the developed world, are willing to recycle, change to more efficient light bulbs, and drive more fuel-efficient cars, to reduce our personal footprint. However, each of us does not know if these behaviors, combined with all our other behaviors, actually reduce our footprint. 3000 miles of airplane travel per seat consumes the petrol an efficient car consumes in 4 months. Take three or four family members on the plane and your family's footprint is the same as if you drove an extra car. Take three family trips a year and your family burns enough petrol to run four cars.

If we do not increase the size of our homes or take more energy intensive vacations, and we take aggressive green behaviors we can reduce our personal footprint a few percent. However, if we eat a more healthful diet and exercise, and it extends our life by that same percentage -- we did not reduce our footprint at all?

If we capped the consumption of all individuals; if each person in the world, accepted middle America limits to his or her consumptive practices; if we limited the number of children so global population stopped growing; if we changed to a coal economy and sequestered all the carbon dioxide, total human footprint would still increase by a factor of four to allow the "have-nots" consumption to catch up with that of middle class "haves" (URL.) We would empty our reservoirs, diminish our forests and fisheries, and poison and destroy our environment 4 times faster than we are today.

These examples show that aggressive (green, zero population growth, and social justice) behaviors do not make humankind viable. They do not prevent ever rapidly expanding scarcity, reallocation, and conflict, or a potential dark age.

f) Rapid population decline changes the prediction

If we want to bequeath our children an eco-system that will support them, if we want them to be free of ever expanding conflict, we have to put some new actions in our agenda. I suggest the new behaviors must cause rapid population decline. One child per family behaviors will reduce human population by half each 30 years.

The absence of scarcity, reallocation, and social conflict initiates because one child will replace two parents. Each child will have twice the resources without causing a reallocation. After the third generation each child can increase his or her footprint (wellbeing) by a factor of 8 during his or her lifetime without causing any reallocation or increasing humankind's total human footprint.

This is possible because you have two parents, 4 grand parents and 8 great grandparents. The dying generation has 8 people and the birthed generation has one. Since you are their only heir in your generation you eventually inherit the wellbeing of 8 people. You will be born into one house, by the time you are 30 you have two. When you get to sixty you have four and at ninety you have eight. How many people do you know who would trash a social system that promises that rate of improvement?

If you have followed this logic, if you have run the math, then you know, "preceding behaviors to recycle, conserve, save species,

and implement social justice, should be behaviors that create rapid population decline (RPD.)” Then you know that humankind’s viability requires the "one-child-per-family" behavior.

## **PART II -- Implementing Rapid Population Decline**

Few people underestimate the difficulty of changing an individual’s preference from “2 or more children” to “one per family.” However, grass roots efforts, driven by common sense, have achieved such transitions. For example, people no longer share their smoke on airplanes and in public places. For the most part they don’t keep slaves. And in an ever growing part of the world women do have equal rights.

All of these transitions started with just one person laying down a convincing argument that an approved behavior is hurtful. A convincing argument does not immediately change behavior but it starts a change in belief about the old behavior's goodness.

As more people change their belief of a behavior's goodness the easier it is for additional people to both change and contribute to further change. With enough voices the institutional wheels begin to turn and eventually, for example, no one smokes on airplanes.

### a) Change based on contagion

Therefore my plan to implement “RPD” recruits people, one and a time, using common sense arguments. My plan relies on a contagion process. Each new member, (besides believing that one child per family is the route to humankind’s viability and is willing to state so publicly) commits to recruiting one new RPD member each month. Given a month a person ought to be able to find one person out of the 6 billion who will both believe and commit to finding one more person each month.

### b) Logical arguments for RPD

An RPD member learns from his recruiter to communicate why

rapid population decline is the basis of humankind's viability. Why people who have a second child are like smokers that share their smoke. Why people who have a second child are creating enormous reallocation forces. How reallocation forces create conflict. Why people, who have a second child, after being informed, are obscenely selfish or submissive to a "blind-to-outcome" culture.

c) Consensus building first -- behavior changing second

The RPD movement will not initially change many childbearing decisions. Most early members, those most easily recruited, will be people who are done having their children. However, this group is like the safety conscious people that eventually were successful in making the smokers step outside and not smoke on airplanes.

Only after the movement's initial growth can we expect it to produce enough social pressure to influence procreative decisions. When the movement is large enough, it can legislate special rooms in restaurants for parents of two kids; special seats high in the right field bleachers, special parking spaces in the back of the lot. The goal would be to make parents of 2 kids as unwelcome as smokers. Make them mindful that they are messing up the future for everyone.

d) How long to RPD initiation?

How long will it take for these grassroots social and political pressures to change procreative behaviors? Anyone want to guess that it will take 100 years? 50 years? 25 years before we can embarrass parents of two young children? How many years before we can shape the procreative decisions of new couples? The estimate does not require higher math. Anyone can work it out.

At the end of the first month there will be 2 people out recruiting -- 1 and one other person. At the end of the second month there will be four. At the end of 3 months there will be 8. At the end of 4 months there will be 16. It does not sound like rapid growth. However, at the end of a year there will be 4000 people recruiting new members at one a month. This is still a small movement. This is still way too small a fraction to rein in the childbearing behaviors of 6 billion. However, at the end of two years (24 months) we will have 8 million

members in our "one-child-per-family" movement.

That amounts to one person in every 750 people. In the smoking problem 750 smokers are not going outside to appease one safety conscious person. But don't give up hope. Your solution is not 50 or 25 years off. With 8 million people recruiting, 9 months later (2 years and 9 months from the time we started) more than 3 billion people, half the global population, will be in the RPD movement.

Holding the intellectual and moral high ground, over the remaining less informed and selfish global community members, the 50% can apply some serious leverage. It may take more than a month for each RPD member to recruit his or her last person. However, given the assistance from global peer pressure, NGO's, governments, the Internet, and media, --- implementing "near universal not more than one-child-per-family behaviors" will have taken less than three years to put in place.

#### e) Social changes from RPD

With most people on earth having only one child per family starting in 2010, we could be approaching a global population of 3 billion around 2050.

Yes, we will have some problems changing our economy into one where "per-capita-wellbeing" goes up but "total footprint" does not. We will have to adjust to a community of no siblings, no aunts no uncles and 8 times as many 90 year old's as infants. However, most will be healthy, wealthy, self sufficient and productive well past current retirement.

RPD will not solve all the problems existent in the human condition. We will still have to transition our energy source from petroleum. We will still have to manage our CO2 production. However, the most dangerous reallocation processes that drive us toward social conflict will have been reversed. Each day the world will be a little more peaceful. Resources used to attack or defend can be redirected toward making these transitions.

As long as humankind wants to improve personal wellbeing, as long as per capita footprint continues to increase faster than technology and resources allow, we will have to continue choosing

one child per family behaviors and reducing our population. If we keep doing it for 300 years we will have less than 100 million people on earth.

f) RPD's end

Could humankind diminish to zero? At some population, "people" will become the scarce resource. A homeless person on a curb will cause a traffic jam when, everyone wanting to take him or her home, stops to offer assistance. Why, because a person's value -- exceeds their footprint.

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