ENTROPY AND THE NEW WORLD ORDER

Gerardus D. Bouw, Ph.D.

This paper was drafted back in 1975. For years, I've been hoping to finish it, but the Lord has kept me from it. Perhaps this warning is not meant for the eyes of the world. Nevertheless, I have permission to print what I have here. It may seem disjointed but that is because it's made up of loose notes and two overlapping papers.

Essentially this paper is the third in a series on entropy. The first installment appeared under the title "The Waves of Sin"[1] and the second was entitled "Entropy and the Human Situation."[2] These examined the effects of a rise in entropy produced by the great increase in sin over the last decades. Accompanying the increase in sin, the world has witnessed a shift towards a one-world government, called "the New World Order" by the Georges Bush. The New World Order is nothing more than an occult, pagan totalitarian system designed to usurp absolute control over all the world's resources, including its peoples. This paper attempts to show that such absolute control cannot be maintained and must result in the destruction of a third of the world. The reader is reminded that the term *world* means **the order of man in the earth**. In particular, *world* does not mean the earth's ecosystem.

The myth of overpopulation

Throughout history, most people lived under the notion that they did not believe in myths. In the 1970s, for example, psychologists lamented that modern society lacks myths. Unwittingly, these people had swallowed every myth we have. One of the most pervasive and tragic myths of the twentieth century is the myth of overpopulation.

Consider the analysis. Suppose that an average person, i, requires f_i amount of food in a unit of time, t, (such as per day). The same person requires m_i in materials in the same time, mostly for shelter. Now suppose that the total amount of food produced in time t is F and that the total amount of material produced in that time is M. Then the maximum population which can be supported in time t, N_T, is:

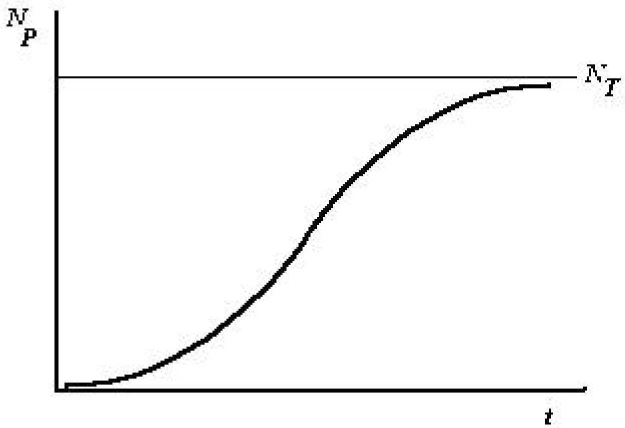
$$N_T = \min\{F/f_i\ , M/m_i\}.$$

---

[1] Bouw, G.D., 1998. "The Waves of Sin," *Biblical Astronomer*, **8**(85):28.
[2] Bouw, G.D., 1999. "Entropy and the Human Situation," *Biblical Astronomer,* **9**(89):16.

In any case, the population cannot exceed N_T. If the food supply is radically increased relative to the material supply, then some may succumb to the elements, depending on the climate of the affected area. If material goods increase suddenly over the food supply, no decrease in population is expected. A decrease in material production may or may not effect the population, depending on climate. A decrease in total food supply may reduce the population.

In general, the number of people alive at any given time, N_P, will

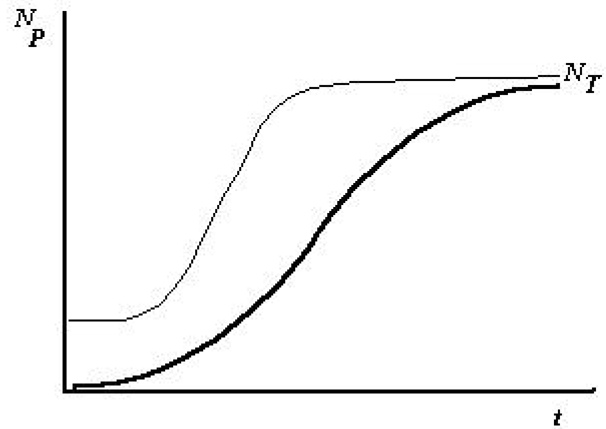


fall in the range

$$0 \le N_P \le N_T.$$

Thus the population growth curve in time will level off asymptotically to N_T, as shown in the first figure. Such a curve is sometimes called a *Salk Curve.*

Herein can be seen the myth of overpopulation. For centuries mankind's population increased while keeping pace with the increase in food production, shelter being less of a limit to population numbers. (That is, the raw materials outpaced population growth.) As the population increased (at the bottom left of the figure), it eventually reached the level where the "mean free path" between new inventions and the implementation of these new inventions (technology) was less than the average life span. These new inventions increased both the food and the material production rates. Indeed, the food production rate has kept ahead of the population rate. For example, between 1964 and 1974 the population increased by about 23% while the world's food supply increased by 32%.[3] In the figure above, that means that not only is the population going up what looks like an exponential slope, but the ceiling, the line marked N_T is also going up at a faster rate than is the population line. In other words, the true situation looks not as in the figure above, but as in the figure below.



So far, the material resources have not figured greatly into the population limits. We mentioned that shelter is a limiting factor, and that is especially true in cold climates; but is there an effect which man has overlooked? It could be that for the first time in history the limiting ceiling, N_T, is shifting from food dominance to material dominance.

The Holy Bible suggests such an effect at times, particularly in Deuteronomy 8:11-14.[4] Given this, it is not surprising that we now encounter shifting social values in those nations that channel the most power and control and which have the greatest material wealth. There is a law of economics, similar to the law of gravity, in which large aggregates amass than small aggregates (Mat. 13:12[5]). We say that it takes money to make money. This process is characteristic of all examples of "local entropy reversal," of which planetary and stellar bodies, financial and informational wealth, intelligence and life are just

[3] *Time*, 11 November, 1974, pg. 75.
[4] Deuteronomy 8:11 Beware that thou forget not the LORD thy God**,** in not keeping his commandments, and his judgments, and his statutes, which I command thee this day:
[12] Lest *when* thou hast eaten and art full, and hast built goodly houses, and dwelt *therein;*
[13] And *when* thy herds and thy flocks multiply, and thy silver and thy gold is multiplied, and all that thou hast is multiplied;
[14] Then thine heart be lifted up, and thou forget the LORD thy God**,** which brought thee forth out of the land of Egypt, from the house of bondage.
[5] Matthew 13:12 For whosoever hath, to him shall be given, and he shall have more abundance: but whosoever hath not, from him shall be taken away even that he hath.

a few. Since such amassment centers are local, there is a point beyond which growth goes unchecked and the aggregation becomes unstable. For example, unchecked growth in life is called “Cancer.” In terms of entropy, this state is called “Degeneracy.”

How can we be certain that the Salk curve describes population growth? First, it’s observed in laboratory experiments on overcrowding. The Germans and Russians have seen it work in their concentration camps and gulags. Second, there is reason. A woman doesn’t give birth to a full-grown man. It takes twenty years or so to make an adult. That’s twenty years to adjust to the increased consumption. So there is no reason to butcher babies in the name of “family planning.” The more people there are in earth, the higher N_T rises, and the more inventions, simplifications, technologies, and the more degrees of freedom are possible.

Entropy and economics

In statistical thermodynamics, a complete specification of the state of a system, at a particular time, calls for a statement of the position and velocity of each of its component particles. In other words, one needs to specify the position of and the rate of flow for each particle in the system. The particles can be molecules, dollars, automobiles, daily requirements of food and shelter, or what-have-you.

For example, suppose one had $\$_i$ amount of money in the i^{th} account, then the rate of change or rate of flow per unit time is given by the differential $d\$_i/dt$ which, for notational brevity we shall write by $\$_i'$. If we suppose that we have n accounts, we now have a $2n$-dimensional phase space with elements

$$\$_1, \$_2, ...\$_n, \$_1', \$_2', ... \$_n'.$$

The differentials $\$_i'$ are small compared with the dimensions of the system and the range of flow rates of the particles, but large enough so that each cell contains a large number of representative points. The volume of the cell, H, is the product:

$$H = \$_1 \cdot \$_2 ... \cdot \$_n \cdot \$_1' .\cdot \$_2' ... .\cdot \$_n'$$

Each particle in the system has its representative point in phase space and for brevity we speak of these as phase points. Imagine the cells to be numbered 1, 2, 3, ..., i, ..., n and let $N_1, N_2, ..., N_i, ... N_n$ stand for the number of phase points in the corresponding cells. The number of phase points per unit volume, or the density in phase space, r, is then:

$$r = N_i/H$$

where the subscript i is the number of some arbitrary cell. The density r will be some function of the 2-n coordinates of the i^{th} cell and we wish to determine this function.

Microstates and macrostates

A complete specification of the 2*n*-coordinates of each particle of a system, within the limits of the dimension of the cell in which the particle lies, is said to define a "microstate" of the system. Such specifies where each particle is and how fast and in which direction it is moving. This detailed description is usually unachievable, and it is also not necessary to determine the observable properties of the system. For example, in our money case above, for most practical purposes it usually doesn't matter which dollar bill (i.e., its serial number) finds itself in any particular cell. The observable properties depend only on how many phase points lie in each cell of phase space. A specification of the number of phase points in each cell of phase space, that is, knowledge of the number N_i, is said to define a "macrostate" of the system.

Now usually all macrostates are equally probable, that is, over a long period any one microstate occurs as often as any other. At first, this may not seem reasonable. For example, if one flips a coin 10 times, how likely is it that the macrostate, ten heads, occurs? This is a rare occurrence, but any other specific combination of heads and tails is equally unlikely. Take another example. The state of Ohio uses the lottery to siphon money from the state's poorest people. In order to win you need to guess six numbers out of roughly 45. Now I've asked my students "Would you pick the numbers 1, 2, 3, 4, 5, 6?" The answer is always a resounding "No!" I then say, "Well, then you shouldn't play the lottery, because any other combination of six numbers you select has just as much chance of winning as that one." That is, all microstates are equally possible.

"But," someone objects, "somebody wins the lottery!" True, there's about a 50% chance each week that someone will win, but that's the difference between specifying the macrostate versus the microstate. That someone will win is a statement about the macrostate. It doesn't specify which are the winning numbers. Specifying the winning numbers is to specify the microstate.

It is easily seen that many different microstates correspond to the same macrostate. Any shift of the phase points in phase space that does not change the number of points in each volume element leaves unaltered the macrostate of the system and its observable properties. As time goes on, and the microstates of the system continually change (if they do), the macrostate that occurs most frequently will be that for which there are the largest number of microstates. Hence the population growth, why inflation occurs in a dynamic economy, etc. If, as turns out to be the case, there is one particular macrostate for which there are more microstates than any other, that macrostate will practically be the only one that is observed. Other macrostates will be observed occasionally, and these rare occurrences are responsible for, among other things, the scattering of blue light in the earth's atmosphere, i.e., why the sky is blue.

Thermodynamic probability

We now set ourselves to the problem of determining how many microstates correspond to a given macrostate, and if there is any particular macrostate for which this number is a maximum. The number of microstates corresponding to any given macrostate is called the "Thermodynamic probability" of the macrostate and is represented by *W*. In general, *W* is a very large number.

Let us take a simple example. Suppose there are just two cells in phase space, namely 1 and 2; and that there are four phase points, a, b, c, and d. Let N_1 and N_2 represent the number of phase points in their respective cell. The possible macrostates are:

N1	4	3	2	1	0
N2	0	1	2	3	4

and we see that there are five macrostates all together. To each of these macrostates there corresponds a different number of microstates. The microstates corresponding to the macrostate $N_1 = 3$ and $N_2 = 1$, is:

cell 1	bcd	cda	dab	abc
cell 2	a	b	c	d

We see that there are four microstates for this particular macrostate, so that $W = 4$.

Changing the order of the phase points (a, b, c, d) within a particular cell is not considered a change in microstate, just like it doesn't matter in which order one hands over bills of a particular denomination to a bank teller.

The number of macrostates corresponding to a given macrostate can be computed by noting that the number of different ways in which N things can be arranged is $N!$. There are N choices for the first, (N-1) for the second, (N-2) for the third, and so on down to 1 for the last. Now the number of permutations of our four letters a, b, c, and d, is 4! which is 24. This does not give the number of microstates in the above example, however, because it includes all the possible permutations of the three points in cell 1, of which there are 3! = 6. We must divide the total number of permutations, 24, by those that only permute the points within cell 1, which gives 24/6 = 4, in agreement with the result obtained by counting.

In the general case of N phase points, and where permutations within more than one cell are possible, the number of microstates corresponding to a given macrostate is:

$$W = N! \,/\, \Pi\, N_i!$$

where Ð represents the product of all factorials from i=1...n.

Now, for the above example, the five macrostates can, by use of this formula, be seen to have probability values of:

N1	4	3	2	1	0
N2	0	1	2	3	4
W	1	4	6	4	1

There are, all together, sixteen possible microstates corresponding to the five macrostates. If the phase points a, b, c, and d are continuously shifting around so that one microstate after the other turns up, and all microstates turn up with equal frequency, the first and fifth macrostates will each be observed 1/16th of the time, the second and fourth each 1/4th of the time, and the third 3/8th of the time.

We now return to the problem of evaluating W for a system, where the number N and all the N_is as well are large. The factorial of a large number can be found with sufficient precision from Stirling's approximation:

$$\ln (x!) = x \ln x - x + 1.$$

Thus the equation for W above becomes:

$$\ln W = \ln(N!) - \Sigma \ln(N_i!)$$

$$= N \ln N - N - \Sigma N_i \ln N_i + \Sigma N_i$$
$$= N \ln N - \Sigma N_i \ln N_i$$

since $\Sigma N_i = N$.

Entropy

In the equilibrium state of the system, both the entropy and the thermodynamic probability have their maximum values, which leads us to suspect some correlation between them. The relationship happens to be logarithmic instead of linear, so that the entropy S is given by:

$$S = k \ln W$$

where k is the constant of proportionality or a scaling factor, called Boltzmann's constant–the smallest unit or quantum of entropy.

We can interpret the increase of entropy in a system as the trend of a system to go from a less probable state to a more probable state. It is helpful to think of the concept of thermodynamic probability in terms of disorder. The greater the disorder, the greater the thermodynamic probability and the greater the entropy. The greatest degree of order in phase space results if all are in a single cell, that is, if all are in a very small volume of phase space.

We can rewrite the above equation in statistical terms as:

$$S/k = \ln W = N \ln N - \Sigma (N_i \ln N_i).$$

Entropy and the New World Order

In order to have a stable system, S, the entropy, must be a maximum, the flow of S, $dS/dt = 0$. We may also need d^2S/dt^2, the rate of change in the flow.

From the above formula, we can derive these rates of change. We notationally replace the population of a cell, N_i by the cell's statistical weight, $p_i=N_i/N$, and assuming no change in N the number of states. For simplicity, we will bring Boltzmann's constant, k, to the left.

$$k^{-1}dS/dt = -\Sigma[(\ln p_i + 1)dp_i/dt] \qquad (1)$$

and

$$k^{-1}d^2S/dt^2 = -\Sigma(\ln p_i + 1)\, d^2p_i/dt^2 - \Sigma(1/p_i)(dp_i/dt)^2.$$

The entropy S has an absolute maximum if the p_is are all equal. In economic terms, this means that each man has equal resources. This is, of course, not the goal of the New World Order (NWO). Their goal is to minimize the p_is but to have a selected few have control over all the resources. In other words, the ultimate goal is to concentrate the economic power in the hands of a few and to enslave the masses. This means that most of the cells (i.e., people) will have their probabilities go to zero, that is, they'll die: they'll be killed either by violence or by starvation. Effectively this reduces the total number of states, N but leaves the form of the equations unchanged.

Consider the expression:

$$S/k = - \Sigma (p_i \ln p_i). \tag{2}$$

If all the probabilities (outcomes) but one are forcibly disallowed, then there is only one term and that term's $p = 1$. That makes $S/k = 0$, which is a perfectly ordered, state, full of absolute truth and nothing hidden (*occult*ed). This is a state only God can achieve.

The other extreme is where all the probabilities, p_i, are the same, namely, $1/N$. In that case the above expression becomes:

$$\begin{aligned} S/k &= - (1/N) \Sigma \ln (1/N_i) \\ &= \ln N. \end{aligned}$$

This is the maximum entropy in the system.

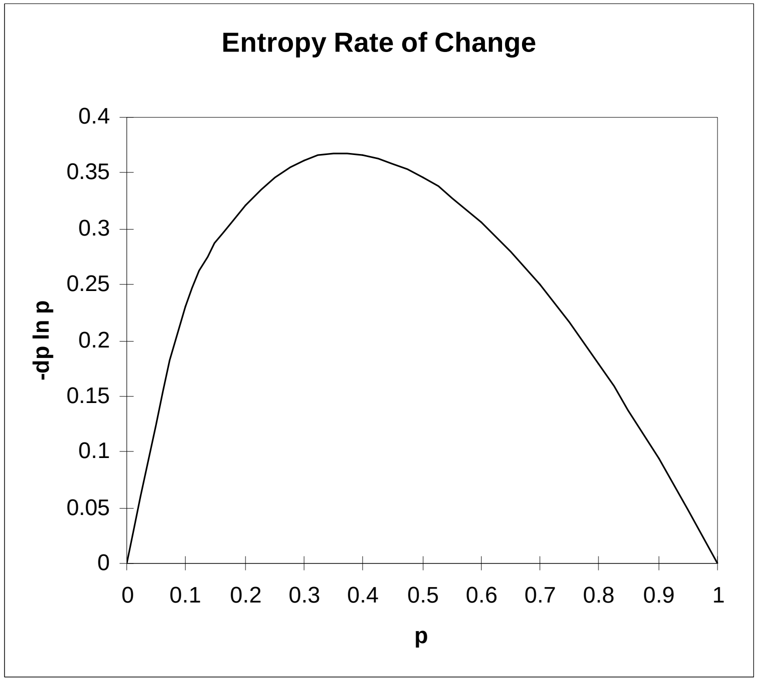
Now consider equation (1) above. It expresses the rate of change in entropy in time. Rearranging terms and dropping time gives:

$$k^{-1}\mathrm{d}S = -\Sigma[(\ln p_i + 1)\mathrm{d}p_i]$$

or

$$\mathrm{d}S/k = - \Sigma \mathrm{d}p_i \ln p_i - \Sigma \mathrm{d}p_i.$$

Now suppose that by some "glorious jihad" or "the peoples' struggle for liberation" the average rate of change per cell approached the cell's value. That is, $\mathrm{d}p_i \approx p_i$. This is the case where war breaks out and wealth and power are transferred from a great many people. The rightmost term will then sum close to 1 and the first term can be rewritten in the form of equation (2). (I assume this because the Bible principle that if a man has little, he'll receive little while those with much will receive much.)



The result appears in the figure below. This figure is equivalent to the entropy distribution for a single cell, as in “one world order.”

Notice that the maximum occurs at $p \approx 0.37$. At that point the $\ln(p) = -1$ and the value of dp is also ≈ 0.37. This says that the maximum entropy for such a rigorous system occurs at this value. Now the number of states can only be an integer (quantum), so the smallest number of cells to which one can assign a probability close to 0.37 is three. Each cell then receives a value $p_i = 1/3$.

Conclusion

What does this mean? It means that in a rigorous, oppressive system, in which degrees of freedom are severely limited, the system – the one world order society in this case – will collapse under its own weight destroying a third of the world with it. It’s similar to developing an extremely rigid alloy, one that absolutely cannot bend. If one hits it with a feather, it will shatter. The above analysis suggests that most likely a third of that bar will crumble to shivers.

Although the United Nations believes that a one-world order can be made a reality, it looks like the actual result will be quite different.

The Holy Bible nine times mentions that a third part of something will be destroyed. These are in Revelation chapters 8, 9, and 12. Three more times such destruction is mentioned in the Old Testament (Ezekiel 5:2, 12; and Zechariah 13:9). True, the Lord initiates these acts; but it seems that the potential is built into the very fabric of creation. Just as entropy says that salvation by works is impossible, so entropy also says that a rigorous totalitarian system won't last long.

The question will arise in the mind of some that during the millennium Jesus will rule with a rod of iron. Isn't that the same situation?

No, not really. Observe that the state of minimum entropy (that is, absolute order) is metastable. This means that it is stable as long as nothing "jolts" the system. The rule by the "rod of iron" of the antichrist is one that restricts freedom and liberty. It is a rod of iron built for death. The rod of iron by which the Lord Jesus Christ shall rule is one of liberty. It is the opposite, a rod of iron built for life. One can see even today that governments are becoming the enemies of freedom: particularly they are enemies of the Truth (the Lord Jesus), the Way (the Lord Jesus), and even the Life (again the Lord Jesus as per John 14:6). They do this by enforced abortions, propaganda and control of the publishing media, and passing "tolerance" laws or "hate" laws which ban the truth that Jesus is the only mediator between man and God (1 Timothy 2:5).

During the rule with the rod of iron by the Lord Jesus, the lion shall lie down with the fatling and eat straw (Isaiah 11:6-9; 65:25).[6] Christ set the captives free and gave us liberty (2 Corinthians 3:17). His rod is directed against those who would sin and do evil; against those who would hurt and betray the innocent. This is a far cry from the new world order, and one-world, and one religion demons. Even so, come Lord Jesus.

---

[6] **Isaiah 11:6-9** – The wolf also shall dwell with the lamb, and the leopard shall lie down with the kid; and the calf and the young lion and the fatling together; and a little child shall lead them.
[7]And the cow and the bear shall feed; their young ones shall lie down together: and the lion shall eat straw like the ox.
[8]And the sucking child shall play on the hole of the asp, and the weaned child shall put his hand on the cockatrice' den.
[9]They shall not hurt nor destroy in all my holy mountain: for the earth shall be full of the knowledge of the LORD, as the waters cover the sea.
Isaiah 65:25 – The wolf and the lamb shall feed together, and the lion shall eat straw like the bullock: and dust *shall be* the serpent's meat. They shall not hurt nor destroy in all my holy mountain, saith the LORD.