The future of craftmanship

A law is more impressive the greater the simplicity of its premises,
the more different are the kinds of things it relates, and the more extended its range of applicability.
Therefore, the deep impression which classical thermodynamics made on me.
It is the only physical theory of universal content,
which I am convinced, that within the framework of applicability of its basic concepts will never be overthrown.

Albert Einstein

Sociology is a science that studies the laws of society and how to organize the society work in order to get more effective result for each of its individual.
The society work resembles a machine work that converts heat into work.

In the research, society organization type is called Heat Machine.

Different organizations of society results in different Heat machines.

The society itself – its individuals – are called Gas on which the Heat machine acts to produce some work.

The effectiveness of a society can be measured by defining and measuring the effectiveness of Heat machine that acts on Gas.

Heat machine work consists of cycles.

Hence to measure society effectiveness it is enough to find out such cycles and measure their effectiveness.

Let us define Temperature of a Gas– as a difference between effectiveness of most effective Heat machine applied on the same Gas and effectiveness of least effective Heat machine applied on that Gas.

We will call Absolute Zero the Temperature of least effective Heat machine.

Measure of egoism E can be defined as the logarithm of how much money M individual has invested to the society divided by the positive effects G (that may be measured by growth in every individual income) that this investment has brought to each individual and after that absolute value is taken, ie.

$$E = abs(log(M/G))$$

where M – invested money, G -positive effect resulting in growth of income of each society individual.

Let us define Volume V of gas as summed measure of egoism E of each individual in the gas.

Let us define the pressure of gas P as an average number of individual contacts for one individual.

Gas state equations

Parameters P, V, and T define the state of a gas and as any parameters they obey the functional equation

$$F(P,V,T) = 0 \qquad (1)$$

Let us call it Gas state equation. From mathematical point of view this equation defines some surface.

Let us call it Society state surface.

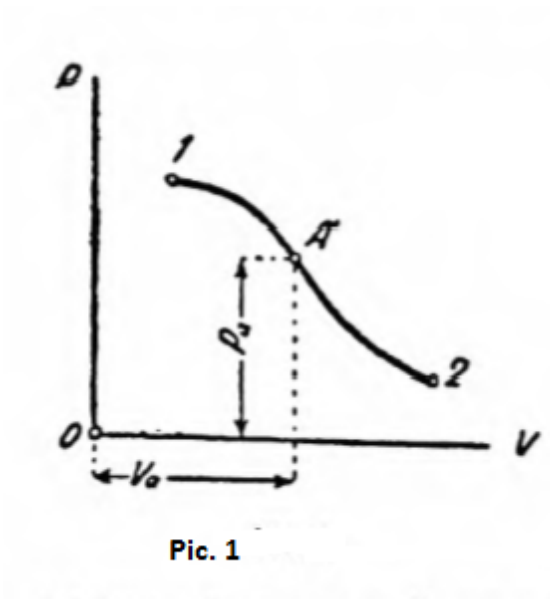
Any state of a gas that is calculated with parameters P = a, V = b, T = c is defined by a point on Society state surface.

The process of changing Gas state will result in the line been drawn on the surface by the points that are close to each other.

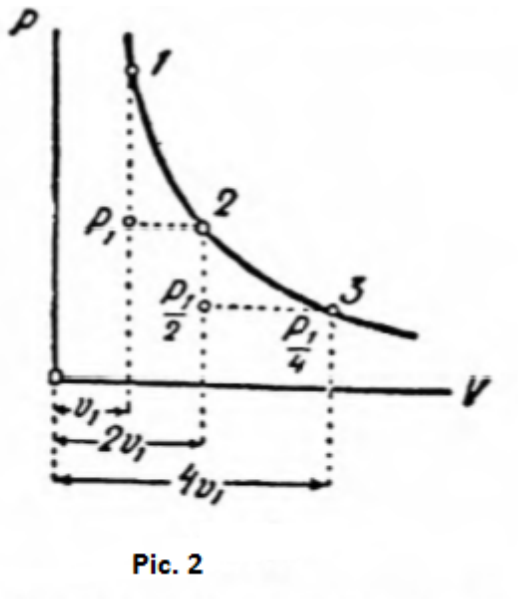
Let us choose two dimensional coordinate system P-V to draw such lines (three dimensional is not very descriptive).

Let us take V as a abscissa and P as an ordinate.
We can draw the lines for changing T since T has some dependency on P and V derived from equation (1):

$$T = A(P, V) \qquad (2)$$



Pic. 1



Pic. 2

The example picture is drawn on Pic.1.
For example, from this diagram one can find the values P_A and V_A for the given point A, and then the value T is found out from equation (2).
Hence every society process in two dimensional coordinate system P-V will correspond some line that shows the law of their changing.
The most important lines are those that show the processes when temperature T is constant

$$f(P,V) = \text{const} \qquad (3).$$

Basic Laws

First Law

In the society process that happen according to equation (3), the change in pressure P is indirectly proportional to the change of volume V.

If the initial pressure is P1 and the final pressure is P2 this Law

can be written as follows:

$$P1/P2 = V2/V1 \text{ or } P1*V1 = P2 * V2 \text{ or } P * V = \text{const} \qquad (4).$$

Pic. 2 shows this Law schematically.

Second Law

When gas temperature grows with constant pressure, the volume of gas grows too, and vice versa, when the temperature decreases the gas volume decreases.

This can be written by equation

$$\textit{delta}\ V = k * \textit{delta}\ T,$$

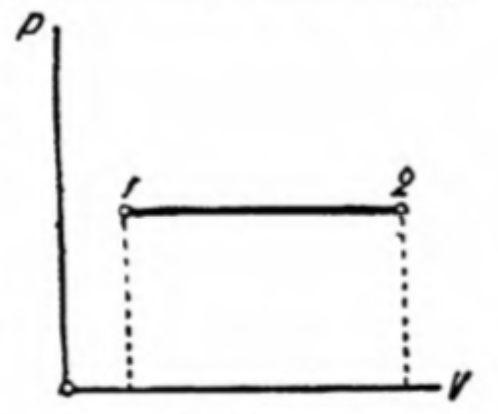
where *delta* V – change in volume, *delta* T is change in temperature and *k* is proportionality coefficient.

This results in the equation

$$V1/V2 = T1/T2 \qquad (5),$$

where V1, T1 – volume and temperature at point 1, V2, T2 – volume and temperature at point 2.

The corresponding diagram is shown on Pic. 3.

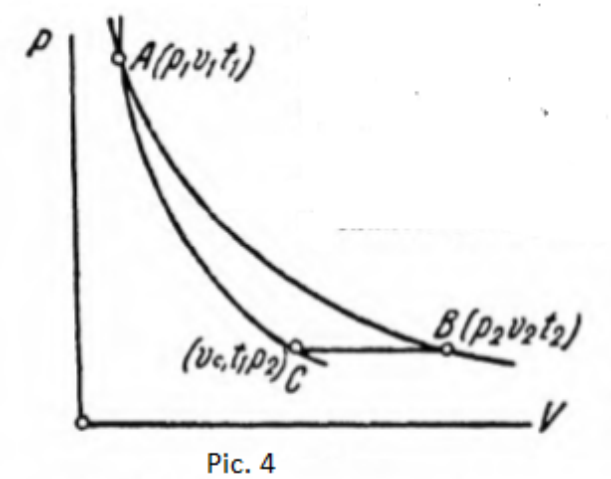


Pic. 3

Third Law

Let there exists a process AB (shown on Pic. 4), in which all parameters P,V, T change.

Let us identify the relationship between those.



Pic. 4

The law of how it changes is generally unknown, hence we will study it by drawing the line AC with constant temperature T1 and the line CB with constant pressure P2 (see Pic. 4).

For the first line AC according to First Law we have

$$V1/Vc = Pc/P1.$$

Since Pc = P2, we have

$$V1/Vc = P2/P1.$$

For the line CB according to Second Law we have

$$Vc/V2 = Tc/T2.$$

Since Tc = T1, we have

$$Vc/V2 = T1/T2.$$

Hence we derive the law

$$P * V / T = \text{const} \qquad (6).$$

As an immediate consequence we obtain

if V → infinity and pressure P = const,

ie. when one individual Egoism grows infinitely,

then temperature T also grows infinitely,

ie. T → infinity.

This means that the effectiveness of such Heat machine grows to infinity as well.

But because that individual egoism is growing even if individual invests money to society the positive effect to other individuals (growth in their income) tends to zero.

In other words, we obtained the law of Society organization effectiveness

One individual Egoism leads eventually to poverty of others.

This tendency is well seen during the history of human race,

when some of the **individuals** become such as described - let us call them **Super-egoist individuals.**

Another consequence is that

if pressure P → 0

then the temperature T also tends to zero,

ie. T → 0.

We obtained another Law of Society organization effectiveness

when the average number of individual contacts tends to zero the temperature tends to Absolute zero

that means that the society becomes the least effective organized society that produces no value.

In our modern society we all can see **the development of technologies** that led people to **abandon personal contacts completely: Internet, Mobile, TV, Mass production, Chemistry and etc.**

Other topics of research

In dissertation we will define also the notion of Entropy, its Law of change and relate Entropy to a “time arrow”.

Also, we will study **society evolution processes and their relation to Entropy law and “time arrow”.**

Study pros and cons of different society evolution processes and their consequences on “time arrow”.