

Economical crisis. Black and White holes approach

The economical crisis roots were probably first analyzed in the book [1].

This paper shows another way in analyzing economical crisis utilizing existing theory from physics.

The economics consists of number of players (people), environment (media, personal contacts, resources, money, land and etc) and some mechanisms (government, business, organizations and etc).

Each person (player) can be seen as a pin ball that is floating in the liquid (environment) with a certain charge Q and energy E when it is born.

The environment has an energy W that is a sum of all people energy E .

The environment has a pressure P . We call P a pressure of environment. It is actually the amount of chaotic information created by all players and mechanisms. We can call P also garbage information reminding the well-known binary garbage in Computer Science.

The player has inner pressure I that is interpreted as a will to leave in the environment (communicate with outside environment).

It is easy to see that the energy W of the environment is increased from the energy F of personal contacts that can be calculated based on the known formula from Electricity Theory:

the energy F between two players is directly proportional to their charges and indirectly proportional to the radius R of both egoism (as it can be easily seen R is the same as a will to leave together or communicate with each other).

One can see now that the amount of initial energy E of a player can decrease or increase over time depending on the pressure P .

It is easily seen that if the initial energy E of a player decreases/increases, the total energy of the environment decreases/increases as well.

Mechanism is a pump that can work both ways: increase the pressure of the environment or decrease it, in other words it creates chaotic information or orders the information (entropy increase or decrease).

Definition.

If environment pressure P is higher than inner pressure I , the player is called smashed.

Definition.

Black hole is a player or mechanism that consumes more energy than gives and smashes players by increasing the environmental pressure P .

Definition.

White hole is a player or mechanism that gives more energy than consumes and never smashes any player.

Theorem.

If some mechanism always increase pressure P and there are no white holes, there arise black holes. Finally those black holes form one black hole that shuts itself. All players get smashed.

Proof.

Since pressure is increased, ie entropy increases and there are no white holes, by laws of physics it leads to forming black holes.

Black holes attracts each other forming one black hole that finally shuts itself down. The pressure P gets higher than the inner pressure of any player since they are all Black holes. Hence all players are smashed.

QED

Theorem.

White holes can arise only from the personal contacts.

Proof.

Follows from definition.

QED

As one can see Black holes were predicted in [1]. In the art and literature, Black holes were shown at least in [2], [3]. Lost time of Marcel Proust is entropy increase that leads to forming Black holes.

In book [3] there is made a common proposal:

they suggest raising of environmental pressure P .

The following theorem shows that it is a mistake.

Definition.

Organization is a collection of people that are connected through electronic devices and/or through personal contacts.

Theorem on personal contacts and doors.

The number of personal contacts depends indirectly proportional on the number of rules in the underlying organization.

Proof.

The bigger is the number of rules in the organization, the more rules the person needs to overcome (call somewhere, register somewhere, learn how to use and etc) in order to get in touch with someone. It is the same as going in the labyrinth and entering the doors in order to meet someone. Each door has a door bell – the rule, the puzzle – the person needs to solve to enter the door. Hence the more such doors to open the less is the number of personal contacts.

Because one walks infinitely long time in the end.

QED

It is known that the common way of behavior is to always create more rules. Hence the number of personal contacts tends to zero. Because of that the environment energy W can not increase.

Let us now prove that any Computer Company is a Black hole.

Definition.

Bug in a computer program is a situation (command input) that makes the program to behave in unpredictable way, ie not written in the specification.

Definition.

Software (computer program) that has a bug is called malware.

Theorem on Bug.

Any computer program (software) has a bug.
In other words any software is always a malware.

Proof.

Computer program is a set of logical rules with input and output. It is based on arithmetic operations in the processor. So, it is a logical system consisting of rules that accepts input and derives the output according to them.

According to Gödel theorem (see [5]), any such logical system encounters a true statement (command input) that it does not know how to interpret (by Gödel theorem it can not be proved or disproved using the rules of that system).

It means that such logical system contains a bug.

In other words, it is a malware.

QED

Theorem on Computer Company.

Any Computer Company is a Black hole.

Proof.

Due to Theorem on Bug, there is always bug in the computer program no matter how one programs or fixes it. Obviously, Computer Company creates chaotic information by this “bug fixing” process. It is easily seen that players involved in this process do not increase the energy of the environment W since nowadays they even do not need to work together – the work is done remotely and in own premises. Hence we proved that any Computer Company is a Black hole.

QED

It is easily seen now why Economical crisis exists – there are Black holes and the number of rules in any organization grows.

References.

1. Karl Marx. Capital
2. Kazimir Malevich. Black Square
3. Marcel Proust. In Search of Lost Time
4. W. Albrecht, G. Wernz, T. Williams, Fraud. Bringing light to the Dark Side of Business
5. Francesco Berto, There's Something about Gödel: The Complete Guide to the Incompleteness Theorem