

BOOK OF PROCEEDINGS

II International Congress on Interdisciplinarity in Social and Human Sciences

11th - 12th May 2017



Research Centre for Spatial and Organizational Dynamics
University of Algarve
Faro, Portugal

TECHNICAL INFORMATION

Proceedings of the II International Congress on Interdisciplinarity in Social and Human Sciences

11th - 12th May 2017

University of Algarve, Faro, Portugal

Editors: Saul Neves de Jesus and Patrícia Pinto

Publisher:

CIEO – Research Centre for Spatial and Organizational Dynamics

University of Algarve

Gambelas Campus, Faculty of Economics, Building 9

8005-139, Faro

cieo@ualg.pt

www.cieo.pt

Editing, Page Layout and Cover:

Marlene Fernandes

CIEO Secretariat

Organizing Commission:

Saul Neves de Jesus, University of Algarve (Chair)

Patrícia Pinto, University of Algarve

Alexandra Gomes, University of Algarve

Joana Santos, University of Algarve

João Viseu, University of Algarve

Julieta Rosa, University of Algarve

Marlene Fernandes, University of Algarve

NOTE:

Please take in consideration that the articles language published in this issue correspond to the original version submitted by the authors.

ISBN: 978-989-8472-82-3

KNOWLEDGE-BASED ECONOMY

Peter Stallinga

Faculty of Science and Technology, Department of Electronic Engineering and Informatics, University of Algarve
(pjotr@ualg.pt)

Custódia S. C. Fonseca

Faculty of Science and Technology, Department of Chemistry and Pharmacy, University of Algarve
(cfonseca@ualg.pt)

Igor Khmelinskiic

Faculty of Science and Technology, Department of Chemistry and Pharmacy, and CIQA, University of Algarve
(ikhmelin@ualg.pt)

ABSTRACT

The European Union is resorting to long-term multi-annual political and economical plans. The current set of plans, “Horizons 2020”, also involves restructuring the educational system, as in the Bologna system. The idea behind it is that education should help industry to win the competitive battle with other major economical blocks. The idea is best described by the adage of the European Union of developing a so-called “knowledge-based economy”.

It implies that education is a form of investment. We should educate people – the society should spend effort on educating people – in order for society to make profit on it. Contrasting this is the idea of education as a consumption good. In the latter, people study to become knowledgeable, since knowledge makes a person happy.

We discuss here the dissident view why an educational system that is for investment-only will at the end not bear fruit and will destroy science, creativity and eventually any form of competitiveness in the economy. It will lead to moral as well as financial bankruptcy.

Keywords: Education, Science, Politics, Economy.

JEL Classification: O38

1. INTRODUCTION

The European Union, in resemblance to the former Soviet Union, is trying an experiment. Just like the Soviet Experiment, it is trying to centralize all power and decision making in a select group of people. To avoid populism, this body of lawmakers and managers is kept out of sight and reach of the population. Quietly improving society at a distance. The idea, by big names such as initiators Churchill, is sold as a perfect way to avoid wars; the First and Second World Wars blamed on nationalism, the way to avoid them is shun any form of national sovereignty. As an example, to remove national identity, mixing of European (and non-European people) is stimulated through visiting programs (Erasmus visits in the academic world). Borders for people are removed. We are supposed to think as ‘Europeans’ and not ‘Portuguese’, or ‘Dutch’, etc. Once again, the similarity with the former Soviet Union is striking.

Yet, not many people are misled by this officially promoted ‘open’ agenda. Many by now understand the hidden corporate agenda. Especially the ones that studied the history of the European Union a little: The European Union is an evolution of the European Economical Community which, in turn, was an evolution of the European Coal and Steel Community (formed just after the Second World War) with the underlying goal to facilitate the corporate activity, based on the idea “what is good for industry is good for the people”. Thus spoke the industry. The avoidance of war was only a subterfuge for increased corporate power, basically to put the corporations in control of Europe. Interestingly, it was the exact same structure of the Germans that was defeated moments before. It took the joined effort of the rest of the world to defeat it. Apparently, if such a tiny country can nearly outdo the rest of the world, it was a way of organizing society that makes it winning. They must have thought, let’s make it our pan-European structure. (Even today we praise German industry). Note that the biggest world power at the time, the United States, entered the European war theater only when German fascism was losing (after the lost Battle of Britain and, especially, the lost battles of Stalingrad and Kursk), not when it was winning (up to, say, 1942). In hindsight, it must have been the threat of the alternative to fascism (communism) that made them decide to enter the war theater and make of Europe a US-fascist protectorate. Some curious facts then start making sense, such as the fact that the Nazi army and regime were helped by American capital. The ties between the two countries was much larger than history books are telling us.

With the ties between the victors and the defeated strong, the differences in power structure between modern-day Europe and war-time Nazi-Germany have not become very big indeed. Throw in the soviet-style centralized political structure and a new star is born. Immediately at a standoff with the real enemy of fascism, (soviet) communism.

We can see this from their very same open-agenda European mission statement. The absurd mission statement that must

be distracting us from the hidden agenda. To start with, if it is all about avoiding war, why is the European Union ever more on the lookout for war with its neighbors, especially (and ultimately) with Russia? Ukraine, Yugoslavia, Libya, Iraq, Syria. Etc. What is more, the main idea is supposed to be to avoid war; apparently, if we take this statement as literal, it does not matter what exact form of government we'd have, which is apparently of secondary importance. We can then even have German Nazi-style fascism, or any other form of government, as long as we do not have war.

Well, fascism we got. (The hidden agenda). We can call it corporate fascism, a form of government in which industry and politics bundle their forces – the Italian word for bundle is ‘fascio’ – with in corporate fascism the corporations (industry) leading. US-style fascism that beat German-style (national-pride-based) fascism. If we won the war, then why do we still have the same political structure, moreover, centralized around the exact same country that was vanquished? Nobody will deny the central role of Germany in European politics. At best Germany is the entry-point puppet-state of Washington.

“Hold your horses”, we hear you say. “This goes too far!”. Well, maybe it is strong name-calling, but – what’s in a name? – the truth had better be said if we are going to analyze our society correctly. Whatever you may call it, and whether you like it or not, it is a fact that industry is in control of law-making in Europe (Balanyá *et al.*, 1999). It has been estimated that the European Round Table of Industrialists (ERT; 50 large companies of Europe (ERTa, 2017)) and lobbyist in general write a whopping 75% of all European laws, up to and including the treaties of Maastricht and Lisbon, which were only rubber stamped by politicians without them ever having actually read them, *let alone* having written parts (Moser and Lietaert, 2012). Most members of the European Parliament (MEPs) are, in fact, working simultaneously for large companies. When you have only corporation representatives in government, it is not strange that government, as a whole, thinks like the corporations and does things in their interest. The European Commission itself does not see this blending, nor the severe lobbying, as a problem, but is only concerned about the public image. As the European Union itself writes, “... most political scientist and policy-makers recognise that public and private interests have a legitimate and important role to play in the policy process. Nowhere is this truer than in the European public policy process where some 15,000 Commission and European Parliamentary officials face some 20,000 lobbyists on a daily basis. It is therefore not surprising that a significant resource dependency between officials and lobbyists based on regulatory needs, expertises, information and reputation has emerged. For this reason it is important that as we formalised and improved the EU lobbying codes of conduct we do not damage the information exchanges and credibility of the policy process.” (Directorate General Internal Policies of the Union, 2007).

There, the word is out. The European government is a machine that represents the industry; the system resembles (corporate) fascism. Industry, in turn, is an abstract entity that has no morality in itself, but has as only objective profit. Even if you may think that companies can also have morality – some companies even allude to this, see for example the stance of the ERT on Global Warming (ERTb 2017)(of which more later) – companies with morality are rapidly weeded out in an economy that is fiercely competitive, a ferocity we would like to see and encourage. Moral companies undeniably make less profit than immoral ones and survivability in economy boils down to profitability; at best the companies want to seem moral. In view of this Darwinistic observation, we can readily comprehend that in our current economical environment all companies have a lack of morality. The lobbying and law-making in Brussels is yet another form of profit optimization; where laws are made to keep industry in check and put morality back into business by making immorality unprofitable, business tries to remove these morality-inspired profit-limiting bounds, just so to increase profit. Whatever you may think – whatever the propaganda they pour out over us – industry is not there to make Europe a better place. A substantial part of the owners of industry, if not most of it, actually resides outside Europe and couldn’t care less about the state of Europe or its citizens, the same you do not care much about the welfare of Sri Lanka, to name but an example, where your pension fund is heavily investing to guarantee your good life after retiring. You sure hope that is what your pension fund is doing, defending your interests and not those of the Sri Lankians. The same with the owners of European business; they defend the interests of their owners and not your interests, also in Brussels. Don’t be naive.

We can thus summarize the economy and our entire post-war Americo-European society as “based on the sole paradigm of profitability”. The entities that work on this paradigm, corporations or industry in a free-market economy, in order to increase their profit have bought governments (with a centralized form of government the most efficient way of doing it, because it avoids having to have lobbyists in each and every nucleus of local or regional government). On the one hand, it was done to remove any profit barriers, a simple economical optimization. On the other hand, it imposed onto government, and society in general through the bought governments, the moral philosophy – ethics – of profitability. The two results going hand in hand. (Profitable) free-market activity seen as the Utopian goal for each and every element in society. We will analyze the second point (of the ethics) in a moment. But a small digression has to be made about the economical aspects of profit. This digression is actually worked out in detail in the book *Money: In gold we trust by one of us (PS)*.

Profit we define as financial gain in an economical activity. Money is invested and at the end of a cycle money is received. By definition, profit means that more money came out than was put in. A positive return-on-investment (ROI). All very well. It is now thought that the task of government (that is, the joined corporations) is to organize the society/economy in such a way that the total profit is optimized. Even better, it should be organized in such a way that risk of loss is minimized – all having profit – in order to have unbridled investment and a production maximization, something that is the underlying open agenda; if companies invest a lot, more is produced and we will have more welfare.

The problem with this is that it is not possible that all make profit. If money is limited, the economy is a so-called zero-sum game; the profit of one is the loss of another. If some economical agents in the economy – those corporations that are mostly represented in Brussels, as in the ERT, etc. – make guaranteed profit, all the others combined make guaranteed loss! Thus, all the others will go bankrupt as long as the corporations do not relinquish power in Brussels, something that is not likely to happen. Once all others are bankrupt and have stopped their economical activity, who will take up the role of the losers in the zero-sum game in order for the corporations to continue having guaranteed profit?! Even tax exemptions for the big corporations, such as the one of Apple in Ireland, will not save the system, it will actually aggravate it. We could let the

state run into debt to save the corporations and economy. However, this just delays the inevitable, since the maximum debt is limited (90% of gross domestic product, as argued by Reinhart and Rogoff (2010)); if money does not increase its speed of circulation, GDP is limited and state debt is limited. The economy is thus doomed from the start.

The only way out of it is constantly printing fresh money, something that was made possible by abandoning the gold standard, the convertibility of money into the limited-resource gold, in the monetary system of Bretton Woods. It made money effectively infinite and the economy could be turned into a positive-sum game. Well, a silly question immediately arises: why would I do my best to work for a living, to earn money, something that is virtually infinite?

Moreover, we still remain with a system where laws are written to guarantee profit to the Brussels-represented corporations. They basically do not have to do any competitive activity – profit is guaranteed after all – other than lobbying. Lobbying itself has become the economical activity. The lobbying must moreover grow forever because the money borrowed has (theoretically) to be paid back and this can only be done if the economy is growing; Money will only be lent if tomorrow there is more of it than today since interest has to be paid as well. This means that the rest of the economical agents (like the small bakers on the corner of the street. Those lobbyistless entities that actually produce something else than lobbying) will not make profit anyway, or at least their activity will be stopped by lack of financing. Since it is not a level-playing-field, with corporations always pulling the longest straw, the entities that actually produce will stop activity and the economy will turn itself 100% virtual. Made possible by virtual money. We reach a mathematical singularity, with the average cost of real physically-tangible products being zero divided by zero. It is basically a system in which the Central Bank is printing money, the corporations getting hold of it and through dividends placing it on accounts of their owners in Panama and on the Cayman Islands. If ever any 1% of the wealthy 1% of society should decide to actually spend the ‘earned’ money that they have stored in fiscal paradises, inflation would be infinite since too little is physically produced to pin the money to something. The ‘rich’ can never enjoy their wealth. Everything is virtual. Yet, since real economy is kilowatts, and real property is kilojoules, the scheme of printing money is a mere tool of transferring real property (infrastructures) to an ever-smaller number of people.

2. KNOWLEDGE-BASED ECONOMY OR ECONOMY-BASED KNOWLEDGE?

In a society where financial profit is the sole philosophical morality – the ‘ethics’ – we can also expect that these same ethics will be applied to knowledge (science and education). Indeed, the corporations dash government have designed a soviet-style long-term plan for the economy in which knowledge plays a pivotal role. They call it a ‘knowledge-based society’. If we have an intellectual advantage over our competitors, we can sell them products (with profit) and thus sustain our economy. We said in the introduction that the profit-driven economy is itself unsustainable. But what about the idea to incentivate knowledge through the paradigm of profitability? Does that work? Will we get more knowledge through this paradigm? And will we get better education through it? Let’s analyze it in more detail.

We can distinguish between the knowledge itself and the transference of knowledge, the latter normally called ‘education’. Where schools are solely busy with education, and research centers solely busy with acquiring knowledge, universities have a special role in that they are both centers of acquisition of knowledge and dissemination of knowledge. Universities are both research centers and schools. We can call them simply ‘knowledge centers’. This contrasts them with technical high-schools, which are only institutes of knowledge dissemination, albeit on a high level. Well, these concepts have faded over the years, mostly because of the idea of profitability. Universities and technical high-schools eating into eachother’s markets once financing of these institutions came ever less from primary sources, i.e. government, and ever more from secondary and ternary sources (tuition fees, project grants and donations). Institutions were basically demanded to be profitable. Universities became more like technical high-schools, educating people for industry, and technical high-schools became more like universities, doing more research. Probably because ‘university’ sounds sexier, all institutions are now called like that; technical high-schools have disappeared.

The concept of profitability has led to extreme excesses in which, for example, the University of Harvard has its major source of income in market investment (Piketty, 2014). Donations are put in lucrative investment schemes instead of teaching or research.

A university educating people for working in industry is fully a university taking over the role of a technical high-school. Instead, a university should educate people because people are happier when they are wise. And happiness be the goal, not profitability. Compare this to the function of a hospital. A hospital does not (only) cure people of malfunctioning so that they can go back to work and be more productive, i.e. the profit reason (curing people being profitable), but instead to cure people because being healthy makes people happy and happiness is the primary goal in society, or should be. Whatever we may think, profitability at the end is only a means to the real goal, happiness.

Related to the difference in function between a university and a technical high-school is the distinction between science on the one hand, and technology or engineering on the other hand. Science is the acquisition of knowledge per se, without any intended benefit for society, financially-profitable or other. That while the task of technology is to take any knowledge and to design useful products and the task of engineering is to actually make them somehow. Science is per definition not profitable. Or, as the icon of science, Albert Einstein, once said “Those that think that science is to make society a better place are utterly wrong”. In recent times, Nobel Prizes are given, not for scientific innovation, but to people addressing problems with socio-economic impact. (Compare the Nobel Prize of Crutzen for addressing the hole in the ozone layer to the one given nearly a century earlier to his compatriot Kamerlingh Onnes for discovering superconductivity; things have changed indeed. Politics has entered science). The European Union through its granting system, implementing the plan that everything should be profitable, wants to bet on science as being profitable as well. That means turning science into

technology just like universities were turned into technical high-schools.

One way to do this is through patents and copyrights. A knowledge-based economy is a patent-based economy as the European Union writes itself: “Europe requires strong industrial property rights to protect its innovations and remain competitive in the global knowledge-based economy” (Commission of the European Communities, 2008). So, now universities are required to produce copyrights and patents. It is no longer about the (beauty of) knowledge. It is about money, a positive ROI of society. Well, this is strange. The people that actually paid for the research leading up to the knowledge and patents through their taxation and funding of universities are not the ones that actually benefit from the patents. Their return-on-investment is zero. All benefit goes to the companies. If, on the other hand, the research is paid for by companies, why does the research have to be executed in universities and not in their own laboratories? This does not make sense. It is just a scheme for companies to be freeloaders – getting things for free – a scheme approved by the governments that were giving lip service to the companies, as we had already established above. A scheme that will moreover go wrong because an unlimited, infinite profit-scheme is not possible in a physically limited planet, as shown above and in the book *Money: In gold we trust*.

Science and knowledge have thus become an investment scheme. Science an industry (of which more later on). The same reasoning applies when seen from the point of view of the students. Students attending a university do this to acquire knowledge. Knowledge makes wise and wisdom equals happiness. It thus therefore does not matter if the acquired knowledge has some use or not, just as art is not meaningful other than being beautiful. As the ancient Greeks said, eternal bliss befalls those who can do philosophy. It is the ultimate state of happiness. Yet, students in the 21st century cannot hope to reach this lofty state; their goals must be more down-to-earth and work for the idea of profit.

It is understandable that, from the point of view of a profit-oriented society, citizens are investment objects, or at least vehicles of financial speculation, and it is to be expected that in such a society the projected productivity of citizens is converted into financial derivative products, thus making society speculate on its own citizens. For example, a state can more-easily get its government budget (deficit) financed if there is an outlook on an increased productivity of its workers. Education has thus become a financial vehicle for market speculation on the state as a whole. Prone to all its problems of margin calls, short selling, and whatnot.

Note that speculation, by definition, means that the value of a product is expressed in terms of the time-derivative of the value of that product. In a simplified equation,

$$p = \alpha \frac{dp}{dt} ,$$

with p the value, t time and α a proportionality factor. The solution to this differential equation is exponential growth,

$$p(t) = e^{t/\alpha} ,$$

a growth that was indeed needed, as argued above. Speculation is the (only) way to go in a profit-driven society. Yet, the moment the system saturates for some reason – and saturate it will in a non-infinite physical world – the exact same equation shows that it plummets instantaneously. Growth is exponential but slow, collapse is immediate. Speculative systems are doomed to fail. There is no such thing as a ‘sustainable economy’ when the economy is based on speculation and growth.

From the point of view of the student it is even stranger. Attending a course at the university is to be considered a (personal) investment as well, and has to have a positive return-on-investment along life. As if life itself is an investment project, and one’s goal can only be to make profit. We see here the difference between a course at the university as a consumption product vs. a course as an investment product. While argued above, an investment can only be a means to a goal of happiness, the means has now become the goal with the original goal – happiness – completely removed from sight. Everything in life, including life itself, has become an investment project. Moreover, speculation is also here important. A person’s self worth is expressed in terms of tomorrow’s worth. You are only worth anything if you are making yourself more valuable all the time. Never can there be any sort of saturation, since saturation brings collapse, as shown above. Lifelong learning is now the way to go. Always investing and never reaping. Every activity from cradle to grave an investment, even if we can see that, without any shred of doubt, this infinite investment scheme is doomed to fail for sheer limitations of a person’s life span.

This brings us to the point that the system in fact is indeed collapsing. A general positive ROI on all investments is not possible in a zero-sum game; the average ROI must be zero. The corporations are designing the rules of the game and make sure they are not the ones drawing the shortest straw; their ROI is guaranteed. Students, by not being organized and not represented in any government, draw the shortest straw and have thus a nearly guaranteed negative ROI. On average, a course costs more than it will return in a lifetime when the economy is saturating, as it is doing now. After the dot-com bubble that collapsed (ca. 2000) and the subsequent housing bubble that collapsed (ca. 2008), a threat hung in the air that it would take the entire financial sector down (ca. 2010). This was avoided by those financial corporations ordering the states to bail them out, which caused the state financing to collapse. Now is the turn for the citizens to collapse. Corporations (including corporate-styled universities) and financial institutions have guaranteed positive ROI. The state is not allowed to have a large negative ROI (hence also the need for the universities to have positive ROI and be corporate-styled). That

puts the entire burden of maintaining the system alive on the citizens, for example the academic students. They must have a guaranteed negative return on investment. That while the entire paradigm of society, up to and including that one for individuals, was to invest, to even make profit on knowledge. To see knowledge as a commodity that can be used in a profit-based society. Actually, the acquisition of knowledge is what makes the biggest loss in this society. We reach the following dialectical conclusion:

Knowledge in a knowledge-based economy is what makes loss in a society based on the paradigm of profit.

3. SCIENCE AS A COMMODITY

Science and knowledge have thus become an industry. The European Union seeing scientific research as something that can be ‘managed’ somehow. If you have a hammer as a tool, you see all problems as nails, so the EU now manages science in its typical top-down technocratic way. Scientists have to hand in project proposals – the same way proposals for building bridges and other infrastructures are resolved – in which they have to specify what will be the outcome of their research; ‘milestones’ and ‘deliverables’ (as if acquisition of knowledge can be predicted; why would you do research if you already know the answer?!). Everything seen as manageable production of a commodity. And this commodity has to make profit. This is what you get if you have a single (corporate) viewpoint in government.

Let’s take a step back and look at the difference between science and technology. Science starts from the premise that we do not know things – it starts with the assumption of our ignorance – while technology starts from the premise that we are wise. Cashing in on science is thus rather awkward. It is not possible, or at least unpredictable, since we do not know what to cash in on. We do know the knowns, but we do not know the unknowns; we do not even know what unknowns we do not know. It is stabbing in the dark and hoping we’ll find a glorkl, whatever that may be. That is science compared to technology. If things are unpredictable, they are highly shunned as investment objects.

Let’s state this more clearly. In a bottom-up organization of the world, science is discovering truths for the beauty of it, without financial objectives or other benefits for society. Technology is then looking at this acquired knowledge and see how they can be made useful to mankind. Engineering is making products and profit. That last one is highly predictable and production and profit can be managed. A profitable society thus wants as much engineering and as little science as possible. That is, unless science can be engineered as well. That means, basically, turning science into a predictable commodity. Truths should be engineered. That way science can be turned into an industry, something that is highly desirable in a profit-driven society. The only science that can survive in a highly-competitive profit-driven knowledge-based economy is all knowledge that can be engineered, doctored and constructed. Welcome to the 21st century! We use a top-down approach to our society. We start with an outcome and work our way down to the desired ‘truth’.

Let’s give some examples. First the case of cholesterol. Astra Zeneca discovered a chemical, ‘statins’ that had an effect on people, namely lowering the cholesterol in the blood. This is the potentially profitable sellable end product, and Astra Zeneca had the patent to it. Their marketing department was set to work to find an ‘illness’, which was soon found. High cholesterol could be statistically linked to cardiovascular diseases. A scientific myth was born. Cholesterol was labeled a problem, even though cholesterol is nearly as ubiquitous as water in our body, since it is needed for the double-layered lipid cell walls.

The entire research structure violates all scientific rules. The most essential is that it went out of its way trying to prove a specific model (namely “cholesterol causes illnesses”), instead of disproving it as the scientific method warrants. Moreover, research should exclude all other hypotheses before it can assume one model as being correct (for the moment). As the prime rule of statistics tells us, “Correlation is not causation!”. The fact that cholesterol is correlated to cardiovascular diseases does not mean that cholesterol is responsible for these diseases. It might be quite to the contrary, the only weapon our body has in fighting cardiovascular diseases being upping cholesterol levels. By giving statins we deprive the body of these weapons. Something similar happened to iron in the body and infections: Low iron levels in the blood correlated very well to infections. Doctors, in an attempt to help the body to fight infections, prescribed dietary iron supplements. Yet, an infected body is eliminating iron exactly for the reason of killing bacteria in a battle of survival, because these bacteria need iron even more than we do. Supplying iron tips the balance of the battle in favor of the bacteria.

Likewise, high cholesterol might not be the cause, but the result of illness. Statins that lower cholesterol might actually aggravate the problem. Fortunately, statins have no effect on cardiovascular diseases. In 2010 *Scientific America* wrote that there existed no reliable research whatsoever about the benefit of statins. The only research that existed was from Astra Zeneca itself:

“Direct evidence for the benefit of statins as primary prevention – that is, for preventing heart attacks in people who do not yet have heart disease – comes largely from one clinical trial published in 2008 in the *New England Journal of Medicine*. The trial called JUPITER and funded by AstraZeneca, ... found that rosuvastatin reduced the risk of cardiovascular events by 44 percent” (Wenner Moyer, 2010).

More recent studies found that statins have proven no effect on women and no effect can be proven on men (Brogan, 2014).

It seems that something is going wrong, but it isn’t. It is all because of a top-down structure that starts with the paradigm of profit. In such an environment everything is running smoothly. Profit is made indeed. A lot. The global market for statins is estimated to be \$29 billion (Mercola, 2012).

What we think is going wrong here is that we find it immoral that profit is made on our health, or lack of it. That we are forced to buy products that are not beneficial to our health. Such a moral – ethic – analysis, however, has no place in a society that is organized around the sole paradigm of profitability. If a product can be sold on basis of sloppy science, then this sloppy science is, in fact, a pearl of engineering in a knowledge-based economy. The (scientific) truth, in this case, was doctored. (No pun intended).

It started all with the wrong assumption that science should be useful, and, moreover, since ‘usefulness’ in a money-oriented society is expressed in financial terms, that it should be profitable. It easily boils down to this: “The truth is the one that makes most money”. The idea that cholesterol is bad for your health can propagate in society because profit can be made on the idea, and it substitutes ideas that do not result in profit. It can easily survive in society. Richard Dawkins calls such idea-genes ‘memes’ and describes how memes survive in a social environment (in analogy to genes in a biological environment) through survival-of-the-fittest selection rules (Dawkins, 1976). The cholesterol-problem is a winning meme because it is a profitable meme in a profit-driven society.

Now, as a small side note, some of the problems in modern society can be ascribed to a change of vector of the propagation of the memes. Where main stream media (MSM) are a good vector for the propagation of profitable memes, since main-stream media work on a for-profit basis as well, and the entire system is geared towards profitability with the MSM actually being owned by for-profit entities that thus have a stake in the propagation of memes, social media (SM) follow different rules; profitability is not an issue there. This change of vector of propagation of memes causes changes of the memes propagating. MSM now accusing SM of spreading ‘fake news’, and vice versa. There seems to be a revolution going on, especially caused by the change in the area of information circulation. Some, if not all, of the things being said here might all be canceled, if the change in vector causes a change in paradigm of society. For the moment we have a top-down (fascistic) structure of profitable science and education.

Before we continue, so what is the alternative then? How does it work in bottom-up? How does pure science work? Alan Chalmers asked this question in his book *What is this thing called science?* (Chalmers, 1976). He summarizes the basic principles of the famous Scientific Method of philosopher Karl Popper. Apart from the observation by Einstein that science is not intended to be useful, this method has these basic ingredients:

- 1) **Subject:** Study the natural, real world. For instance, mathematics is not science because it studies a virtual, imaginary world.
- 2) **Data collection:** Acquisition, reduction, induction: Gather data, organize data, reduce data, look for correlations and patterns. A classical example is Linnaeus who spent his entire life gathering information about species in flora and fauna, labeling and indexing them.
- 3) **Hypothesis:** On basis of all data form a hypothesis that can explain the data. Darwin that formed a model based on the data of Linnaeus.
- 4) **Isolation:** All alternative explanations for the data have to have been rejected. In case more than one model exist for the data, the simplest one is the correct one, according to Ockham’s Razor.
- 5) **Falsification:** Try to find reasons why the model is wrong. Do not try to find proof for the model, because that is what is called ‘affirming the consequent’. Bad: If P then Q, so look for Q. Good: If P then not R, and look for R. “In other words, we are trying to do our best to show we are wrong” (Feynman). A hypothesis that cannot ever be rejected is not science! Next time you see somebody entering a (pseudo)scientific discussion, ask this person, “What would it take – what piece of new data could I bring – for you to admit you are wrong?”. If no such data may exist, the entire hypothesis is silly and the science is a hoax. That is why some call the greatest scientific discovery of the 21st century the Hoax Boson. Science it isn’t. Billions spent on trying to prove a theory correct. At this very moment the same scheme is used for gravitational waves.
- 6) **Experiment:** The model should come with a prediction. Data that do not exist yet but that can be obtained through a new experiment. Einstein showed that Newtonian mechanics failed by predicting that the rays of light are bending around the Sun, later observed at a solar eclipse. On the other hand, a model that can only explain the past and has no possible way to refute it, for instance by a new experiment, is not scientific. It is mere retrodiction, or is plain silly (As Murphy’s Law, “Everything that can go wrong will go wrong”). It is silly because it cannot be tested; The test will fail, as it is governed by Murphy’s Law itself). Moreover, a rejected model cannot retroactively be modified to include the new data. Such a Bayesian, ever-adjusting, method leads nowhere. We can also immediately see that because there’d exist two models that explain the data until the last data point. And that is violating rule #4 above.
- 7) **Replication:** If the scientist has done all (s)he could do to tear down the hypothesis but failed, other scientists have to be informed. This is done by supplying all information needed to reproduce the thought train of the scientist. All data, all analysis methods, and all reasoning that led up to the conclusion by the scientist. Also, the scientist should inform the colleagues about everything that is still not well understood, where the model is on weak ground. When this is not fully followed, the scientist is a fraud and can be put in court, as was for instance done to Thomas Mann by Steve McIntyre when the former’s Hockey Stick climate data proved to be fake and Mann refused to give the data and the method leading up to the Hockey Stick.

Note that nowhere in this method does it say that science should be useful or profitable. A truth is a truth, if it is useful or not. Science in 2017 is dead! Instead, in 2017, we start with a desirable outcome of research – let’s no longer call it science. It starts with a meme can can be made into profit when it is backed up with research. Yet, anybody that does not follow the above scientific method is not a scientist. And anybody that claims to be a scientist and does not follow the scientific method is a fraud. Since money is made with this fraud, it can even be called a swindle. Many modern-day scientists are swindlers selling snake oil. Unfortunately, the designation ‘scientist’ is not protected and anybody can call him- or herself a scientist

without any legal repercussions. Educational industry actually gives a PhD (philosophical degree) to each and any person that finishes one of its lucrative courses, without these people ever having been lectured the concept of ‘science’, or philosophy in general. As far as we know, no European post-Bologna PhD program contains any ECTSs (European credit transfer system) in philosophy, let all one science.

4. THE GLOBAL WARMING MYTH: THE ULTIMATE SCIENTIFIC FRAUD

In 2017, a meme survives if profit can be made on it, otherwise it will slowly disappear from the thought-gene pool. Memes are nearly randomly created constantly, like random mutations of genes; the strongest survive. Yet, some get support from the beginning. This brings us to the mother-of-all-scientific-frauds, the Anthropogenic Global Warming. It brings us back to the political point we introduced at the introduction. A centralized government also wants to define the correct way of looking at things. In fact, the idea of ‘political correctness’ was part of Stalin’s doctrine in the Soviet Union. If people are forced to agree on things, conflict would be avoided, so they must have thought.

In the West, through the League of Nations and later United Nations, the idea of a pan-global government took shape. The so-called new world order (NWO), a designation often used by conspiracy thinkers, but no conspiracy exists, just as much as ‘capitalism’ or ‘socialism’ is a conspiracy; it is just an ideology, a new way of organizing the world, without there being specific people behind it or benefiting from it. This NWO government uses similar techniques of political correctness to join people. The idea took shape that, in the absence of an external enemy in the coming pan-globally governed society, an internal enemy was needed. It was deemed a good idea, a political correct idea, to take mankind itself as the enemy of mankind. The biggest think-tank of that era, the Club of Rome, actually wrote that (later) in their work *The first global revolution*:

“In searching for a new enemy to unite us, we came up with the idea that pollution, the threat of global warming, water shortages, famine and the like, would fit the bill. In their totality and their interactions these phenomena do constitute a common threat which must be confronted by everyone together. ... All these dangers are caused by human intervention in natural processes, and it is only through changed attitudes and behaviour that they can be overcome. The real enemy then is humanity itself.” (King and Schneider, 1991).

Or

“We’ve got to ride this global warming issue. Even if the theory of global warming is wrong, we will be doing the right thing in terms of economic and environmental policy”. (Timothy Wirth, President of the UN Foundation).

The meme of Anthropogenic Global Warming had a benefit, a political profit. It also has economical profit, but of that later. The need for top-down truth-engineering existed. Politics started meddling in science.

A United Nations think tank was created together with – for some strange reason; after all, climate is not weather – the World Meteorological Organization, and baptized the Intergovernmental Panel on Climate Change (IPCC). This is a political body, as the name implies, and has no scientific aspirations, other than engineering the proof for man-made climate change. They set out with the idea of carbon dioxide as a greenhouse effect that was presented by Roger Revelle in his groundbreaking article in Scientific American (Revelle, 1982). Later it was also propagated by his acolyte Albert Arnold Gore Jr., who even got a Nobel Prize of Peace helping to execute the NWO government program.

The IPCC set to work and doctored the proof of man-made climate change on a regular basis, with a rate of about one report every five to ten years. The doctoring they do not even hide in their reports, as the IPCC work-flow in the table below testifies. The endeavor starts with the outline of the conclusions. Experts are then contracted to substantiate these conclusions and writers hired to put it in beautiful phrases:

Table 1: IPCC work flow diagram identifying various tasks (source: climate.uu-uno.org)

Step	Task
1	IPCC approves outline
2	Governments, organisations nominate experts
3	Bureaux select Authors
4	Authors prepare 1st-order DRAFT(*)
5	Expert Review(*)
6	Authors prepare 2nd-order DRAFT(*)
7	Expert and Government Review(*)
8	Authors prepare FINAL DRAFT(*)
9	Final distribution and Government Review of SPM
10	WG/IPCC accepts/approves Report and SPM

(*) Peer reviewed and internationally available scientific technical and socio-economic literature, manuscripts made available for IPCC review and selected non-peer reviewed literature produced by other relevant institutions including industry

This structure is nearly an exact replica of the one used in the former Soviet Union for denying the theories of Darwin, a failed scientific structure we now call Lysenkoism.

“Lysenkoism was a political campaign against genetics and science-based agriculture conducted by Trofim Lysenko, his followers and Soviet authorities. Lysenko served as the director of the Soviet Union's Lenin All-Union Academy of Agricultural Sciences. Lysenkoism began in the late 1920s and formally ended in 1964. The term Lysenkoism can also be used metaphorically to describe the manipulation or distortion of the scientific process as a way to reach a predetermined conclusion as dictated by an ideological bias, often related to social or political objectives.” (Lysenkoism, 2017).

In Lysenkoism, opposing scientists were silenced by blocking their career, eliminating these voices from the (politically correct) debate, just as the European Union is doing currently with climate-skeptic scientists in Europe by just removing any funding to them. It is as good as impossible to have a project approved that is critical towards the idea of AGW, whereas pro-AGW projects get bucket loads of funding. A person's stance on the Global Warming issue is a career maker/breaker. One of us, PS, is a example for that. Projects about organic electronics (efficient light sources) and solar panels, photovoltaics in general, are easily granted, the project about the analysis of Global Warming models (MoCCA) never gets any funding.

The governments thus have a clear program to propagate the AGW meme. Most of them are fully aware of the lie of the ideas, but for a politician something (the ‘open agenda’) being true or not is not so important as much as the final goal (the ‘hidden agenda’) is. If a lie is needed to improve society, then that's what has to be used. A so-called ‘convenient lie’. They therefore hired propaganda agencies to see how the lie could best be sold. An example is the Institute for Public Policy Research (IPPR). In their report, *Warm Words. How are we telling the climate story and can we tell it better?* they write,

“Ultimately, positive climate behaviours need to be approached in the same way as marketers approach acts of buying and consuming. This is the relevant context for climate change communications in the UK today – not the increasingly residual models of public service or campaigning communications. It amounts to treating climate-friendly activity as a brand that can be sold. This is, we believe, the route to mass behaviour change.” (Ereaut and Segnit, 2007).

The idea of programming in masses people's behavior through selective information feeding is also called ‘propaganda’. ‘Behavior change’ is equal to ‘brainwashing’ with the choice of wording depending on the point of view (government vs. citizen). To see to what a dangerous point the propaganda/lie has become, take this phrase from the same work:

“To help address the chaotic nature of the climate change discourse in the UK today, interested agencies now need to treat the argument as having been won, at least for popular communications. This means simply behaving as if climate change exists and is real, and that individual actions are effective. The ‘facts’ need to be treated as being so taken-for-granted that they need not be spoken.” (Ereaut and Segnit, 2007).

Indeed, the ‘truth’ should never be used as an argument. Lest people find out it is a lie.

Then, having shown that it is in the interest of governments to propagate the meme of AGW, and having shown that in a fascist society industry has linked up – ‘bundled’ – with government and is actually in control, we have to show that the meme of AGW is favorable for industry, that it gives them profit. There are many conspiracy theories going about (social media and main stream media alike) that, especially, oil-industry is paying scientists to deny the AGW ideas. This is easily shown to be incorrect. What is more, industry is in fact a large supporter of the AGW ideas. Including oil industry. As shown above, the European Round Table of Industrialists (ERT) are the ones that are in control in the European Union and are writing its laws. This ERT includes several oil companies:

Royal Dutch Shell (The Netherlands)

Eni (Italy)

TOTAL (France)

BP (United Kingdom)

This ERT comes with strong support of the Global Warming ideas, as can easily be seen on their internet page (ERTb, 2017). Worth noting is also the documentary movie *Climate of Concern* by Royal Dutch Shell (1991) where they raise serious concerns about the impact of burning fossil fuels on the climate. Shell now heavily invests in ‘green’ energies. (Take for instance their construction of a windmill park in front of the coast of Zeeland, enough to supply energy to one million households). So much for a conspiracy! It can easily be understood. An oil company does not have the paradigm of selling petrol; it merely has, like any other company, the paradigm of making profit, and up to now it was best done with selling refined petroleum products, but they are readily convinced to switch their business if opportunity knocks. As a comparison, on the same member list of the ERT is also Philips. It started as a light-bulb factory in Eindhoven, but rapidly evolved over the years into a multinational corporation making televisions, micro-electronica, consumer electronics, and recently they moved their core business to medical equipment. The capital is flexible and applies its resources to where profit can be made,

it does not have to be making the same product all the time. The ERT indeed sees the Global Warming threat as a business opportunity. Nothing less than “Growth, competitiveness and climate policy can be mutually reinforcing”.

If you have a hammer as a tool you see all problems as nails, so the problem of Global Warming is solved with ... you guessed it ... more industry (sic). Bankers, financial institutions in general, joined in to get part of the spoils, and designed and applied their financial expertise to attack the ‘problem’. Cap-‘n-trade of CO2 emission certificates are an example of such financial structures, standing at several hundred billion dollars. As New York Times wrote:

“Carbon will be the world’s biggest commodity market, and it could become the world’s biggest market over all,” said Mr. Redshaw, the head of environmental markets at Barclays Capital.” (Kanter, 2007).

If you are interested in making a buck on the gullibility of people, take a look at the Green Chip Stocks pages (Green Chip Stocks, 2017). The same pyramid scheme of speculation invented by them and that nearly took down the entire financial structure in 2008 – and the global economy with it – is now used to suck every last penny out of the gullible sheople.

In a situation where everybody benefits from false knowledge, it is not surprising that this false knowledge propagates in society. Politicians benefit. Industry benefits. Media benefit. ‘Scientists’ benefit. There is nobody that makes a loss in this profit-driven society. (We have been racking our brains and cannot come up with any way to make money with the opposite of the AGW meme, making money on the knowledge we have that AGW is false in this knowledge-based economy. If any of our readers know a way how to take money from the gullible, please contact one of us. For sure it is not “investing in oil [companies]”). Profit for everybody. Well, that is, except for the citizens. They see their spendable income come down through tax and forced consumption. They see their nature around them being destroyed by photo-voltaic and eolic parks. They generally suffer from the greatest insult that one can be submitted to: to be lied to and the liars getting away with it.

“A racket is a service that is fraudulently offered to solve a problem, such as for a problem that does not exist, that will not be put into effect, or that would not otherwise exist if the racket did not exist. Conducting a racket is racketeering. Particularly, the potential problem may be caused by the same party that offers to solve it, although that fact may be concealed, with the specific intent to engender continual patronage for this party. The most common example of a racket is the “protection racket.” The racket itself promises to protect the target business or person from dangerous individuals in the neighborhood; then either collects their money or causes the damages to the business until the owner pays. The racket exists as both the problem and its solution and is used as a method of extortion.”
(Wikipedia: racket)

One may sure hope that the change of information propagation structure, from profit-driven main-stream media to free social media, will result in a change of paradigm in society, where truth (science) is again surviving somehow, other than the naive hope that truth-finding research is commensurate with trying to achieve financial goals only.

The funny thing is that most citizens actually like to be lied to; it makes them feel good. In what is called Pascal’s Wager, even if they are agnostic, they feel that they have nothing to lose by believing in the AGW meme, and everything to lose if they do not believe in it (Stallinga and Khmelinskii, 2016). In fact, they can win more if they become fervent advocates. They, in fact, demand from politicians to be lied to even more. Most people demand the dismantling of science, as it is slowing down progress in finding a solution to the problem. It is then logical that less-informed people are more fanatic about the subject. That makes the meme virtually immortal. To say it once again in a biological analogy: There are no antibodies to this viral meme. And not even facts (reality) will make people change their minds, facts will just be ignored through cognitive dissonance.

5. CONCLUSIONS

We have shown here how knowledge in a knowledge-based economy leads to financial loss in a profit-driven society. Both for the individual who invests in knowledge acquisition (a.k.a. ‘learning’) as well as society as a whole. If knowledge is sought on basis of trying to make a profit, instead any meme will be propagating, not only truths, but also falsehoods, as we have seen in the case of the AGW meme. This dialectical inversion, where profit-optimization leads to financial loss might have come unexpected for some, but should rather have been expected. A knowledge-based economy will go bankrupt, and all knowledge acquired in this economical system will be rather pointless, for being incorrect. The Brussels-centralized control of science, where politics dictates the outcome of research, has created a neo-Lysenkoism that is all but scientific.

ACKNOWLEDGMENTS

The authors declare not to have any conflicts of interests. This research was paid by no grant. It received no funding whatsoever, apart from our salaries at the university where we work. Nor are we members of any climate committees (political or other) or are we linked to companies or NGOs, financially or otherwise. We are not members of any political party or movement. This is an independent work that does not necessarily represent the opinion of our university or of our government.

REFERENCES

- Balanyá, B, Doherty, A, Hoedeman, O, Ma'anit A and Wesselius, E. (1999). *Europe Inc. Regional and Global Restructuring and the Rise of Corporate Power*. Pluto Press, In association with Corporate Europe Observatory. ISBN: 0-7453-1496-1
- Brogan, K. (2013). "Statins for Women? Not for My Patients". The Huffington Post, 20 Nov. 2013. http://www.huffingtonpost.com/kelly-brogan-md/women-statins_b_4283650.html
- Chalmers, A. F. (1976). *What is this thing called science?* Queensland University Press and Open University Press.
- Commission of the European Communities. (2008). "An Industrial Property Rights Strategy for Europe" Communication from the Commission to the European Parliament, the Council and the European Economic and Social Committee, COM(2008) 465/3
- Dawkins, R. (1976). *The Selfish Gene*. Oxford University Press.
- Directorate General Internal Policies of the Union. (2007). "Lobbying in the European Union. Briefing paper." Directorate-General Internal Policies Policy Department C Citizens Rights and Constitutional Affairs.
- Ereaut, G and Segnit, N. (2006). *Warm words. How are we telling the climate story and can we tell it better?*. Institute for Public Policy Research.
- ERTa. (2017). For a list of members of ERT, follow this link: <http://www.ert.eu/members>, visited March 2017.
- ERTb. (2017). For the stance of the ERT on Global Warming, follow this link: <http://www.ert.eu/focus-area/energy-and-climate-change>, visited March 2017.
- Green Chip Stocks. (2017). <http://www.greenchipstocks.com/report/carbon-trading-the-worlds-next-biggest-market/107> visited March 2017.
- Kanter, J. (2007). "In London's Financial World, Carbon Trading Is the New Big Thing". New York Times, 6 July 2007. (<http://www.nytimes.com/2007/07/06/business/worldbusiness/06carbon.html>).
- King, A. and Schneider, B. (1991). *The first global revolution. A report by the council of the club of Rome*. p.75. Pantheon Books.
- Lysenkoism, Wikipedia. <https://en.wikipedia.org/wiki/Lysenkoism> visited March 2017.
- Mercola. (2012). "\$29 Billion Reasons to Lie About Cholesterol", 1 Feb. 2012. <http://articles.mercola.com/sites/articles/archive/2012/02/01/29-billion-reasons-to-lie-about-cholesterol.aspx>
- Moser, F. and Lietaert, M. (2012). *The Brussels Business*, movie (2012).
- Piketty, T. (2014). *Capital in the twenty-first century*. Belknap Press.
- Reinhart, C. M. and Rogoff, K. S. (2010). Growth in a Time of Debt. *American Economic Review: Papers & Proceedings* 100, 573-578. doi: 0.1257/aer.100.2.573
- Revelle, R. (1982). Carbon Dioxide and World Climate, *Scientific American*, Aug. 1982, p. 35.
- Stallinga, P. and Khmelinskii, I. (2016). The Perception of Anthropogenic Global Warming Modeled by Game Theory Decision Tables. *European Scientific Journal* 12, pp. 1857-7881. doi: 10.19044/esj.2016.v12n29p427
- Wenner Moyer, M. (2010). Static over Statins: Should Young People without Cholesterol Problems Take Statins? *Scientific American*, April 2010, p. 13.