



THE COMPLEXITY OF ECONOMICS AND DEMOCRACY

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Abstract. As far as human history goes wealth and power are in the hands of a small selected group. This is the way the world is ruled. The idea of dividing the goods more or less equally among all people is a rather new concept.

If one wonders if it is possible to distribute the worlds assets and work more equally among all people, based for instance on the idea of a world based on socialist capitalism including human rights and sustainable development, then many questions have to be answered. Do people want more equal distribution of assets? Which world model leads to a more equal distribution? How to get this distribution? Can the small amount of people who now have the money and power be overruled by the majority of mankind? And how can this be done?

In order to get some answers to these questions a careful analysis of the issue should be made. What is going on in the world? Who is suffering? Who gets the benefits? Then one has to analyse what the people want and how to get there.

A way to do this is by using the Compram methodology. This scientific methodology is based on the theory of complexity and developed to analyse complexity, to give policy directions and the guide implementations.

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Reikšminiai žodžiai: kompleksiško teorija ir metodologija, ekonomika, Compram metodologija, prekių pas-kirstymas.

1. Introduction

In this article the world economy will be re-
flected from the point of view of human rights and
sustainable development. Asking ourselves the ques-
tion: are the goods and assets in the world equally
divided? Actually: what can be done to change the
world with its very unequal division of goods and
work into a world which is divided more along the
lines of human rights and sustainable development?
Does this take at least a kind of society based on a
democracy with a kind of socialist capitalism? A so-
cietal organisation which no country has reached so
far. Although this is an idealist view, human rights
and sustainable development are taken seriously
by many people, so effort has to be undertaken to
reach this goal. Therefore many questions have to

be answered. What has to be changed? Which peo-
ple share this idealistic idea and which people do not
want this?

Changing an economy, changing the division of
the goods and assets, is a complex societal problem.
For answering these questions one needs the theory
of societal complexity. This is a rather new theory
developed in the early 90s by DeTombe (1994).
The theory states that these kind of complicated and
complex issues can only be answered by using the
knowledge of many fields by trying to find the caus-
es of the problem and analysing the power. Combin-
ing the knowledge can be done by a group of experts
guided by a facilitator as the methodology of societal
complexity, the Compram methodology, subscribes.
Knowing the situation, is not enough to change it. In
order to change a situation power is needed. There-

fore actors are invited to reflect on the problem. Although this kind of approach is rather new, some fruitful applications have been done. The methodology is based on the idea that two people know more than one. The whole is more than the sum of the individual parts. This is also based on the idea that the actors have to come to a kind of an agreement in order to implement interventions successfully. Looking at complex societal issues in this way there is a possibility to arrive at more sustainable interventions because the interventions are directed to the causes of the problem and not on the effect. In most everyday life the policy makers tend to do a shallow analysis of the situation and often only work on the effects of the problem and not on the causes. In science too often only mono disciplinary research is carried out in which one very soon reaches the limits of one's field. Therefore a multidisciplinary approach is necessary to find better and more sustainable answers to problems by applying interventions to causes and by including all main actors in the negotiation.

2. Wealth and power

History shows that money and power stays within a small selected group of people, like the first emperor of China Qin Shi Huangdi (221 BC)¹, the Roman emperors who ruled from Morocco till the river Rhine 27 BC till 565 AC), Genghis Khan (1206-1227) and his heirs (till 1290) ruled over parts of China until the borders of Vienna, Turkish sultans (1290-1924) who ruled over parts of Asia and Europe until the border of Vienna around 1500 and until recent in the hands of kings in Europe, Tsars in Russia, sultans in the Middle East and emperors in China and Japan. These people were extremely rich and powerful, sometimes even had the status of a god like in Japan. Most of these rulers ruled in a kind of autocratic way. They made people pay and work for them in exchange for some 'safety' and belonging to a group. The persons of the selected group might change, overruled by new rulers, but the group as such stayed extremely small. Most wealth and connected with this power was conquered by force, making the people of the state work for the glory and power of the ruler.

How could these people become so rich and powerful? Mostly by conquering with pure strength and slyness and perseverance combined with often

extreme cruelty. Men conquered large parts of countries, often by using other men as soldiers and slaves for their own protection and benefit. After their death the power and assets are often inherited by their children such as with the European kingdoms and Asian Emperors. Recent examples of cruel powerful men are Hitler, Stalin, Mao Zedong, all self indicated leaders.

3. Ideal of democracy: equal chances for all people

The idea of dividing the goods more or less equally among all people is a rather new concept. This idea was initiated by philosophers in the time of the Enlightenment² in France in the 18th century and continued with the creation of the USA by its Constitution in 1787, ("We, the People of the United States")³.

This idea is further developed including (male) labourers by Marx and now mostly accepted in democratic countries as a part of human rights (Humphrey, 1948). Although now generally accepted in democracies, seen in the light of the history of mankind the idea of equal chances for all people is rather new. In a democracy we like to distribute power and money more or less equal along the lines of capacity of people, a meritocratic ideal. Too large gaps between the richest and the poorest persons in a country is not desirable. This might be a source of societal upheaval and does not correspond to the human rights and the ideal of equality. In a democracy the leaders should be selected because of their capability and elected by all the people for periods of temporary power. The people of a country hope that in this way they are guided by persons who represent the people and take the benefit of the people into account. In a democracy representatives of the people should take care of the goods, work and benefits of a country and distribute this equally among all people, in a way that every person's basic needs are fulfilled, meanwhile respecting the diversity of people. In this way one gets a democracy with equal chances for all people.

Do the individuals who represent the people really act on behalf of the people or do they act as new kings and go after their own benefit and that of their friends. Let us look at the modern democracy in Northern America, the USA (capitalism) in order to see whether this idea is followed⁴.

¹ Qin Shi Huangdi made himself emperor of China and gave himself political power and religious power, he made himself god in 221 before Christ. He is remembered by the huge terracotta army found near Xian in China where he made a mausoleum for himself with an enormous army, and with animals made of clay (Matter, 2008).

² The period of Enlightenment is about from 1640 till the end of 18th century.

³ The Declaration of Independence in 1776 by B. Franklin & T. Jefferson. The Constitution of the US is of 1787 at that time excluding women and slaves.

⁴ Former communist countries like USSR and China broadcast-

4. Capitalism and democracy

In the USA there is officially a meritocratic way of dividing assets and goods: all people have the equal chances to get the same if they work hard and are qualified according to their talents⁵.

However, is this idea really in place in practice? We see in these countries extremely rich people and, referring to USA, a huge group of poor people⁶.

The economic rules within a capitalist system as the USA, allow some people to get extremely rich on the expense of others. Some activities make some people extremely rich, like for instance being a CEO⁷ of car, oil, steel, electricity, banks or insurance company. Paying the labourers a small amount of money, keeping them obedient and taking most of the profit themselves shared with the shareholders of the company⁸. This way of handling is often justified by the idea that the boss takes the initiative and the risk, and makes all the effort, however labourers give also much effort, and often have to endure serious healthcare risks, without getting an equal share of the profit⁹.

The CEO's of business companies of the last decades tend to pay themselves extremely high salaries and bonuses and shares of the company, meanwhile sell out their firms if it is profitable. The same phenomenon is observed not only in the USA but also in western Europe. An example is the Dutch ABN Amro bank where the CEO Groenink sold out the company in 2007 with direct high profit for himself in millions of euro¹⁰. Another example of company mismanagement and personal greed is the gambling

with pension money by the electricity firm Enron in California. Labourers were persuaded to buy shares of the company which very soon were not worth a penny (Gibney, 2005). This was the same firm Enron that shut down the electricity for some days in California in order to increase the electricity prices. The same kind of unscrupulous management is to be seen in the mortgage disaster started in 2007 in the USA by selling too expensive houses to poor people, giving them the idea that the mortgage is low and affordable. The mortgage was low initially, however, after a short while the interest on the mortgage went up sky high (New York Times, 2007). These poor people could not cover the high mortgage rates, so they had to sell their houses back to the bank or on the market for much lower prices than before. These commercial activities were carried out on purpose by some USA banks (NRC, 2007; IMF, 2008¹¹) in order to make fast and easy money. These banks tried to decrease their own risk by reselling packages of mortgages to other banks, in this way avoiding their own responsibility for this mortgage disaster. This resulted in 2007 and 2008 in a world wide chain of huge bank risks, which made many economies suffer. Some people got high benefits from this mortgage game and most people debts, known as the credit crisis¹².

Other legal ways to become rich quickly is the war industry. War industry production is an extremely easy way to earn huge amounts of money for some, where meanwhile for many others often an enormous source of anxiety, fear, pain, disaster and poverty. For the government starting war is a way of getting new territories and more power, for the war industry selling weapons to both sides is very profitable and for the building companies rebuilding the bombed and destroyed cities is an easy way of acquisition of new projects, and earn a lot of money. See how it is done in the Iraq war started by the Bush junior administration (USA) in 2003. The security of oil for business and the profitable war economy seems to justify this war from the USA point of view, meanwhile 'selling' this concept to the people as fighting for democracy¹³.

ed also the idea of equal division of work and goods among the people. However the guided plan economy of the communist countries created in reality big difference between rich and poor people and, more over, abused the freedom of many people. 50 Million people were sent to camps in Siberia during the Stalin period in USSR 1918-1956 indicated as 'enemy of the state' (Solzjenitsyn, 1974). In China millions of people died of hunger and cruelty by the policy of their own leader Mao Zedong during his communistic regime (Wu, 1994).

⁵ This does not include women (DeTombe & Muntjewerff). Women are still often treated as second hand labourers and in general at least paid 15% less for their labour in comparison with men.

⁶ The USA has 45 million people poor people out of a population of nearly 300 million (about 15% of the population).

⁷ CEO is chief executive officer.

⁸ CEO Groenink of the ABN Amro (The Netherlands) got a yearly income of 354 times the mean salary of his employees (NRC, 2007).

⁹ The owner of a company do not have the risk personally. The law is formulated in this way that when the firm get bankrupt the owner is not direct personal responsible.

¹⁰ The Childrens Investment Fund (TCI) a private equity fund, stimulated in 2007 to dividing the ABN Amro bank. This gave the TCI owner Chris Holm a benefit of hundreds of millions (NRC, 2008).

¹¹ In the Global Financial Stability Report of the IMF is the debt due to the mortgage credit crisis estimated on 21 March 2008 on 945 Billion us dollar (600 billion Euro).

¹² John Paulson earned in one year (2007) 3 billion US dollar with his hedge fund Paulson & Co, speculating on the downfall of the American house market and the mortgage crisis (Trader Monthly, 2008)

¹³ The USA government supported Saddam Hussein (1979-2003) in the beginning of his political career. The same person that was fought in the first (ended in 1991) and second USA-Iraq war (started in 2003), his me wit support of the UK.

These capitalist activities are legitimated by law, so is selling cigarettes and alcohol¹⁴, gambling on the stock market and buying firms by hedge funds and private equity funds, selling and reselling vulnerable mortgages. It is all allowed within the economic rules of the capitalist market of the USA and in Europe. However these activities lead to poverty of many, enlarging the income gap between people.

5. Corruption, illegal activities and tolerance

Next to legal activities there are illegal but often tolerated activities, or at least not strongly fought activities, which make people rich very quickly. Such as human trafficking, prostitution, child labour, illegal adoption of children, gambling (Las Vegas), soft and hard drugs trade and organ trade¹⁵. The government, even in a so-called democracy, is not always so taken care of the interest of the people who elected them in order to represent them. Too often many governments primarily take care of the interest of a small group of businessmen¹⁶.

Can the exorcism of capitalism be diminished in favour of that of a real democracy? Can the government do something about this? The few rules there are for diminishing the exorcism of capitalism are not enough or do not function. Or the people who have to control these rules are reluctant to do so as long as they and their friends benefit¹⁷. Most power of the kings and tsars in Europe are now replaced by (self) elected statesmen. The real power is still in the hands of the government or taken over by the small group of rich people; owners of pension and insurance companies (Smit, 2003). The power and the wealth are now in the hands of a small group of captains of industry¹⁸.

¹⁴ Joseph Kennedy, USA gathered his family capital in the early 20ties in the prohibition days with smuggling alcohol. His son John F. Kennedy became the 35th president of the USA in the period of from 1960-1963

¹⁵ Carla del Ponte, war investigator of the recent Balkan war, described in her book 'La Caccia' (Del Ponte, 2008) that the Kosovo's Liberation Army traded organs of killed Servers.

¹⁶ This kind of corruption is well spread in countries like Italy and Indonesia.

¹⁷ Berlusconi, of the party of Forza Italia, was premier in Italy from 2001-2006. Berlusconi is the richest men of Italy. He owned in 2002 7 billion Euro. He was convicted because of fraud, perjury and bribery, but came free because he changed the law. The mafia supports his Forza Italia party, and thus is tolerated by the government of Berlusconi. Judges who want to fight the mafia are obstructed by the government of Berlusconi.

¹⁸ The 400 richest people of the world has more money than the 6.8 billion (minus 500) people together (De Preter, 1983; Forbes, 2008). Rockefeller owned in 1937 1.4% of the GNP (1.4 billion) ; Bill Gates owns 0.66% of the GNP (82 billion).

6. Developing countries and support

Within the developed countries there is a gap between rich and poor inhabitants, however between the countries in the world there is an even bigger gap between the rich and the poor; the so-called developed and the developing countries. Instead of smaller, this gap seems to grow wider. There are many reasons for this gap (Diamond, 1997; Landes, 1998). One of the reasons is that the resources, labour and goods of the developing countries are sold for too low prizes to the rich developed countries.

Given the idea of real democracy and equal division of goods and assets among all people in the world, the developing countries are left behind. To change this structural and incidental developing money is given by the rich countries.

Structural foreign aid is not so helpful as it seems. The reason for this is that the target group is wrongly defined: men instead of women or often the support does not reach the target group. However, although it looks very good structural foreign aid is in essence often a support for the business of the developed countries itself. When technical support is given, like computers, medical or transportation devices, the support often lacks the necessary education for use and maintenance. Or when medicines are given it happens that these medicines have already proven to work inadequately¹⁹.

Incidental foreign aid is given in times of disaster and famine. War is one of the main sources of famine. In the last fifty years people of African descent from different tribes have been set up against each other and stimulated to kill each other²⁰; women and children flee without the means of existence and farmers leave their land not taken care of. 80 per cent of the money given in these incidental projects do not reach the target groups. In these cases keeping peace, fighting corruption and changing the international trade agreements would do better for the developing countries than giving money and food. Often there is no democracy and the government is corrupt in these countries. Although most people are very poor in the developing countries, some are extremely rich²¹.

¹⁹ Such as donating free already inadequate HIV/Aids medicines to Africa by Bush jr. administration while already know that people get resistant soon from these medicines.

²⁰ The Tutsi's and Hutu's in the Rwanda civil war in 1994.

²¹ The number 4, 5, 6 of the ranking of the richest people of the world by Forbes (2008) are living in India. The developing country Indonesia is long time governed by the extremely rich and corrupted family of Suharto (1967-1998).

7. Is real democracy possible?

Can the economy be directed towards the idea of socialism based capitalism where the human rights are ensured and where the production, including the methods of production, are sustainable (DeTombe, 2008), and where people can live in peace and freedom, having enough goods to maintain themselves and their family and where individual differences are respected?

To answer this question many issues have to be studied. First: is a socially based capitalism democracy based on human rights and sustainable development a guarantee to a better life for many people? Second: does the majority of people really want a more equal division of goods and assets? Third: will or can the people who have the money and power support or obstruct this idea?

The description given above is neither complete nor detailed enough to answer these questions. In order to answer these questions one needs to invoke the theory of complexity (DeTombe, 1994, 2003) the description above is only meant as an illustration and indication of what is happening in the world. In the theory of complexity this is called an awareness of a complex societal problem (phase 1.1 of the phases of problem handling; see figure 1) To be aware of the gap between the ideal idea of democracy and reality. Questions stated above are only a few of the many questions that have to be analysed and answered before one can answer the question whether real democracy is possible.

In order to answer these questions a thorough analysis of the wealth, the power, economy, international trade and human goals, drives and desires is needed. Diminishing the inequality of wealth between the countries and within the countries starts with identifying the causes of the inequality and those who profit from this inequality and who suffers. Which phenomena, goods, organisations, people, states, contracts etc. are involved and how are the phenomena related to each other. Ideas and concepts should be changed. For instance, what to do with the concept of GNP and sustainable development. An international control of respect of the human rights to labor should be established there for the GNP as a measurement of progress should be replaced by the definition of the national quality of life (NQL) as an indicator of welfare of a country. This gives a better evaluation of what is really the quality of life in a society, which includes well-being and welfare into the national product (DeTombe, 2008). To start the insight in this complex and difficult material one needs

to make good understandable simulation models in which the connection between the phenomena can be described and where one can see how the phenomena interact. Making this kind of simulation model can not be done by one person alone. This has to be done by a team of experts; each with expert knowledge of their own field. A good scientific methodology to do this is the Compram methodology developed to analyse, guide and evaluate complex societal issues (DeTombe, 1992, 1994, 1997, 1999, 2000a, 2000b, 2001, 2003, 2004).

8. The theory of societal complexity and the Compram methodology

The theory of societal complexity (DeTombe, 1994, 2003) recognizes twelve phases in the problem handling process (see figure 1). The phases should be followed in the prescribed order, but can also be used iterative, meaning that one can not skip a phase but one can go back to earlier phases of the handling process if necessary.

Sub-cycle 1: Defining the problem

- | | |
|-----------|---|
| phase 1.1 | becoming aware of the problem and forming a (vague) mental idea; |
| phase 1.2 | extending the mental idea by reflection and research; |
| phase 1.3 | putting the problem on the agenda and deciding to handle the problem; |
| phase 1.4 | forming a problem handling team and starting to analyze the problem; |
| phase 1.5 | gathering data, exchanging knowledge and forming hypotheses; |
| phase 1.6 | formulating the conceptual model of the problem. |

Sub-cycle 2: Changing the problem

- | | |
|-----------|--|
| phase 2.1 | constructing an empirical model and establishing the desired goal; |
| phase 2.2 | defining the handling space; |
| phase 2.3 | constructing and evaluating scenarios; |
| phase 2.4 | suggesting interventions; |
| phase 2.5 | implementing interventions; |
| phase 2.6 | evaluating interventions. |

Figure 1. The phases in the problem handling process (DeTombe, 1994, 2001, 2003)

As indicated before the description above (paragraph 1-5) is the first phase of the problem handling process. When this idea of inequality is taken se-

riously the next step of extending one's idea about this can be done by thinking, discussing and reading (phase 1.2). Then one can try to put this on an (international) agenda (phase 1.3). When accepted, this problem can be taken up by a problem owner, who can start handling this problem (phase 1.4 to 2. 6). This needs a good and thorough scientifically based methodology.

The Compram methodology is a good and thorough scientifically based methodology for analyzing and handling societal complexity. The methodology is based on the idea that handling complex societal problems should be done with a team of experts and actors. The problem handling process should be open, transparent and possible to follow by and be controlled by outsiders. The Compram methodology²² is based on the idea that each societal problem is based on elements of knowledge, power and emotion.

The Compram methodology has six basic steps (see figure 3). Each step is performed by a group of problem handlers guided by a facilitator. The problem owner asks a facilitator to guide the problem handling (process problem handling phase 2, Compram methodology step 1).

Step 1 of the Compram methodology

In the first step of the problem handling process the facilitator invite experts with knowledge of a part of the problem. For the first question 'How are the assets divided among the people of the world' experts of the field of economic, politics, psychology, agriculture, commerce, developing countries, and religion are invited. Each expert sees by her/his education a part of the problem colored by his/her own field of knowledge (see figure 2).

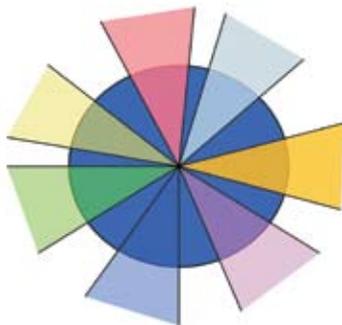


Figure 2. Every experts sees a part of the problem

²² The Compram methodology is advised by the OECD (July 2006) to handle complex societal issues. The 'Final consensus report' is published in Report on the Workshop on Science and Technology for a Safer Society 20-Jul-2006 <http://www.oecd.org/dataoecd/29/2/37163745.pdf>.

A carefully composed team of experts describes together the problem and by explaining to each other what certain aspects mean in their field, how this should be interpreted and how they are related. The experts interpret knowledge given by the other experts for their own field. In this way the problem handling team is able to form an overview of the problem. The experts meet several times analyzing the content on knowledge, power and emotions. They analyze which actors are involved, which unorganized groups are affected, what goals different groups have and which directions these groups would support and which not, and what their power is. The emotions will be analyzed in relation to the ideas or goals of the actors. The combined knowledge of the experts, the definition of the problem, will be described in a seven layer model (DeTombe, 1994). This model is created to ease the communication between the experts of different fields. In each layer of the seven layer model the knowledge is given in a different way, from a description of the problem in words, to defining the concept and the status of the knowledge to describing the problem in ways of a causal model, into a conceptual model with the help of a simulation model (system dynamic model). This is done through an iterative process of describing the problem based on the discussion between the experts. Part by part the seven layer model is filled, until the group of experts is convinced that this description of the issue represents the definition of the problem. This is phase 1.4 to 2. 6 of the experts.

step 1	analysis and description of the problem by a team of neutral content experts: knowledge;
step 2	analysis and description of the problem by different teams of actors: power;
step 3	identification of interventions by experts and actors: negotiation;
step 4	anticipation of the societal reactions: emotion;
step 5	implementation of the interventions;
step 6	evaluation of the changes.

Figure 3. The six steps of the Compram methodology

Step 2 of the Compram methodology

The second step of the Compram methodology deals with power. In the second step of the Compram methodology the actors are invited. These are the main actors in the problem. They are invited to give their view on the problem, to see on what conditions and to what extend they like to cooperate and which goals and desires they have. Realizing that the

world is what it is, the methodology recognizes that major groups of people are not sufficiently represented in these kinds of problem handling processes. The Compram methodology explicitly includes unorganized groups, like in this case, people from developing countries, women, and elderly people as discussion partners in the handling process. Each actor group can, supported by the facilitator, analyse the problem and define the problem expressed in a seven layer model supported in the same way by a facilitator as the experts. Handling complex societal problems is difficult not only because the different kind of phenomena, but also taking the values and ethical aspects of people into account. This is phase 1.4 – 2.4 of the handling process of the actors.

Step 3 of the Compram methodology

In step 3 of the Compram methodology the representatives of the actors groups and the experts discuss together their view on the issue of democracy and the more equal distribution of assets among the people of the world. This is the negotiation step in order to diminish the gap between the rich and poor countries. Many issues in a democracy need to have mutual agreement of the actors involved. In step 3 of the Compram method the actors will explain and negotiate their point of view, the definitions and models, the differences and similarities, with each other and with the experts. The comparison between the views of the actors and that of the experts is made easier by structuring the description of the problem in the same structured way by using the seven layer model including the system dynamic models. Based on scenarios, what-if exercises and try-outs with the models, suggestions can be made for changing the problem towards the mutually agreed goals. This is phase 2.3 and 2.4 of the problem handling process.

Step 4 of the Compram methodology

Before the changes are implemented the societal reactions must be heard. When the group of representatives agree with each other on certain kinds of interventions, it does not mean that the rest of the world will agree automatically. There for, the outcome of the agreement between the actors and the experts of step 3 of the Compram methodology will be published and is open for discussion with the rest of the people who are involved. In this case the rest of the world, or at least some representatives of the rest. This is step 4 of the Compram methodology. Depending on the reaction of those people the problem handling process can continue or should be brought back to the negotiation table: step 3 of the Compram methodology or sometimes even to step two or one, the definition part.

Step 5 of the Compram methodology

When agreed upon several possible changes, these interventions can be implemented, carefully guided by a group of problem handlers and the facilitator. This is step 5 of the Compram methodology.

Step 6 of the Compram methodology

Directly after step 5 of the Compram methodology the problem handling process itself should be evaluated. Is the problem handling process performed in the right way? Are issues overseen? What can be improved next time? This is step 6 of the Compram methodology. After several years, the implementation should be evaluated. What has changed meanwhile in the world? Are the goals still valid and wanted? Is the effect of the intervention some steps nearer to the desired goals? Often at this moment in time, parts of the problem handling process should be performed again, because complex societal process tend to change, often, unexpectedly and suddenly in unforeseen directions.

Conclusions and summary

We live in a world in which the majority of the people can hardly support themselves, while a small group of people enjoy excessive wealth. This is far from the ideal of democracy where goods and assets of the world should be equally divided among people, where living and production is based on sustainable development. This ideal can be realized in a kind of socially based capitalist democracy where human rights are respected and ensured. If the people want this kind of ruling many things should be changed. What has to be abandoned or at least diminished is war, child labor, prostitution, and corruption. Then the concept of foreign aid should be changed from giving technological goods, to abandon corruption and war, and establishing democracy.

The main question is do people want this? The power is in the hands of the wealthy. In order to get some insight into this problem one needs to make a thoroughly scientific analysis of the world. This should be done based on the theory of societal complexity using a methodology with which teams of experts and actors can make an analysis of the situation and, based on simulation models and scenarios, see where changes can be made. This can be done by the scientifically based methodology: the Compram methodology²³.

²³ Many articles and books are published about the Compram methodology. Available at: <http://www.geocities.com/dorien-detombe>

Handling complex societal problems needs a special approach. Handling societal problems in an interdisciplinary way has become a must for our society. The challenge is to combine the knowledge of the social sciences, technological sciences and natural sciences in such a way that new knowledge and insights are created. The problems society is confronted with are difficult to handle. There is a growing gap between the complexity of these problems, the need for interdisciplinarity and the way the knowledge, for instance on universities, is organized. There is a need for better methods and tools, more knowledge and imagination. Scientific knowledge is needed to survive amidst these problems.

Therefore the theory of societal complexity is a field of scientific attention which combines knowledge from different sciences. Some of the scientific and real life reasons for this special approach are that the complex societal problems are seldom completely defined, change during their development, involve many actors each with a different view on the problem, with different interest and with different 'solutions' in mind, have a large impact on society and involve a large amount of money. In handling complex societal problems technology supported by science can play a role, however, only as an extension of human capacity not as substituting human capacity. Handling these kinds of problems belongs to the field of theory of societal complexity. The claim of this field is that complex societal problems should be handled in according to the approaches, methods and tools in the field of societal complexity.

To find out what we know about the problem, who is affected by it, which parties are involved, who benefits and who suffers, the emotions and political vulnerability, one has to analyze the problem. This needs an interdisciplinary approach. An interdisciplinary group of knowledge experts should analyze the situation and discuss possible changes. Then stakeholders should discuss the issue and give their opinion on the situation. Together the experts and stakeholders should find some fruitful changes. The interventions should be carefully implemented and evaluated on their desired effect on the problem.

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EKONOMIKOS KOMPLEKSIŠKUMAS IR DEMOKRATIJA

Dorien J. DeTOMBE

Tarptautinė socialinio kompleksiško tyrimo metodologijos asociacija, Olandija

Santrauka. Per visą žmonijos istoriją turtas ir galia telkiami mažos išrinktųjų grupelės rankose. Idėja padalyti gėrybes visiems žmonėms po lygiai yra gana nauja. Kai kas abejoja, ar įmanoma paskirstyti pasaulio turtus ir darbą tolygiau, pavyzdžiui, remiantis socialinio kapitalizmo nuostatomis, kartu užtikrinant žmogaus teises ir tvarią plėtrą. Bet ar žmonės nori tolygesnio turto paskirstymo? Ir koks pasaulio modelis tai užtikrintų? Ar gali pasaulio gyventojų didžiuma valdyti turtingą pasaulio mažumą?

Keldama šiuos klausimus autorė bando rasti analitiškai pagrįstus atsakymus į juos, atsakyti, ko žmonės nori, taikydama savo sukurtą *Copram* kompleksiško tyrimo metodologiją, taip pat pateikdama kitas šio tyrimo išvadas.

Dorien J. DeTombe (MSc. Ph.D.) – is doctor, the founding person of the Theory of Societal Complexity and the Methodology for Societal Complexity, Amsterdam, The Netherlands. She is an internationally recognized expert in the field of handling Complex Societal Problems. She developed the methodology COMPRAM (Complex Problem Handling Methodology), a multidisciplinary methodology for political decision making by multidisciplinary team of experts and actors. Dorien DeTombe studied social science and computer science. She received her doctorate in the field of methodology for Complex Societal Problems. She is a member of many scientific boards and review committees, a regular referee for conferences and journals. She spend her main career as a researcher at Utrecht University and at Delft University of Technology in The Netherlands.

Dorien J. DeTombe published more than 100 scientific articles and several books on the subject of Methodology of Societal Complexity. She is conducting research on the subject of handling complex problems, such as in the field of policy problems and risk management, sustainable development, healthcare and economy on issues like floods, HIV/Aids, urban research, future planning, agriculture, terrorism. She lectures on the subject of Methodology of Societal Complexity as a visiting professor and at conferences all over the world on the topic of Methodology of Societal Complexity. She is an editor of several journals.

Dorien J. DeTombe – filosofijos daktarė, Tarptautinės socialinio kompleksiško tyrimo metodologijos asociacijos pirmininkė. Ji yra tarptautinė visuomenės kompleksiško nagrinėjimo srities ekspertė, COMPRM metodologijos autorė, mokslinių žurnalų redakcinės kolegijos narė. Mokslinių tyrimų sritys: daugiadalykės metodologijos taikymas politinių sprendimų priėmimo sistemoje, politikos problemos, rizikos analizė ir valdymas, darnus vystymasis, sveikatos apsaugos ir ekonominės problemos. Yra įgijusi socialinių ir informacinių technologijų mokslo sričių magistro ir daktaro mokslo laipsnius. Yra parašiusi per 100 mokslinių straipsnių ir keletą knygų visuomenės kompleksiško tyrimo metodologijos klausimais.