THE FUNDAMENTALS OF MODERN CIVILIZATION
CONSEQUENCES AND REMEDIES

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Abstract: Modern civilization depends on the rise of science in the 16th and 17th centuries followed by modern philosophy, which started by Descartes in the 17th century as well as the Illuminism ideas in the 18th century. From the different Philosophies of the last 4 centuries and considering which ideas have survived we can deduce four main parameters, which explain the history and the present situation. The dangers of recent globalisation and those of modern technology are discussed. Some directions of remedy are mentioned as a vision. Copyright © IFAC 2001

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1. INTRODUCTION

I am dealing in this paper with modern civilization, which is essentially European and dominating in different parts of the world to different degrees. Like other civilizations it has its positive and negative aspects taking the value of live as basis which is surely relative. The higher the education level of the people the narrower the gap between the theory and the praxis of any civilization.

One may say that modern science (Russell, 1946; Henry, 1997; Tiwari, 1992) began in Europe when Copernicus (1473-1543) published his heliocentric theory in the year of his death in 1543 as hypotheses. All the astronomers as well as the church rejected it. Tycho Brahe (1546-1601) who adopted an intermediate position noted the positions of the planets for many years. His student Kepler who made use of these measurements discovered the three laws of planetary motion in 1609 and 1619. Galileo (1564-1642) who is the founder of dynamics showed the importance of acceleration, discovered the law of inertia and the parallelogram law for projectiles and forces. He accepted the discoveries of the heliocentric system and used a telescope to discover 4 satellites of Jupiter. He was condemned by the inquisition privately in 1616 and publicly in 1633. Galileo renounced his ideas which caused a damage to the church. Newton (1642-1727) stated his three laws of motion, a part of which is due to Galileo and most important the law of universal gravitation. In the 17th century technology has developed rapidly with the invention of the microscope, the telescope, the thermometer, the barometer, the air pump, the improvements of the clocks, the magnet, Boyle law in chemistry and the discovery of the circulation of the blood. Mathematics has also developed: : Nabier (logarithms), Descartes (analytic geometry), Leibnitz (infinitiesimal calculus).

Because of the triumph of science the relation between the humans and religion has shifted
gradually in the direction of natural science and humans became not humble anymore. The causality principle became important. The 18th century witnessed three big developments namely the illuminism (Aufklärung), the industrial revolution and the French revolution.

Modern philosophy (Diemer 1967; Russell, 1946; Bennett, 2001) was founded by Descartes (1596-1650) who considered a mechanical world and douting everything (Cartesian doubt). Rationality is the way "I think, therefore I am." And Knowledge of external things must be by the mind not by the senses. On the other hand Locke (1632-1704) did have another line of thought which is empiricism in the theory of knowledge. All our knowledge (with the possible exception of logic and mathematics) is derived from experience. In the line of Descartes is Spinoza (1634-1677), Leibnitz (1646-1716), Kant (1724-1804) and Hegel (1770-1831). In the line of Locke (1632-1704), Berkeley (1685-1753) and Hume (1711-1776). The two lines of philosophy are also reflected in ethics. Political philosophy has developed in two directions democracy and some sort of totalitarianism.

From the philosophy of the last 4 centuries I shall extract four parameters with which we should be able to understand history till today. The crisis of today is a good example of application. Also it is possible to make some predictions for the future and to give a vision for a better future of humanity. The four parameters are: Belief in natural science, rationalism and empiricism (no metaphysics), seeking happiness as aim in life and ethics (no metaphysics). These are the world view, the tools, the aim in life and the restrictions. These four parameters are extremes which may be softened by religious beliefs. Different individuals have these parameters in different degrees. In the following four sections I shall give the consequences for the individuals and the society.

2. BELIEF IN NATURAL SCIENCE

This is a result of conflict with the religion. In mechanics the resultant is near to the larger force and in biology there is the survival of the fittest (Darwinism). Therefore the powerful gets what he can limited only by the law. For states, there is almost no international law which can be enforced, therefore there is no limit other than the powers of the other states. The result is war and economic injustice.

One can say that power has been the crucial factor in the history of mankind, but now it has been established according to the new belief (substitute for religion). The force of fairness should play no part.

According to Russell (Russell, 1975) the fundamental concept in social science is power with its many forms (wealth, military, civil authority, propaganda, secret service, priestly power). Love of power is one of the strongest human motives even following the leader is trying to take part in power. Machiavelli glorifies naked power. Hobbes propagates that power of the state is absolute. Rousseau in his social contract tends to justify the totalitarian state and Nietzsche wants an international ruling race who are to be the lords of the earth. Belief in race and nationalism is natural outcome of love of power. Prophets have valued things other than power (wisdom, justice, universal love, ...)

As Science is power then scientific activity is important for a society. For economic power work is important for the individual and society. The other side of it is the power of the stock exchange and the currency market which can be misused. Information is a powerful tool in the hand of totalitarian systems. In democratic systems it plays the major role in the formation of the opinion of the people. It is normally misused and democracy is damaged. There is a saying may be not far from the truth (in a dictatorship the information is manipulated but the people know it and in a democracy the information is also manipulated but the people do not know).

Some consequences of the belief in natural science are colonialism, communism, fascism and the global dictatorship with its consequences like damage of the environment, political and economic injustice and international terrorism with its two parts as in fig.3.

Fig.1 Dictatorship in a Developing Country

Fig.1 shows the cause-effect diagram of a dictatorship in a developing country (Mansour, 2000), (Mansour, 2001). The low level of education is a sufficient condition but not necessary for a dictatorship. Here we have two positive feedback loops which prevent the system from recovering. External interference is necessary for a considerable change towards a new development. Unfortunately the modelled system is present in a large number of societies in the present world.
Fig. 2 Dictatorship in a Developed Country

Fig. 2 shows the cause-effect diagram of a dictatorship in a developed country. Here a national emergency is the cause of dictatorship which keeps its grip on power by misusing the information (propaganda). A terror positive feedback loop similar to that in Fig. 1 is present. A recovery can be from outside only. An example is the national socialist system in Germany.

Fig. 3 shows the cause-effect diagram of globalization and the global dictatorship. This is similar to Fig. 2 except that the cause is the military and the economic power of one country (super power). A vision for the benefit of humanity is discussed at the end.

This system is similar to the dictatorship in a developed country. Here the members of the global system are countries of different systems of government. The terror loop is quite similar. The United Nations structure does not include a general assembly and an international court with binding decisions and the security council is not an international government with executive power controlled by the general assembly and the international court. That is to say, it is not a democratic system. The dangers of this system are the possibility of using weapons of mass destruction either by the global dictator or by the terrorist organizations.

Fig. 3 Global Dictatorship

3. RATIONALISM (MIND) & EMPIRICISM (EXPERIENCE)

Descartes: "I think, therefore I am." Kant "the mind like the sun in the heliocentric system." Spinoza, Leibnitz, Hegel and Marx follow the rationality whereas Locke, Berkeley and Hume follow the empiricism. Here we have no metaphysics. The consequences are: materialism, man is a machine and people like raw materials. Society forces individuals to instrumental reason where freedom is reduced. The economy growth is a main aim where the result is diverging capital and income in the society. The destruction of the environment, more technique in medicine with less human feeling as well as inhuman decisions are consequences.

4. SEEKING INDIVIDUAL HAPPINESS

Bentham (1748-...): each individual always follows what he believes to be his own happiness which leads to the happiness of the society "greatest - happiness principle". In economy, Adam Smith: do what is in your interest bounded by the law (interest of societies mostly not bounded by law). The consequences are: (Taylor, 1995)

A. Individualism: no high aim-loneliness-every one has his own values and should have nothing against the values of others which is moral subjectivity-concentration on himself-less interest in political activity thus loosing control of politicians which leads to mild form of despotism.

B. Freedom: liberalism and respect of human rights in the society

C. Democracy: Locke social contract-checks and balances- the legislative, executive and judicial functions of government should be kept separate is characteristic of liberalism
5. ETHICS

Ethics or the reference behaviour is determined by the mind (Kant), by the feelings (Hume) or according to utilitarianism (Bentham).

The model of Ethics is found in (Mansour 2001).

Ethics and legality: Fig.4 shows a symbolic representation of the regions of ethical and legal behaviour. The boundary of the region of legal behaviour coincides partly with the region of ethical behaviour. According to experience most of the behaviour is legal but not ethical according to the third parameter. Also the region of legal behaviour is expanding in a liberal society. Almost no ethics for international behaviour as interest is dictating.

Ethical problems in technology: dangers from nuclear, chemical and biological weapons from countries possessing them and from terror organizations. Also there are dangers of nuclear power plants for the people and the environment. Dangers of biotechnology come from the fact that experiments are done because of profit where the consequences are not clear.

IV. No concentration of information and building mechanisms to avoid misuse of information
V. Economics (no concentration of wealth, man is not a machine, adequate social security system)
VI. Education (general-all humans equal irrespective of colour, race, religion or world view-training in democracy-no racial history education)

D - Disarmament

7. CONCLUSION

In system theory one should have a model of the system under question, analyse its behaviour to understand it before making a synthesis. That is exactly what I have tried in this paper hopefully with some success. The situation of today is very crucial after the humans have developed the means of their destruction. We have to live or die. I have my personal experience with a dictatorship, global dictatorship and misuse of information. That means I am using the mind and experience in developing this work.

REFERENCES


6. VISION FOR REMEDY

A. Belief in accountability (Spirituality). For most of the people there are no ethics without accountability. Thus making a correction to the illumism.
B. Stressing common universal values or world-ethos (Kueng 1990). The project was presented to the United Nations General Assembly in November 2001.
C. Democratic world organization with an international government. "When once an international government has been created, much of Locke political philosophy will again become applicable" (Russell, 1946)

What is a real democracy?

I. Decentralization to avoid accumulation of power
II. Representation and direct democracy (Swiss model)
III. Parties and independents in representation