

## Enlightenment, Artificial Intelligence and Society

Malenka de Lamotte\*

\* *Quartier Le Savel, 26460 Le Poët-Célar, France, email: [malenkadelamotte@posteo.de](mailto:malenkadelamotte@posteo.de).*

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Abstract: Scholars in the independent scientific community agree on that living conditions may deteriorate fast because of climate changes. Thus the question is what to do about it. I would like to look at the developments of the recent Past: Enlightenment and Human Rights, and Artificial Intelligence as it has grown out of those two movements, and their possible contributions to improving our developments into our global future.

*Keywords:* Enlightenment, Human Rights, Climate change, Artificial Intelligence

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### 1. INTRODUCTION

Looking as humans at the globe of today - particularly in Europe and the Western countries – this world has been very strongly shaped by the era of *Enlightenment* during the 16th and 17th Centuries although several other important movements have also contributed to shaping Europe of today. This paper, however, is putting emphasis on *enlightenment* because of its close relation to *Human Rights* and *rationality* which have been in the foreground of discussions across Europe up to the present. The following, very special quotation may illustrate this view. It has been taken from the discussions of building the *House of European History* at Brussels during the years 2007–2017: “The Age of Enlightenment was another watershed in the cultural and political development of Europe prioritising the value of reason and rational thinking and thus radically changing perspectives on human and nature. In consequence, the values of self-determination and agency in world affairs have impregnated the deepest layers of our consciousness until the present day” (Andrea Mork, 2018).

Today, this view of our societies, their “value of reason and rational thinking”, although - considered in historical terms - never really fulfilled or put into practice at large, never really strong in defence against counter-movements across Europe, is seriously endangered by the massive changes threatening our Globe as such. If we as humans on this globe continue to act like we have been doing since about 100 years, we will most probably end up in an overheated Earth where living conditions for human beings are everything but comfortable. With this overheated earth, we are approaching the environmental collapse which is being talked about since several decades.

I am, however, staying optimistic: There are maybe even possibilities or options which we do not see yet. Nevertheless I am personally moved by the idea to be looking ahead toward a post-collapse society. Thus I have been preparing myself mentally and in some practical ways for living conditions beyond such collapse. However I would very much like to see other, less conflictual and less violent

pathways emerge. For this discussion, I have deliberately chosen here a communication approach which is closer to *open discussion* rather than scientific deliberation.

### 2. ENLIGHTENMENT AND HUMAN RIGHTS

#### 2.1 Aims and developments

Let me start some reasoning about our Western world of today because these countries of Europe and the Americas have been the ones to shape our world of today during the past centuries. As mentioned above, it can only be understood if we call up the historical concept of *Enlightenment* – largely forgotten today and frequently considered merely a past period in Europe and later on in Northern America. The *Age of Enlightenment* (since about 1700) appears today as a period of special philosophical discourse involving some people whose names are still remembered. Their roles in the history of Europe, however, are not really considered that important any more today. In short, their aims which they started to spell out during the 17th and 18th Century are – among others:

The European societies (and in parallel - among others - the United States) were to develop concepts of democracy against the then prevailing feudal government systems, fighting for individual liberty of all citizens, and overcoming the powers of religious authorities. Some important names at that time were David Hume and Adam Smith in Britain, also John Locke with his claim of Natural Rights (which means: there are Rights which are valid for all across society), and Rousseau and Diderot in France, and Kant in Germany. Enlightenment contributed decisively to the concepts of *Human Rights* (1948). This development is a spiral movement still going on across the continents.

And I would particularly like to refer to *Mary Wollstonecraft*: she argued at that time that women should be treated as rational beings equal to males. It is particularly important that the enlightenment movement has also named *slavery* to be fully wrong which finally has led to abolishing slave trade more or less world-wide (although the problem is still with us on a fairly large scale around the whole world). Other

historical personalities have been fighting for equal opportunity and equal social participation for all members of society, independent from gender, age, social background, health, race or religion (see Human Rights, 1948). Some of them, however, have too often continued to live within their prejudices of traditions, class, ethnic background or religion etc. One example may be mentioned here: Jefferson, 1743-1826, was the third president of the USA and principal author of the Declaration of Independence, but also owner of about 600 slaves (Jefferson, 2020). And still up to today large numbers of people are living in oppression, poverty and under very bad sanitary conditions, as refugees or other marginalised minorities, excluded from participation, very often children – very much prey to the global capitalism and power structures.

Nevertheless, many historians see this process of enlightenment to be continuing up to today. It has been carried along by the natural sciences and technology; it is supported by developments of economy toward capitalism and by revolutionary developments as well as by rational and democratic discourse across society. These developments have been largely successful for the Western societies despite their pitfalls which have also been clearly visible through the past decades.

There have been the great scientists who have shaped the past centuries with their insights into how the world works; modern medicine and hygiene which are now the main factor in both extending our individual life-span, and still enlarging the population on our Globe; the many engineers and architects who have designed systems which nobody would have imagined before; the painters and authors who have changed our views of the world; *Bertha von Suttner* fighting for world peace, and the many women fighting for women's suffrage. This process of enlightenment may be best described by referring back to Plato (2500 years ago) and his *Cave Parable*. The following paragraph is an adapted version of an earlier publication (Veldkamp et al. 2003).

## 2.2 The Cave Parable, suggested by Plato

Let us imagine a large, deep cave (Figure 1). People are sitting in this cave. They are chained down in a way that they are only allowed to look straight ahead into the cave. Behind these people, a large fire is blazing. A wall has been erected between this fire and the people. It is about the height of a man. Some servants are walking along behind this wall. They are carrying different things: sculptures of people and animals, or tools, jars and vases. Their shadows are projected by the fire, over the wall and onto the rear rock face of the cave where they become visible for the people in chains.

The exit of the cave is beyond the fire and opens toward the sun by means of a ladder. The people can only reach sunlight if they get free from their chains. Then they make their way, first of all, around the corner of this wall. Only then, these people recognize the 'real' things behind the wall. Here they start climbing up out of the cave by means of the ladder towards the sunlight and the real world.



Figure 1: The Cave Parable (Drawing: Markus Maurer. In: Veldkamp et al. 2003)

Subsequently these people may return into the cave to tell their companions in chains what they have seen and experienced. Their companions, however, may not believe them. For them, the *shadow* images are *real*. They may call the reportedly real things 'un-real' - or virtual or fake, or phantoms or dreams. They are not willing to shed their chains because for them, it is the easier and less risky option to refuse such changes demanded by *outsiders*. So far Plato's understanding that our continuous strife for reality and truth is a long and cumbersome way.

During the past centuries, enlightenment has been basically following Plato's model of understanding the world: individuals (researchers, engineers, physicians, poets, artists and philosophers etc.) have made each on their own – or perhaps in small groups and communities - the cumbersome way up to the sun. When returning they have often been considered the *outsiders* and even the *enemies* of society.

## 3. ENLIGHTENMENT AND DIGITIZATION

### 3.1 Successes

This process of enlightenment has been – more or less - valid and successful up to today: It has been taking place in parallel to several other important movements of societal change. But

additionally, it has fundamentally widened its scope during the last 20-30 years. Within one generation, our whole world has been transformed into our present world of science, engineering, and *digitization*. Now we – as the present-day humans around the Globe - can call up at any time and at any place all knowledge and wisdom of thousands of years of human endeavour, whatever we want to know about the world and the universe and about ourselves as humans. It means that we may all stream in masses up this Plato ladder out of the cave –never to return if we like. We all may, thus, be *enlightened!*

The *social media* even may occasionally create a new kind of grass-root democracy against authoritarian, all powerful governments; etc. Young people without any power or previous visibility can challenge the governments and start grass-root movements to fight those political decisions which obviously endanger the future of the young generation: two European examples - *Greta Thunberg (2019)*: 1.4 million of clicks world-wide, and presently another example from Germany: *Rezo (2019)* with 15 million of clicks (out of the population of about 80 million in Germany)!

### 3.2 The new Religion

So far it looks as if through the centuries, the movement of Enlightenment – and with it, the Human Rights - have after all become a success around the world even if there are many societies and countries which have not yet accepted the concept at large. But beyond this optimistic view on things, there seem to be serious causes of concern for all of us, looming up on the horizon: The world has become so complex that people tend to go backwards instead of courageously facing difficult futures. It appears that these groups of people today create their own cave – or bubble - of communication: once again, they trust only those within their cave; only the facts within their bubble are *real*, all others are *fake*; and only those within their bubble are *friends*, all others are *enemies*; many of these people seem to experience the *fear of freedom* (compare Fromm, 1942); and there are once again whole nations trusting their leaders even if it is easily visible for any outsiders that these leaders are telling them lies all the way. Enlightenment has no meaning for them, life is non-reflexive and only simple answers are considered answers at all. Already now those countries returning to their cave views of the past choose the easiest and, at first view, consolidating path into their futures: they have started to abandon international agreements which were once based on reason and negotiations toward compromises rather than using power or greed. Thus they are once again turning away from enlightenment, against all expectations – the most obvious example of these processes at present seems to be the USA (e.g. Trump, 2020).

Furthermore, the internet, computers, digitization, Artificial Intelligence – originally, these were all buzzwords for liberation, for the power of the people. Today, a growing number of people realize that the opposite is true. Dataism – our newest religion according to Harari (2016) – cannot any longer be neglected. The ‘priests’ of today – FAANG

(Facebook, Amazon, Apple, Netflix and Google) - cannot be kept under control because again, this new kind of religion has out-powered the State. Although this sounds like the opposite of enlightenment it is merely another step within the epistemological framework of humanity. Societies have learned and started to implement great things (e.g. Artificial Intelligence), but they are not yet able to handle them. Thus the Western societies seem to have begun to go back to some kind of a pre-secular state of affairs where “authority is increasingly expressed algorithmically ...Facebook defines who we are, Amazon defines what we want, and Google defines what we think” (Pasquale, 2015, p. 8, 15). It looks very much as if societies are approaching attitudes which once were part of *medieval* ways of thinking and acting.

### 3.3 The new Magi

Within this world of digitization, there is a new group emerging: a kind of *Magi of Digitization*. They are the *Digital Elite* who like sorcerers really know everything about digital systems and who build these highly complex things of today. At first glance, they would be the persons to trigger new processes of enlightenment for the future. Of course, however, there are the people in power – those who actually control the decisions at large. They may not really know anything in detail about these digital systems but they set the rules and the aims of the processes into the future (frequently to increase their own powers and profits). Fair and aim-oriented communication between these two groups takes place only with great difficulties as many faulty technological developments and disasters have proven (e.g., the recent Boeing accidents as discussed by Tania Hancke, 2020).

Referring back to Plato, it seems that those new elite of Magi are the new class of individuals who are making the way out of the cave toward the sun, thus to be enlightened in person – and very few people can communicate with them. Therefore it appears difficult to get them committed for support and cooperation which are needed concerning the changes societies are facing.

### 3.4 Changing our course of action

And this course of actions in Western societies needs to change. These societies are living in a dangerous mixture of democracy, capitalism and individualism. In Europe, we have been taught from early childhood to earn money and to buy things to be happy. In addition, we have been taught that the basic entity in society is the individual human being. We as individual persons are at least as important as the well-being of our society or community at large. And we have mostly experienced that human coexistence may mean the survival of the fittest. Our being richer, fitter etc is not necessarily evaluated in the long run but in the short run, even if it is detrimental for others or ‘nature’.

The enlightenment tradition has been very much about putting into question deep-rooted, but not necessarily beneficial values of human societies. Since then we all are questioning everything: via science, research and rational

thinking. But things have got increasingly complex and people have been increasingly caught in their individual rat-races of work, family, performance, academia, etc. Thus the originally liberating and empowering ideas of democratic decision-making have become the brakes of changes and of the decisions necessary in order for all of us not to run into serious trouble climate-wise.

#### 4. CLIMATE CHANGE

##### 4.1 Population Growth

Changing course of action in this context is rather hard. As Plato has told us, there is this lack of willingness to change things or even to change oneself. We would need to do many things differently really fast as not to end up in the scenarios depicted by the IPCC (2014). Their views have been taken up again in 2020 and followed further: “Governments agreed in Paris in 2015 to respond to climate change by limiting global warming to well below 2°C above pre-industrial levels while pursuing efforts to hold it to 1.5°C. Each government decides its own actions in furtherance of this goal, known as Nationally Determined Contributions. They agreed to review progress towards the goal in a global stocktake every five years starting in 2023” (IPCC 2020). It has, however, been recently agreed on United Nations level that “With current policies and pledges, global warming by the end of the century is expected to reach just over 2 °C to 4 °C, depending on how sensitive the climate is to emission” (UNEP, 2019).

Just today we can see very impressively that human societies are able and willing to react fast and more or less concerted. The Covid-19 Virus shows us that financial means can be liberated and societies at large can be brought to do or not to do things – if only the respect and fears are large enough. But where is the rational assessment of Climate Change? Will not Climate Change be much more dangerous for humankind at large than Covid-19? Where is the proportionality in assessing and comparing Covid-19 and Climate Change?

The most frightening development of humankind today seems to be the fast growing population on the earth although it may level out toward the end of the 21<sup>st</sup> Century at about 11 billion, as forecast by the United Nation’s Population Division (2019). The exponential increase of pollution, the climate change and the up-coming scarcity of our resources are linked to this population growth.

The ‘old’ enlightenment had been developed within what Weizsäcker & Wijkman (2018) call an ‘empty’ world, a world with seemingly endless resources and only a few billions of people around on the globe. Today, humankind is living as if 1.6 planets would be available. A new enlightenment would, therefore, be urgently required which would give a more realistic and future-oriented drive on science, technology and society. But who in all the countries is going to decide how to fight against these dangers for humankind? Things are greatly changing by and around us. We have to adapt to it.

For the human species, however, it currently looks as if we would be the first species to get into serious trouble because we are unable to deal with the changes in the environment and technology that we have created ourselves. These thoughts have been taken up in parallel to this paper, by O’Neill et al (2020) for this Conference linking them to both technology and society developments with special emphasis on human-centred technology design.

##### 4.2 Democracy and political movements

We have only started to realize just how much everything will be affected, influenced, undermined or intensified by these changes coming up: our political systems, the understanding of democracy, the very idea of sovereignty, Human Rights etc. are just some examples. The concept of some democratic State organization and the idea of individual liberty are of special importance in relation to the question where our society, our world community may move to. These concepts may not be working successfully any longer in view of all challenges ahead.

We are very late in matters of *re-inventing* our social, political and economic organization. It would mean to encompass all the threatening issues of both climate change and digitization into our societal and individual functioning. The democratic masses of the Western world do not yet want to give up their decision-making strategies to be replaced by any different new and faster, more powerful strategies which are to be developed today and which are not straight dictatorship. As some examples of how difficult such changes are: we may refer to the new strictly conservative and retrospective German movement ‘Fridays for Horsepower’ (2019) - they deliberately continue to demand for everybody the freedom to buy cars with *particularly large* engine displacement, e.g. SUVs; and there are the strong conservative or even right-wing political parties all over the world which are still denying any danger of climate changes (e.g. the US Republicans, 2020).

Many groups within society believe in *Geo-Engineering* to be the tool that our societies might want to use in order to save us from climate change or at least to buy time to fight such Climate Change. Engineers world-wide have already done some research on it – not yet enough – and there might be some useful outcomes. But presently, most of these ideas appear rather expensive, or only employable on a small scale, or unforeseeable in their effects on the climate as well as on the world at large. They mostly are so far merely laboratory experiments or thought concepts. Their implementation may take decades. As Marion Hersh puts it in her presentation in parallel to this paper: “Thus much remains to be done to move towards sustainable development and time is running out with regards to action on climate change. However, a sustainable world is possible and engineering could make a significant contribution to achieving it” (Hersh, 2020).

There seems to be, however, some way out in sight: those many movements that take an active stance on our future, e.g. ‘Fridays for Future’, ‘Extinction Rebellion’, De-growth

movements, Transition Towns etc. They are all represented on the web. Until now these movements have remained rather marginal. Extinction Rebellion, however, assume that only about 3.5% of society are needed to make change happen non-violently and by using civil disobedience (Erica Chenoweth, 2013). Thus we should not exclude this possibility.

Many scholars today do indeed hold up this option, but many others are getting increasingly pessimistic on that issue because there is so little movement forward in a setting where we would need so much commitment. Consequently, there are quite some people preparing themselves for changing living conditions - not only climate-wise, but also society-wise; e.g., there are the *prepper* movements or *survivalists*; there are neo-survivalists; and in France, there are the *decroissants* – those who live and prepare for a world beyond the Growth ideology. Also in France, the new research field of *collapsologie* is presently developing (compare Department, 2018). And there are others who prepare themselves for a post-collapse society.

#### 4.3 Artificial Intelligence (AI)

There might also be the option of developing AI. It would mean to remember our history of enlightenment: rational thinking and science might lead us the way out. The working of complex computerized systems and algorithms is nothing but such codified rationality as has been proved, e.g., by the complex mathematical processes of working-out the climate models. They have become the basis of all agreements on the climate change taking place already. Such programs show no emotions, no deviation from the originally data-based input, no interpretation is allowed (although *bias* may come into it and needs to be continuously controlled). Today already, our lives are largely organized by them: “‘Facebook defines who we are, Amazon defines what we want, and Google defines what we think.’ We can extend that epigram to include finance, which defines what we have (materially at least), and reputation, which increasingly defines our opportunities.” (Pasquale, 2015, 15).

It might be the moment to really start using AI to help us getting things straight, to use AI as a *tool* in terms of decision-support and political processes. We could use the capabilities of computerized systems to start coordinated efforts to avoid the worst for humankind.

As one example, banking today is already largely controlled by such AI (compare: AI at Banks, 2019). But human societies need more than codified decision-making - they also require human emotions, human rationality and empathy. The financial turbulences in 2010 are one example for developments when *codified* decision-making was not the right approach. Humans had then lost the oversight, and algorithmic feedback loops created an ever more uncontrollable situation (Compare Organ, 2019). Computerized systems should, thus, not be given full control, but they may help and support processes within human societies. It may also mean to use AI to buy time in order to

restructure society. We do not know what implications it would have for human societies if computerized systems get an even more important role in structuring society. Now, we have to take such risky paths. And we need to be aware of the perceived dangers on the way and to be cautious regarding the still unknown risks.

## 5. THE NEW ENLIGHTENMENT

However here in the West, we have the tendency to believe that we are the *Center of the World*. We have to get much more humility – about us, about our inventions, about our ways of life. Weizsäcker and Wijkman (2018) believe in this regard that “the new enlightenment, ‘enlightenment 2.0’, is unlikely to be Europe-centered [...]. In most of the Asian traditions, there is a strong sense of balance, as opposed to the monotheistic dogmatic view where only one side is right. Balance is sought between rational thinking (the brain) and emotional feeling (the heart)... We need to find a balance between all these ‘opposites’: Humans and nature, Short-term and long-term, Speed and stability, Private and public, Women and men, Equity and awards for achievements, State and religion” (Weizsäcker & Wijkman, 2018, pp. 93, 95–96). It may include looking more carefully at other cultural traditions outside the Western world for solutions of problems within society, e.g. biology or medicine. Furthermore, Maxton and Randers (2016) propose that we should focus in the future on these four pillars as we consider Human Rights and our Enlightenment legacy:

“*Rather than* regarding the individual as sacrosanct, societies and economic systems should boost average well-being, *Rather than* leaving markets to run themselves, they should be managed and operated in the interest of society, even if this means restricting trade, *Rather than* promoting small governments, the State should be right-sized and properly supported to tackle the challenges that lie ahead, *Rather than* building greater military defences, the goal should be to protect collective well-being, to promote the highest quality of life for as many people as possible, within the bounds of what the planet can support” (Maxton & Randers, 2016, p.195).

It may become our most serious challenge whether we are able to fight together employing as far as possible, democratic negotiations on equal terms as Habermas (1981) suggested, and we will need to take Human Rights into account in a new way along this path of a new enlightenment into the future.

## 6. CONCLUSIONS

Homo sapiens is unable to un-know! That is as much true in the context of enlightenment as it is in the case of digitization and with it, e.g., AI. We as humans can never get fully back to pre-enlightenment: we can never get digitization out of human functioning again. Even if we would try to do so: the knowledge is there, it will get expanded and it will stay. If it is not used by us here in Europe, there will be other parts of

the world (mainly Asia) which may take the lead. The main question is how we can give shape to the changes coming up. They will come anyway. We need to participate in giving shape to change: this is the challenge we especially in the West have to face. Therefore, our view necessarily needs to be future-oriented. We can learn many things from the past – by looking at patterns and structures (which, by the way, algorithms can help us to see), but the only way for us is forward. This requires honesty, courage (especially in relation to Climate Change and world population growth) and the development and analysis of many scenarios.

It is highest time to give rational thinking a chance, as it has developed with the societal movements of Enlightenment and Human Rights. It may include for us perhaps to put not growth, money or anything of this kind into the center of our considerations, but *ourselves* as the human beings who are only existing through and within the Earth's ecosystem. As a Human Rights defender, I believe we have to do it right now.

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