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CLIMATE CHANGE IN THE ATTENTION ARENA OF THE MIDDLE CLASS

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The middle class needs concerns, needs to fend off real or perceived threats, as part of life. When no other immediate and direct threats, such as war, hunger, or viruses, are present, environmental deterioration is a well-received issue by the middle class, which allows for the development and practice to show their good intentions.

Unfortunately, these intentions are not always well guided, their measurable effects in terms of, for instance, limiting greenhouse gas emissions (and thus climate change) are often negligible. Here, it is suggested to embark on “Apollo projects”, which bundle the potential and willingness of the middle class. These projects should develop specific technologies, which are economically attractive and will therefore spread throughout the world, and will therefore allow for a reduction of greenhouse gas emissions in the gigaton-range. Such pan-national projects could address emission-free ship- or air-propulsion, the electrification of heating or that of processes in the chemical industry.

In the following first an understanding is introduced, what the “middle class” constitutes. This understanding is clearly a simplification; the middle class is an enormously complex social group, but I hope that some key features are covered well, in particular the dimension of accepting challenges of somehow “improving

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the world”. Then, I look at the interruption brought by COVID-19 and at the challenge of the more indirect threat and cultural construct of the climate crisis.

The very real problem of anthropogenic climate change, and its anticipated solution as documented in the Paris agreement, is associated with an enormous quantitative challenge, namely the ending of all emissions of greenhouse gases by 2050, everywhere in the world, and for every purpose. Unfortunately, this is hardly understood by the middle class. When this quantitative challenge is not understood, the climate crisis cannot be handled. At the end of this article, it is suggested that we build on the goodwill of the middle class to focus our resources on *Apollo projects*. Such projects are needed to bring about technological advancements that could reduce greenhouse gas emissions in the gigaton-range.

The middle class and its worries

The term “middle class” goes with a variety of meanings. I will refer to that social stratum where people have a sufficient and secure income, but are not rich. Or, as Wikipedia summaries: “the middle class as having a reasonable amount of discretionary income, so that they do not live from hand-to-mouth as the poor do. ... beginning at the point where people have roughly a third of their income left for discretionary spending after paying for basic food and shelter.”³⁹ As such, a significant middle class emerged with the industrialization and with trade, mostly some time in the 19th century.

Thus, I suggest, the members of the middle class do not suffer from significant, immediate and direct problems concerning income, housing, and food. While most free resources of the middle class go into increasing income and security, part of the energy is used for developing a good and just lifestyle. Some of it is also needed to protect against dynamics which may threaten this income and security. These threats may be real, but they do not need to be so. In the 19th and 20th centuries these threatening forces were perceived to be the ‘underclass’ and their requests for the redistribution of wealth and privilege. It could also be the foreigners, who could be perceived as questioning the middle classes’ own identity, or superiority rooted in nationalism and racism.

In Europe – I will refer mostly to Northern Europe, which I have observed now for almost 70 years – this middle class became saturated sometimes in the 1970s and 1980s. When the conventional pressures, such as housing, labor, education, and health, became less significant, a new reason of concern emerged,

³⁹ https://en.wikipedia.org/wiki/Middle_class, as of 15 August 2020.

among them the request for a “natural” living milieu. The green motif established itself as a new bourgeois goal.⁴⁰

Initially, attention was paid to the immediate environment (milieu), with a focus on air and water quality, the health of forests and local ecosystems, occupational health and safety and natural reserves. But it also spread to concerns over radioactivity and nuclear power plants. Later, in the 1990s, the issue of climate change, with its various detrimental issues, became the overarching theme, covering not only the local challenges but also a global existential threat. Nowadays, in the beginning of the 2020s, most environmental concerns are attributed to anthropogenic climate change, although topics such as plastic in the sea or air quality are hardly climate issues.

This conceptualization of the middle class and its embracement of a green agenda represents a massive reduction in complexity. Substantial parts of the middle class are critical of the scientific explanation of anthropogenic climate change, but the majority is worried⁴¹. I hope, however, that this reduction in complexity brings forward the significant dimension of the problem at hand, namely how to effectively deal with the climate crisis.

The concern for climate change is large in the middle class but far from uniform, as an Austrian survey shows. According to this study, a better subjective financial status and a higher education is associated with a tendency for a deeper concern for climate change (“klimafreundliche Einstellung”), whereas “people with reduced working hours “Kurzarbeit”) rate climate change less significant.⁴² This illustrates the duality of relative affluence and climate concerns quite well.

The issue of climate change thus has two dimensions. One is the change itself, whose reality is no longer questioned in science, with its mostly detrimental effects on the geophysical and ecological world. The other dimension constitutes the opportunity for people to build a better world, to use the free energy of the middle class constructively. In Germany, this dimension allows a post-Nazi generation to free itself from the perceived historical guilt of the past crimes against humanity.⁴³ For the members of the middle class it can be viewed as an active contribution to redeem the sins that the well-off people in the West have committed to the earth’s climate.

⁴⁰ Cf. J. Radkau, 2011: Die Ära der Ökologie. Eine Weltgeschichte. CH Beck.

⁴¹ E.g., <https://nos.nl/artikel/2319094-ruime-meerderheid-van-nederlanders-denkt-dat-het-klimaat-verandert.html>

⁴² See “Corona, Umwelt, Klima & Nachhaltigkeit”, <https://viecer.univie.ac.at/corona-blog/corona-blog-beitraege/blog63/>, as of 15. August 2020

⁴³ S. Neiman, 2019: Learning from the Germans. Confronting Race and the memory of Evil. Farrar Straus & Giroux, 432 p. ISBN: 9780374184469

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Anthropogenic climate change is for almost all people an abstract threat. They would not know about it had they not been told about it by the media, by interest groups and scientists. Extreme events are summarily declared to represent this anthropogenic climate change, through every storm, every heavy rainfall event and every heat wave. At the same time, apocalyptic perspectives of climate change, of future desertification, migration, wars, massive sea level rise and associated coastal inundation, add to the perception of immediate catastrophe, even if much of these perspectives and interpretations are the result of exaggerations. But it serves the purpose of creating concern and the providing the option of “saving the world”.

Sentiment can reverse quickly – the virus

But, then, suddenly, the virus came, and brought back immediate, undoubtedly immediate and direct threats. People became ill, some died. It seems that in terms of the number of infected and diseased people, the present pandemic compares, at least for New York, to the pandemic of the Spanish flu of 1918-20.⁴⁴

Not surprisingly, the issue of the virus attains very high attention in surveys about public concern about the virus and climate. The levels of immediate concern were comparable. A German newspaper, *Der Spiegel*, reports about a survey in Germany, between 13 March and 13 April, that younger people (28-45 years old) rate climate change as the dominant challenge (50%), whereas a majority of 53% of those older than 45 years point to the pandemic.⁴⁵

Indirect evidence of this abrupt change of attention away from climate to the pandemic, is illustrated in Figure 1, which shows a substantial increase of the presence of “climate” in the monitored media, commencing in 2017 until the end of 2019; in January to March 2020, the frequency diminished strongly, and settled at values similar to those before 2018.

⁴⁴ <https://www.nytimes.com/2020/08/13/health/coronavirus-flu-new-york.html> as of 15 August 2020

⁴⁵ <https://www.spiegel.de/wirtschaft/leben-mit-corona-umfrage-junge-fuerchten-klimawandel-mehr-als-corona-a-21f6a7f4-8f7e-479f-8c0a-d0c547c3e4ed>; interestingly, the issue of refugees was prioritized only by 13 percent, and terrorism only by 1 percent, in both age groups. Noteworthy is the fact that when asked for the reasons of long-term concern, climate was clearly dominant.

Climate change in the attention-arena of the middle class

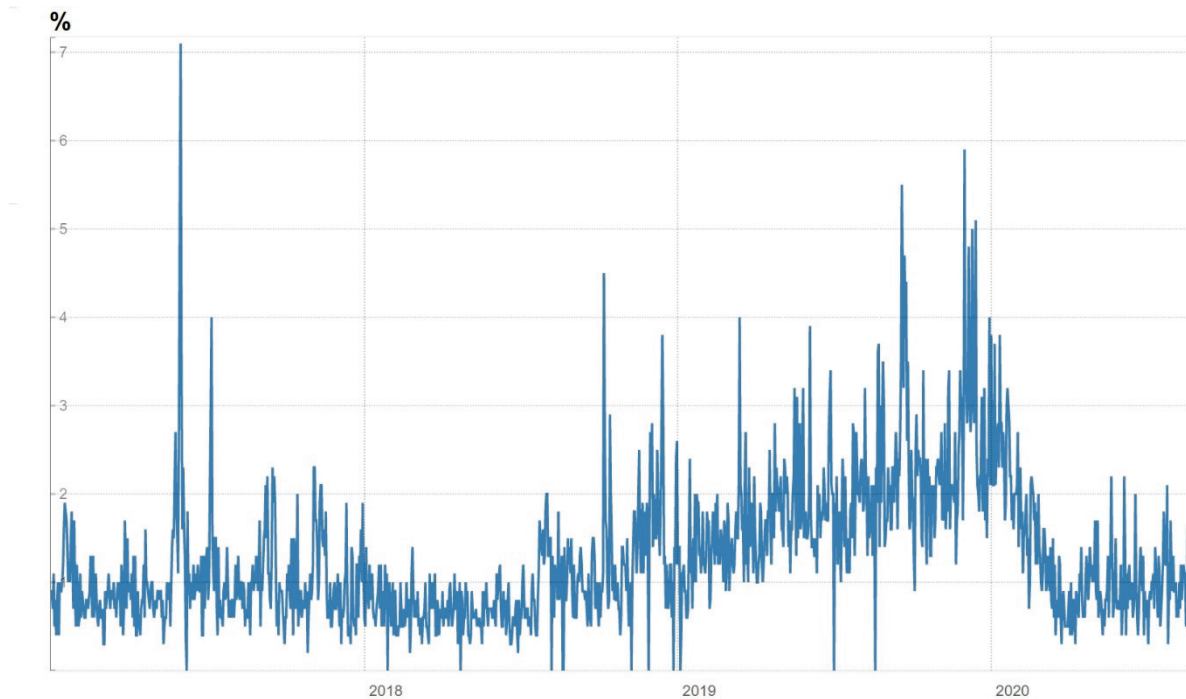


Figure 1: Percentage of climate change related articles online in Europe

Source: The online media monitor on Climate Change Coverage, University of Hamburg. <https://icdc.cen.uni-hamburg.de/omm/world.html>

These tendencies illustrate that the trend towards deeper environmental concern, associated with growing affluence in the middle class, is not irreversible. Abrupt changes of attention happen, when another issue unexpectedly emerges that is perceived as significant. An example would be the attack in 2001 on the Twin-Towers in New York, which immediately lifted the concern about terrorism to top levels. Similarly, the summer of 2015, with a massive influx of refugees into the EU caused a short-term re-orientation of public attention.

Climate change concerns as a cultural phenomenon

The concern that human failures, sins, would cause adverse climatic conditions is as old as civilization, it seems.⁴⁶ In pre-modern times, religious explanations for deficits of precipitation, or for disastrous summers leading to failing harvests were the standard method to make sense of the world.⁴⁷ Through nature, God retaliates for the sins of humans. This traditional thinking is still used, for instance, when folks attributed the flooding of New Orleans to God's judgement

⁴⁶ von Storch, H., and N. Stehr, 2000: Climate change in perspective. Our concerns about global warming have an age-old resonance. *Nature* 405, 615

⁴⁷ E.g., Kershaw I, 1973; The great famine and agrarian crisis in England, 1315-1322. *Past Present* 59:3-50

over the abortion-clinics in that city. Likewise, some blamed the 2014-flooding in the UK to the acquiescence to same-sex marriages.⁴⁸ In modern times, the same revenge/punishment mechanism is often claimed to be at work, even though God is replaced by Nature.⁴⁹

This is a Western pattern of thinking, and research in this direction dealing with other cultures would be interesting to have. On the other hand, given the dominance of post-colonial Western thinking, such ideas will also prevail in other parts of the world, even if possibly in a weaker form. In an analysis of coastal flooding in Ghana, such flooding was mostly understood as an “Act of God”, but without invoking the interpretation of it being a punishment.⁵⁰

This observation, the concept of climate change as a response to human misdoings, is age-old and part of our culture. Because of this, it can be resurface at any time, and enjoys silent public acceptance. – “We knew it all along, but it is good that science is now confirming it.”

Challenges for obtaining efficient interventions

The public, likely mostly the middle class, is keen on acting against the detrimental scenarios of catastrophic climate change becoming real. While industry, the traffic and the lifestyles of others, are considered the main culprits for the pending disaster, people also want to contribute to the solution by individual action. This wish manifests itself in a large variety of activities, of which many serve other purposes, such as animal health, undisturbed neighborhoods, air quality, noise disturbances near airports, etcetera. They are all presented as measures to limit the climate problem, because they would lead to “large” reductions of emissions. However, these reductions appear large, when given in tons of emissions, but in reality they are irrelevant. This becomes clear when measuring the amount of CO₂, which is nowadays worldwide emitted, namely about 40 *billion* tons (Gt) of CO₂ per year. This is the target for emission reduction, the total amount of emissions that must come to an end by 2050 in order to meet the goals of the Paris agreement.⁵¹

An example was the claim, published in the Danish middle-class journal *Politiken*, that sorting waste-textiles would contribute (“help”) to limit climate

⁴⁸ “UK storms are divine retribution for gay marriage laws, says UKIP councilor”. *The Guardian*, 18. January 2014

⁴⁹ ”Naturen slår tillbaka våldsamt”, *Dagens Nyheter*, 14 August 2002

⁵⁰ Evadzi, P., J. Scheffran, E. Zorita, and B. Hünicke, 2018: Awareness of sea-level response under climate change on the coast of Ghana. *Journal of Coastal Conservation* 22(1):183–197; DOI: 10.1007/s11852-017-0569-6

⁵¹ https://www.ipcc.ch/pdf/assessment-report/ar5/syr/AR5_SYR_FINAL_SPM.pdf

change.⁵² While this sorting of waste-textiles may make sense for various reasons, there is hardly any measurable effect on climate-relevant emissions. The actions may contribute to a more sustainable economy, but it would not limit climate change in a significant way. Not surprisingly, the article only claims that it would “help”, but does not quantify it any further.

Obviously, it is difficult for the public to understand the sheer size of the challenge. Most people seem to believe that their actions would matter, hoping that others would follow their good example, which is assumed to become efficient as the sum of all individual actions. A simple calculation shows that this is not leading to reductions in the gigaton-range.

The IPCC summarizes the conditions for reaching the Paris goal, of limiting the increase of global mean temperature to 1.5° until the end of the century, with stationary conditions⁵³ afterwards. This goal requires that today’s emission of anthropogenic CO₂, and similarly for other greenhouse gases, of about 40 Gt CO₂/year is reduced so that the net-emission in 2050 has completely ceased. This has to happen on a planetary scale, everywhere in the world and by all human activities, and then replaced by negative emissions of several Gt CO₂/year in the decades to follow.

This simple assertion is generally not understood by the public and by well-meaning, concerned civil society, such as the Fridays for Future movement. They are seriously worried about or even scared of the perspective of future man-made climate “catastrophes”. The task is daunting, but instead of asking ‘how can this be achieved’, populist requests are aired, such as reaching these goals of net-zero emissions much earlier, say for Hamburg in 2035. For me, this means that such groups do not take anthropogenic climate change serious, but use it as a vehicle to persuade society to change in favor of other middle-class goals, in particular to a healthier and supposedly happier life of its members.

The fact that achieving the goal of net-zero emissions requires all societies in the world to adopt it has been formally accepted by almost all governments of the world. However, the present efforts do not point into the direction of achieving this goal.⁵⁴ This is not really surprising, because the societies and countries of the world are faced with a variety of challenges, among which climate change is just one. Competition for attention and investment include the above-mentioned existential worries about food, housing, labor, education, and

⁵² ”Tøjsortering kan hjælpe klimaet”, Politiken 16. august 2020, p. 14

⁵³ More accurately: stationary conditions, i.e., the temperature varies around this value with relatively small deviations, but there is no systematic in- or decrease.

⁵⁴ According to <https://climateactiontracker.org/countries/>, only two countries are presently underway to meet their Paris obligations: Morocco and Gambia. The EU is classified as “insufficient”. [As of 26. August 2020.]

health – because many in the world have not made it to middle class. The first four of these goals are traditional social-democratic issues, which lose significance for those who made it into middle class: No poverty, zero hunger, good health and well-being, and a high quality of education.⁵⁵

I believe that the unorganized citizen activity will not lead to success, not even a partial success. We, and the question is of course who “we” are, need to do something else to limit the detrimental climatic effects of ongoing emissions of greenhouse gases into the atmosphere, without neglecting or belittling the other UN development goals given above. And we have a tool, the goodwill and intention of the Western middle-class. It needs to be focused on the efficiency of measures, which include serving the other development goals as well.

Focusing the goodwill of the Western middle-class: Apollo projects

On 12 September 1962, John F Kennedy announced his Apollo project: “We choose to go to the Moon in this decade ..., not because [it is] easy, but because [it is] hard; because that goal will serve to organize and measure the best of our energies and skills, because that challenge is one that we are willing to accept, one we are unwilling to postpone, and one we intend to win....”. He suggested to bundle the potential and the will of the United States and its people to do something difficult to achieve. And he added a date: within 10 years. A challenging problem-oriented technological feat, a specific timing and an opportunity for all Americans to be proud of.

Can we think of developing such problem-oriented technologies within a specific time frame, one which would allow the middle class to be proud? I would say, ‘yes, we can’. We could suggest that, based on technological expertise, over the next ten years, Germany could work to develop emission-free ship propulsion; France could do the same with regards to air traffic; China could work on the electrification of chemical process heat. Russia could work on the electrification of heating and cooling. Tanzania could work on providing renewable energy for rural African regions.⁵⁶ All of this could be done without compromising the basic development goals of eliminating hunger and poverty, provisioning health and education.

By starting such projects, with the positive attitude of “we will do it”, a constructive combination of the moral inclinations of families, companies as well as governments for an efficient “stewardship of the natural environment and the climate” may be achieved.

⁵⁵ <https://sdgs.un.org/goals>, as of 20 August 2020

⁵⁶ Much better attributions may be possible; this list a mere illustration of what is meant.

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Clearly, even without new middle-class driven and financed Apollo-projects, efforts towards emissions-free technologies are underway in various quarters of science and companies. Governments invest big into such efforts – but it seems the success is slow. The suggested Apollo-projects may bring about the needed acceleration and scale of initiatives to reduce greenhouse gas emissions.

The new Apollo-challenge would be financed by the middle class who eagerly wants to contribute to solving the climate problem, but who at this time does not know how to do it. So far, it is spreading its goodwill and money for various symbolic acts with no or little efficiency. The Apollo targets should convince the rest of the world that we are serious. Not by self-acclaimed moral superiority but by its economy, so that everywhere in the world large chunks of emissions of greenhouse gases are phased out – with a net-effect in the gigaton-range.⁵⁷

For allowing some detail, a brief account of the challenge of heating and cooling may be useful. In the EU, the total annual amount of emissions related to heating and cooling is about 1 gigaton. If sufficient electrical energy is available, this process could be transformed to run with electricity without emissions. For this transformation, the energy supply must be safe. But it must also meet certain practical conditions, for instance for allowing large housing companies, such as SAGA in Hamburg, the ongoing utilization of older and often culturally valuable houses and quarters. But for the technology to spread around the world, it needs to be foremost economically attractive. Then, the originally smaller achievement of avoiding several megatons of emissions may become an efficient emission reduction in the multi-gigaton range.

Conclusion

In this chapter I have suggested that the goodwill of the middle class in the area climate change is often misguided towards symbolic acts that do not contribute to the real problem of reducing emissions efficiently. Moreover, the attention span of the public might not be long enough that would be needed for a sustained focus on small-scale improvements.

Instead, I suggest national – or pan-national – projects, which results in technology that is, first: economically attractive, so that it is accepted everywhere

⁵⁷ In the EU, „moonshot“-missions, inspired by the Apollo-project, have been launched: “The European Commission unveiled five flagship research and innovation “missions” on Thursday (4 July [2019]), two of which are directly aimed at addressing the climate crisis. Former EU climate Commissioner ... will spearhead the first research and innovation mission, on “Adaptation to Climate Change including Societal Transformation”. The fourth mission, meanwhile, will focus on “Climate-Neutral and Smart Cities”. <https://www.euractiv.com/section/energy-environment/news/eu-research-moonshots-focus-on-climate-crisis/>

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in the world, and second, effective in making emissions obsolete in sectors which today cause large amounts of emissions, such as traffic, heating and cooling, agriculture and industry. This should be financed by something like a tax for the affluent, which would give the middle class the feeling that it is taking responsibility and the pride for the great task of making the world a better place.

Another great American declared “I have a dream”, and surely, this is a dream. We need politicians who are able to balance the various interests, cultural frames and short-term economic boundaries, and we also need to organize the difficult social and political processes. We need enthusiastic and competent engineers. And we need the middle class with its willingness to engage for a common good.