

2030, 2040 what should we expect?

Abstract

With the communication highways, information begins, little by little, to escape from the traditional centers of political, military, business or even religious power. In society, which believes that it is gradually freeing itself from these powers, doubts are beginning to settle in, a number of questions arise, a new breed of commentators, You tubers, interpreters and preachers in all fields appear of social life that try to draw you into their context, their culture or their fashion.

Moreover, the globalization of exchanges, relations, means of "transportation", financial networks and marketing calls into question, implicitly and slyly, the concepts of State, Nation, Community, the very belonging of the 'Individual to a "group", as part of a united Whole. The citizen is becoming more and more an individual connected to his telephone and isolated from the rest.

But with the decrease in resources and the increase in constraints of all kinds, society is wondering about its future, its future, it's very present, the malaise it is going through. She wonders about the modes of governance that are imposed on her, about the many problems she faces daily and the solutions that we cannot offer her. She looks elsewhere and compares, compares herself to other societies and begins to dream, to hope and, very quickly, to express her anger.

The inequalities between North and South, between rich and poor as well as between technologically advanced countries and the others which are struggling to follow, are increasing inexorably and will lead to conflicts, famines and wars of a completely different nature: the war for land arable, the war for increasingly scarce water, the war for influence, the war for space conquest, the war for the appropriation of the seabed and polar lands.

This article is based on the realization of a GIS; it attempts to ask relevant questions for future decades for which certain results lead us to question the relationships, inequalities and influences of each other. He will not answer all these questions; but he will have the advantage of having asked them.

Keywords: 2030, 2050, conflicts, appropriation of spaces, influences

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Introduction

In 2050, the world population will exceed 10 billion people. Most of this growth will take place in cities, which will have a direct impact on safety, mobility, energy demand, administrative services, quality of life and of course the environment. Already in 2030, poor countries will become more impoverished and will face many problems of governance, social conflicts, grievances but also suffering. The rich countries will take more and more advances and the gap will widen further.

GH Soutou¹ asserts: "We will recall here the two major trends at work since 1914: globalization, but also regionalization, i.e. say the regional groupings (like the EU): in fact, we are not dealing with an opposition, but with a form of dialectic". The author quotes the book by Hervé Coutau-Bégarie 2030 who affirms that: "just at the beginning of the most serious crisis of the capitalist economy since 1929, the situation is turned upside down, and it is not enough to "extend the curves" to glimpse the future. Liberal globalization under benevolent American hegemony as Francis Fukuyama announced in 1990 (in his famous article "The End of History?") has failed. Not only because of the 2008 crisis, but also because of a growing rejection of liberal globalization: in 2016, Brexit and the election of Donald Trump also had this significance. (It should be noted, however, that Brexit is ambiguous: opposition to the European Union is also due, among many Britons, to the feeling that the Union is becoming more and more protectionist and less and less able to take advantage of globalization ". The author adds: "On the other hand, Russia, China

and many "emerging" countries no longer accept that the international system continues to be led by Washington, which, moreover, since the Clinton presidency, has multiplied the errors on the world stage, from the Balkans to the Middle East". Alain Juppé asserts in his article "What state of the world in 2030? published in International and Strategic Review 2010/4 (No. 80), pages 29 to 38: "Today, in a world where the latest wave of globalization has, in a way, abolished space and time, everything exercise in futurology is made even more difficult; it is certainly pretentious, and probably vain to want to describe what our world will be like in 2030". The author adds: "unlike our predecessors who lived through the waves of globalization of the Renaissance or the industrial revolution, we no longer have a new frontier, in the geographical sense of the term, to explore. Climate change is not the only challenge. The scarce resources that fuel our development model are being depleted at an agonizing rate. The question of water resources, which is not unrelated to that of the climate, will be central in 2030: a realistic scenario announces that nearly half of the world's population will live in 2030 in an environment subject to water stress. It should also be noted that the International Energy Agency estimates that global energy demand will increase by 60% between 2002 and 2030.

Oil and gas will continue to provide 60% of global energy production; at the current rate of consumption, the reserves could still last at most 30 or 40 years. Anne Mettler¹ predicts: "Unrest in the balance of power at the global level, pressure on liberal democracies, challenges to global governance, transformation of economic models and the very structure of societies, new uses and misuses

of technology, contrasts between models demographics, humanity's growing ecological footprint: the world is moving towards a new geopolitical, geo-economics and geo technological order.

According to the latest United Nations projections, the world population could reach around 8.5 billion in 2030 and 9.7 billion in 2050. It is expected to peak at around 10.4 billion people during the 2080s and continue at this level until 2100.

According to the World Bank, the development of agriculture is one of the most powerful levers on which to act to put an end to extreme poverty, to strengthen the sharing of prosperity and to feed the 9.7 billion people who will count planet in 2050 (a). Compared to other sectors, the growth of agriculture has two to four times more effective effects (a) on increasing the income of the poorest populations.

Urbanization and digitization are two key trends shaping the cities of tomorrow. Indeed, Europe wishes to "build back better" and it is at the intersection of these two desires that the opportunities lie. In this respect, Europe is striving to achieve tangible environmental goals by adopting Smart-City technologies and the Internet of Things (IoT), to face the new associated challenges. In emerging countries, sustainable urbanization projects are trying to be implemented despite many sacrifices generated by the chronic lack of both human and financial resources. Poorer countries have other priorities.

We should note, however, that everywhere we are beginning to integrate the fact that the future can only be built on the basis of a new vision of cities and societies, but also on the basis of the equitable sharing of relevant information. It will surely take a long time to get there because the scarcity of resources and the withdrawal into oneself that began to be observed during the covid-19 pandemic have shown all the difficulty of achieving an equitable sharing of resources but also of information often considered strategic. We will witness a division of the world into two categories:

- i) Those who can and who assume the right to have and know and
- ii) Those who can only suffer.

But with the decrease in resources and the increase in constraints of all kinds, societies are questioning their future, their future, their very present and the malaise they are going through. They wonder about the modes of governance imposed on them, about the many problems they face daily and the solutions that we cannot offer them. They look away and compare, and very quickly express their anger.

Concretely, we will have to expect, in the next decades to come, imbalances of power at the global level, increasing pressures on liberal democracies, challenges to global governance, transformations of economic models and of the very structure societies, new uses and misuses of technology, contrasting demographic patterns. The world already seems to be moving towards a new geopolitical, geo-economics and geo technological order. Some are already predicting the fall and then the definitive exclusion of the euro from the world economy, which will then remain dominated, for some time, by the dollar and the rouble (Russian money).

At the agricultural and forestry levels, forests are increasingly being cleared, particularly in the Amazon; agricultural land is shrinking at the expense of mineralization following the expansion of cities almost everywhere in the world. P. Mouterde1 recalls in an article published in the newspaper *le Monde* on June 3, 2021 "Ecosystems, essential to allow carbon sequestration or ensure food security, have been massively affected by human activities". Urbanization and digitization are two key trends shaping the cities of tomorrow. Indeed,

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In terms of the use of new technologies, a study published by Dell and the Institute for the Future² states that 85% of the jobs of 2030 do not yet exist. Artificial intelligence or robotics will not only profoundly transform existing professions but create new ones, the outlines of which are still difficult to draw, such as ethicists or psy designers. However, some jobs of tomorrow are already a reality, for example: Robotician, data scientists, civilian drone pilot, 3D printer, BIM manager.

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Robotician, data scientists, civilian drone pilot, 3D printer, BIM manager. This report adds that “The digital revolution is as important as the industrial revolution”. These profiles are found in technically and financially advanced nations. Poor countries have many other problems to solve; and this further increases the differences and gaps. At the conflict level, Mind3 the map publications provide a map of the tense arc of crises that crosses Morocco, Algeria, Libya, Egypt, Yemen, Turkey and Iran. The advanced countries are excluded from it, but they are nevertheless found in another map opposing them on migration policies. The current crisis following the occupation of Ukraine by Russia is also pointed out and it is not yet clear how things will develop and what 2030 has in store for us on this issue. Mozambique is also another area struggling to emerge from insecurity and poverty. North Korea and China are also singled out. The Muslim world is not immune to areas of conflict either, with the presumed opposition between Sunnis and Shiites. The seas and oceans are spaces for exchanges and conflicts; this is the case for the Arab-Persian Gulf. The South China Sea is also one of the main maritime routes on the planet; it is the seat of the USA-China rivalry. The Indian Ocean or the Strait of Malacca represents other points of interest and potential conflict.

In terms of space conquest, the USA, Europe and China are currently in the lead with the establishment of space telescopes, manned space stations or colonization projects on the moon or Mars. Emerging countries, such as India, have space station projects. China, for its part, is currently designing a launcher capable of transporting loads greater than 140 tonnes in space by 2030. A performance that will probably exceed that of all its competitors. The International Space Station, scheduled to shut down in 2015, has been upgraded and reprogrammed to last until 2030; it will then have to crash.

In terms of energy, global demand for 2030 foresees oil as the primary source, followed by gas, then coal; nuclear would come in fifth place and hydrogen in sixth place. The main oil producers estimated in 2030 would be located in the USA, South America, a little in Africa, in the Gulf countries allied with the USA and in Asia, particularly in Russia. Russia is already beginning to spell out its rules for distributing oil to producer-dependent Europe. It is difficult to predict how the Ukrainian conflict will develop and how this dependence will become.

At the level of artificial intelligence, we can note in the report of the seminar “social mutations, technological mutations” reported on the site of France Strategy5 that “The massive collection of data, under the name of big data, the computing capacities multiplied and artificial intelligence techniques are the main drivers of the technological transformation at work. Even if artificial intelligence is still far from the ultimate goal it has set itself to reproduce human intelligence, its progress and its potential have largely transformed society in recent years.

At the economic and governance level, Anne Mettler³ affirm that : Whether, today, four of the eight largest economies of the world are European (including the UK), this number will be reduced to three (including UK) by 2030 and by 2050 only Germany is expected to still be part of it.

Method and tools

Realization of a GIS: We consulted many forecast documents which enabled us to develop a geographical database (Geographic Information System, GIS) using the MapInfo software version 8.1 for which we have a license to use.

Figure 1 highlights the world agriculture and hunger maps. Table 1 shows data from the two main tables: agricultures and areas of extreme hunger (famine). However, we have drawn up all the tables allowing us to analyze the various themes mentioned in the introduction: conflicts, appropriation of spaces, new technologies.



Figure 1 Hunger and agricultural tables.

Table 1 Extreme hunger in the world

Arabeles lands	Hunger in the world
Algeria	Mauritania
Inde	Niger
Ethiopia	Namibia
Gulf of Guinea	Somalia
Tchad	
Canada	
uruguay	

Preparation of the maps: Table 2 provides the tables produced. We used a blank world map⁴ and we then used Google Earth pro to calibrate each of the corresponding images. Figure 2 shows the location of benchmarks in the Americas and Africa.

Table 2 SIG tables



Figure 2 Locating the timing points.

Maps presenting the conflicts, the energy sources, the presumed world influences in 2030 are also elaborated with the MapInfo professional tool version 8.5 from numerous documents on the estimated forecasts for 2030. We also used a blank world map. Table 2 shows the summary of the tables. Table 3, present in Figure 2 shows the calibration points used for this work

Table 3 wedging point

Points	Longitude	Latitude	Localisation
1	-75.14	61.45	Nord USA
2	-86.1	20.71	Sud USA
3	-34.41	-6.16	Amereique Sud
4	-12.42	13.84	Afrique
5	57.18	24.59	Peninsule arabique
6	81.13	3.27	Inde

Results

- i) The first result is worrying; table 1, already quoted, shows us that famine (extreme hunger) is localized in areas where there is practically no arable land. This means that the countries concerned are subject to the influence of countries producing cereals and other agricultural products.
- ii) The second result is also concerning in the sense that:
- iii) conflict zones are found in the countries of the South, in other words the most vulnerable
- iv) moreover, the exploitation of space and the seabed is under the essential control of the countries of the North, i.e. the rich countries; yet space and seabed are supposed to be heritage of humanity and therefore belong to all States and Nations; the reality is that these areas are occupied by the first to arrive, i.e. those who have the means (financial, human and technological). This is shown in Figure 3.
- v) The third spectacular result is that given by the map of areas of extreme famine; all the countries concerned are located in Africa. These are often very poor countries and therefore subject to the vagaries of the global resource market. Figure 4 shows us this result.

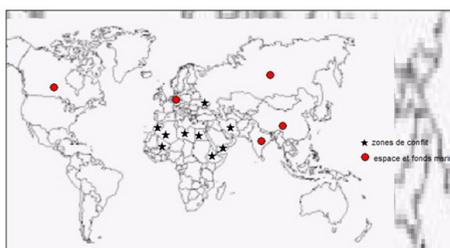


Figure 3 conflits and space appropriation.

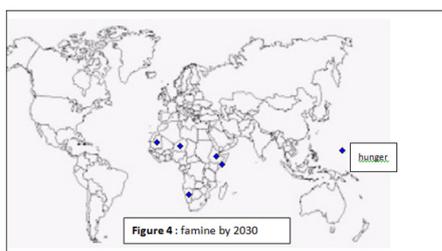


Figure 4 Famine by 2030.

Social change

In the North as in the South, in the rich countries as in those which try to follow them, societies are changing and we are witnessing a real societal mutation that we accept or that we undergo. Advances in science, beyond the “disturbances” induced by technological advances in societal pathways, lead or will lead, sooner or later, to questions of a new kind, on subjects that are nevertheless old and supposedly known and mastered. (because so much considered obvious and simple to design). We are going to consider in what follows two countries that we like: a country in the North, France and a country in the South, Algeria. These two countries seem to represent two sufficiently representative samples of the North and South areas. It is true that the example of France cannot be applied to the United Kingdom or to the Nordic countries which have other laws, other development strategies and another view of the other in general and of the communities. In Europe itself, Germany, Spain and Italy also have other concerns and another view of the other. But the covid-19 pandemic showed us that everyone had the same attitude of the self-first and the other afterwards.

In France

Citizen Lambda’s behavior has changed a lot in recent decades. The globalization of exchanges, relations, means of “transportation”, financial networks and commercialization calls into question, implicitly and slyly, the concepts of State, Nation, Community, of the very belonging of the Individual to a “group”, as part of a united Whole. We have witnessed during the Covid-19 pandemic the strategies of States putting their own interests before others: it will suffice to recall here the cases of masks and vaccines. But the individual, Citizen Lambda, has gradually lost the consideration of the other. It is not uncommon to encounter people chatting quietly in groups and blocking the only path in front of you. It’s not uncommon to find someone so focused on their phone that they don’t even realize they’re blocking you; he sits there chatting for hours oblivious to the inconvenience he is causing to others. It is not uncommon to find people pushing you to get past you in a communal elevator. It is not uncommon to find in your path a person walking his dog and blocking your way with the leash of the dog peeing or rolling on the ground; but maybe that person didn’t even see you coming; in any case, she does not even ask herself the question of whether she is blocking the road or whether other people can take this path. It is also not uncommon to be abruptly awakened in your sleep by neighbors talking very loudly at the bottom of your building just near the entrance; they could have gone a little further, there is so much space! Are these people aware that they are disturbing? Admittedly, there are still exceptions and you sometimes find people helping you down, by the stairs of the metro or in front of your building, your stroller or your shopping trolley; but this is an exception!

In Algeria

We will take here the case of the city of Laghouat, a former oasis of the north-south transition, between the High Plateaux and the Sahara which appears to us as a representative and generalizable sample of many behaviors and attitudes of the citizen. Laghouat, as a rapidly expanding urban center, does not escape this analysis. The population that lives there, now connected and turned towards the outside world via television and a social network, more than towards its own context, is increasingly impregnated by other ways of life and other concerns. The parable is everywhere translating the hope, or the dream, to project oneself elsewhere, to find out about what is happening elsewhere, to follow the series from elsewhere, to aspire to another life of freedom.

The vision of the property of the Other and of the community changes; we appropriate, quite naturally, parts of public spaces; we argue that they are useless and that by taking them, we value them! Where is the respect for the law, where is the consideration of others, where is the control of the competent public services? The Figures 5&6 shows an example that tends to multiply in front of individual houses but also in front of apartment buildings. These habits of the parable to project oneself elsewhere and of the appropriation of the common or public space are found in almost all other Algerian cities.



Figure 5 City of Laghouat.



Figure 6 Tends to multiply in front of individual houses.

With a magister student, a survey had been carried out on respect for road signs in the city of Laghouat. The results are so shocking:

- 1) Strict compliance is only 24% for the 'stop' signal and 35% for 'give way'; it is 0% for the 'pedestrian crossing'; the culture of pedestrian priority on the use of the road is not yet introduced into the popular consciousness and this is confirmed by our taxi driver.
- 2) The 'give way' signal is not respected
- 3) Even the 'stop' signal which requires marking a mandatory stop is very little respected in this form

Conclusion

To carry out this work, we were mainly concerned with creating a complete geographical database (GIS) more suited to our project. The Google Earth tool was mainly used to calibrate the basic image consisting of a background map of the blank world and specific thematic maps.

The main results show us that:

- I. The countries of the North, the richest and the most endowed in resources (human, material, financial) are finally those which

have the main resources and, above all, which completely legally appropriate the spaces (the sky, the space through space exploration to the moon and Mars, the seabed, the polar zones).

- II. The countries of the South are becoming more impoverished and bogged down in multiple problems (anger and social demands, conflicts between cross-border workers and others). Pressure from rich and developed countries on countries in the South is already relatively strong and will remain so or increase by 2030. Two recent examples can be cited:
 - III. US pressure on Morocco: recognition of Western Sahara as belonging to the Kingdom on condition that it normalizes its relations with Israel
 - IV. The pressure of the USA on Australia to denounce the contract for the construction of submarines by France; the contract is awarded in the United Kingdom; but the market cannot ultimately be honored within the scheduled time. Admittedly, Australia has made an economic gesture towards France (reimbursement of a lump sum).
 - V. Russia, for its part, only authorizes its allies to fly over its airspace by passing directly through the North Pole; the others are forced to make long and costly detours.

Technological innovations and social changes: From the report of the SEMINAR "Social changes, technological changes" organized with the collaboration of EHESS and INRIA in October 2015 - June 2017 we can extract: "Technological advances and social transformations which result from them or are at their origin arouse enthusiasm and controversy, both in terms of their long-term scope and the degree of risk they contain. Moreover, technological innovations profoundly modify our societies – not without arousing debate or concern – but they can also generate social changes... which themselves produce fertile ground for new technological breakthroughs".

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Conflicts of interest

The author declares that they have no direct or indirect conflicts.

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