
ESSAYS ON FRUGAL ABUNDANCE

DEGROWTH: MISINTERPRETATIONS AND CONTROVERSIES – PART 1 OF 4

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Simplicity Institute Report 14c, 2014



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Foreword

The great Yale economist Irving Fisher (1867-1947) was said to have a parrot which he had trained to answer any question his students might ask with the words, 'It's the law of supply and demand.' As I find myself facing the same old questions about degrowth over and over again in interviews and debates, I often wish I had such a partner. But if the laws of the market can provide an answer to virtually any economic question, this is unfortunately not the case in the *anti-economic* world of degrowth. Explaining, even in very simple terms, what degrowth is and answering the objections it raises is beyond the ability of a talking bird. If you taught a parrot to declare that degrowth is a 'performative fiction', a 'concrete utopia', or indeed a project to build a society of frugal abundance in order to free ourselves from the paradoxes of the consumer society, its answers would be pertinent and scrupulously exact. But these words are likely to leave the questioner feeling baffled and unsatisfied. Besides, degrowth raises questions to which there are no ready-made answers. There is no dogma yet – and hopefully there never will be any. Answering all questions and ending the debate is not the aim of objectors to growth, and controversies exist within the degrowth movement itself. However, I have listed the most frequent misinterpretations and the most common objections that I have encountered over the years in interviews and debates with audiences of all kinds. A few years ago, I started to compose standard responses that I can use as a starting point in real interviews, but that I also now use to reply to the growing number of requests for fake interviews that I receive by email.

Alas, making this memorandum available to the public will not completely free me from all the unwelcome journalists who keep harassing me, for they will not read this mini-opus any more than they have read my previous works on the subject, in which they could have found answers to most of their questions.

Above all, however, I have written these essays for the numerous and often young 'objectors to growth', who are sometimes short of arguments when confronted with these very misinterpretations and objections by their family or at work. Hopefully, thanks to this small treatise, when challenged at the dinner table by their brother-in-law who happens to work for an international company, they will be able to stir up a debate and undermine firmly-held beliefs, or even change people's minds.

The originality of this work lies more in its form than its content. Most of the arguments included here to clear up misunderstandings and refute objections can already be found in various chapters of my previous publications.¹ The project to build a degrowth society is not only a blasphemous slogan, but also a provocative challenge. Advocating it requires that all available arguments be gathered to counter the objections engendered by the prevailing mind-set.

Regular readers of the French weekly newspaper *Politis* will know that I have written a series of columns for it over the past few years, aiming above all to clarify some elements of the degrowth

1. Notably in *Farewell to Growth*, Cambridge, Polity Press (2009), and *Le Pari de la décroissance*, Paris, Fayard (2006), *Sortir de la société de consommation*, Paris, Les liens qui libèrent (2010) or *Le Temps de la décroissance*, Paris, Thierry Magnier (2010) (available in French only).

programme which remained unclear or to counter the objections raised by members of the Left and the extreme Left. Some of these are included in these essays, but the paragraphs have been edited, modified and updated when necessary, to satisfy the specific objective of this mini-opus.

Over the past few years, the interest sparked by this strange unidentified object called degrowth has led to an abundance of books on the subject. Some of them have objectives very similar to mine.² However, it seemed to me that a synthetic argument based on my long and rich experience could better meet the objectives presented above, while offering a complementary perspective and providing an original introduction for readers unfamiliar with the subject and curious to find out more.³

Finally, when the moment came to print these essays, my publishers and I found out that Jean-Baptiste de Foucauld had published a book entitled *L'Abondance frugale. Pour une nouvelle solidarité* (Paris, Odile Jacob) in April 2010. I have to confess I did not know that someone else had already invented this apparent oxymoron and what is more, had done so as early as the year 1980, according to the book's foreword, which makes its anteriority undeniable, even though I have been using this expression in conferences for a few years now. There is nothing surprising in the fact that two authors (if not more) have each dared to use the same original semantic idea, as they both live in a growth-driven, globalised society crippled by its wealth and the destruction of its environment. Besides, I may have little direct interaction with Jean-Baptiste de Foucauld myself, but we are linked by mutual friends, such as Alain Caillé from the MAUSS movement⁴, Patrick Viveret and Bernard Guibert, alongside whom we seek an alternative to the excesses of the current system, following in Ivan Illich's footsteps, in pursuit of the 'joyful exhilaration of chosen sobriety.'

2. As in the most recent publication, *La Décroissance. 10 questions pour comprendre et en débattre*, Paris, La Découverte (2010) by Denis Bayon, Fabrice Flipo and François Schneider (available in French only). However, this comprehensive and well-designed book is not an easy read for non-specialists despite its erudite authors' intentions.

3. I especially wish to thank my friends Christian Araud, Sophie Cathala, Jean Gadrey, Didier Harpagès, Bernard Legros, Claude Llena, Gilbert Rist and Michaël Singleton, who were patient enough to read several versions of these essays and whose corrections, suggestions and remarks have been a great help. Should these essays be successful, they should get the credit they deserve, though I remain solely accountable for any of its flaws. I also owe thanks to all the 'objectors to growth' from the newspaper *La Décroissance*, the magazine *Entropia* and the various trends of the degrowth movement, who have stimulated my reflections. Finally, I am especially indebted to my publishers Sandrine Palussière and Alexandrine Duhin.

4. Mouvement Anti-Utilitariste dans les Sciences Sociales (Anti-Utilitarian Movement in Social Science).

TOWARDS A SOCIETY OF FRUGAL ABUNDANCE

Plain fare gives as much pleasure as a costly diet once the pain of want has been removed.

Epicurus, *Letter to Menoeceus*, § 130⁵

For if a man has been placed beyond the reach of any desire, what can he possibly lack?

Seneca, *On the happy life*⁶

Supreme wisdom these days might be to think as a pessimist, since the nature of things is cruel and sad, and to act as an optimist, as human action leads to a better moral and social well-being and each justice or kindness effort is worth it, however vain it may seem.

Benoît Malon, *La Morale Sociale*⁷

As the growth society has failed to deliver its promise of universal happiness, we have to find out what such a promise actually means. Overconsumption of material goods condemns a growing part of the population to deprivation, without even ensuring that the rest enjoy a high quality of life. The clean break proposed by the degrowth initiative consists of redefining happiness as ‘frugal abundance in a society based on solidarity’. It implies escaping from the vicious circle of unlimited creation of new products and needs, as well as from the growing frustration that this generates; it also implies using conviviality to moderate the selfish behaviour resulting from the kind of individualism which is nothing more than a standardizing mass phenomenon.

Consumerist abundance was supposed to make everybody happy, as everybody’s desires were to be satisfied. But this satisfaction is based on an unequal distribution of revenue and the vast majority of people are unable to meet their daily needs. Besides, the system of consumerist abundance is based on general dissatisfaction, a notion familiar to advertisers: happy people are not good consumers.⁸ The degrowth society takes the opposite course and proposes to help humanity reach happiness through self-limitation, aiming to achieve a state of frugal abundance.

5. Epicurus. Letter to Menoeceus (§ 130). Available from: www.informationphilosopher.com (Accessed 5 March 2012).

6. Seneca. (1928-1935) *On the happy life*. London, W. Heinemann. (Vol. II). Available from: www.stoics.com (Accessed 5 March 2012).

7. Benoît Malon, *La Morale Sociale*. *Morale socialiste et politique réformatrice* [Social Moral. Socialist moral and reformist policy]. Latresne, Le Bord de l’eau, 2007. Quoted by Philippe Chaniel, *La Délicate Essence du socialisme. L’association, l’individu et la République* [The delicate essence of socialism. Associations, individuals and the Republic]. Lormont, Le Bord de l’eau, 2009, p.77.

8. Stefano Bartolini, *Manifesto per la felicità. Come passare dalla società del ben-avere a quella del ben-essere* [Manifesto for happiness. Going from a society of well-having to a society of well-being]. Rome, Donzelli, 2010, p.231.

Neither growth nor austerity

Austerity is the only solution offered by our governments to the financial and economic crisis that the consumer society is currently going through; for their opponents, the only option is problematic reflation. The first option leads to a dead end and extreme poverty for a large part of the population; the second would be tragic for the planet. The worst choice would be a programme combining reflation and austerity. In fact, this is basically what was suggested at the Toronto Summit (G8/G20) in June 2010. German chancellor Angela Merkel advocated stringency and austerity, while US president Barack Obama, who did not want to jeopardise the timid recovery of the global and US economies, advocated wise reflationary measures. They all finally agreed on this lopsided formula: stringently controlled recovery and austerity tempered by reflation. French finance minister Christine Lagarde went so far as to coin the French word 'rilance', a neologism that could be translated by 'stringeflation' (a blend of 'stringency' and 'reflation')! The priceless unofficial adviser of French president Nicolas Sarkozy Alain Minc, a self-proclaimed expert whose forecasts have consistently been proved wrong and whose peremptory judgements have been belied on numerous occasions, was asked what should be done in such a critical situation and came up with this remarkable statement: we have to 'step on the brakes and the accelerator at the same time.'

What the present governments really mean by the slogan 'reflation *and* austerity' is reflation for those who own capital and austerity for the rest of us. In France, in the name of a largely illusory boost to investment and an utterly fallacious increase in employment, social charges as well as corporation and local business taxes are lowered or abolished. The idea of taxing the banking and financial sectors' superprofits has been abandoned and the tax shield system allows the richest to pay less and less tax. Meanwhile, salaried people, as well as the lower and middle classes, have been hit hard by austerity, with lower wages and social security benefits and a higher legal retirement age (which essentially means lower pensions and a gradual privatisation of the system⁹). As a complementary measure to work towards this imaginary recovery which is supposed to restore budget balance, public services are being further dismantled and anything that remained public is now being privatised. There is even a strange, masochistic austerity contest going on; unfortunately, it does not involve the virtuous austerity advocated by Ivan Illich, which we prefer to call frugality, but an austerity that deprives people not only of what they can do without, but also of an increasing portion of what is absolutely necessary.¹⁰ As soon as one country announces that its workers' wages will be reduced by 20%, another states that it will do better, with a 30% decrease, and a third, not to be outdone, hastens to add even stricter

9. Thomas Piketty, Liliane Bettencourt paie-t-elle des impôts ? [Does Liliane Bettencourt pay taxes?]. Libération, 13 July 2010

10. 'For Aristotle or Aquinas it austeritas marked the foundation of friendship. In the Summa Theologica, II, II, in the 186th question, article 5, Thomas deals with disciplined and creative playfulness. In his third response he defines "austerity" as a virtue which does not exclude all enjoyments, but only those which are distracting from or destructive of personal relatedness. For Thomas, "austerity" is a complementary part of a more embracing virtue, which he calls friendship or joyfulness. It is the fruit of an apprehension that things or tools could destroy rather than enhance eutrapelia (or graceful playfulness) in personal relations.' Ivan Illich, Tools for Conviviality. New York, Harper & Row, 1973, p.xiii.

measures. All this is done for no other reason than to please credit rating agencies and the international capital markets from which the countries in question have taken out loans. As omnipresent advertising urges people to buy more and more even though they cannot afford it and to get into debt with no prospect of being able to pay it back, people are paralyzed, as if guilty, and they hardly react, for they can see no credible alternative policy. In a way, we should expiate the so-called consumerist feast while continuing to feed it in a gloomy general context.

This meaningless austerity policy can only generate a deflationary cycle and lead to another crisis; reflation, which will only occur through speculation, will not be able to prevent it. And this time, our battered countries will not be able to save the banks with thousands of billions of dollars.

Faced with this very concrete threat, well-intentioned people, such as the American economist Joseph Stiglitz, advocate old Keynesian recipes such as stimulating consumption and investment to kick-start growth again. This is not a valid cure, mainly because the planet cannot tolerate it anymore, and also because, since as early as the 1970s, as a result of the depletion of natural resources (in the broad sense of the term), the costs of growth (when there is any growth) have been higher than its profits. The productivity gains that can be expected are nil or almost nil. We would still have to privatise and commodify the remains of our public services and increase the value of an unchanged or decreasing number of goods of lasting use so that an imitation of growth might be prolonged a few more years. This *social-democratic* programme, which is the opposition's main selling argument, lacks credibility, firstly because they cannot be expected to question the restraining neo-liberal framework that they themselves helped build over the last thirty years, and secondly, because the current logic of the system implies unflinching submission to the monetarist doctrine. With property speculation in the 1990s and the 2000s, as well as the wheat and food price increase that followed the oil price increase in 2007, we had a foretaste of what growth policies can result in. Greece is a particularly eloquent example of the failure of the so-called alternative proposed by the left wing: the population voted massively for a socialist party with a classic social-democratic programme; under the pressure of capital markets, the party implemented neo-liberal austerity measures, as it was ordered to do by both the European Commission in Brussels and the International Monetary Fund (IMF). It is unlikely that the Greeks would accept the effects of the vast changes required by a different policy: the exit from the Eurozone, cancellation of at least a portion of public debt, the possibility of being banished from Europe, and an embargo imposed by the 'despoiled' countries, which would result in capital flight. Anyway, kick-starting growth may be conceivable for a small country – such as Greece, Hungary or Ireland – if it chooses autonomy, but it remains problematic on a global scale. And yet, these are the pseudo medicines, of varying degrees of credibility, for boosting growth that are put forward as a remedy to the neo-liberal disaster.

How will degrowth solve the immediate problems in our countries?

If the initiative to build a degrowth society is credible in the long term, how do objectors to growth intend to address short-term challenges, such as finding solutions to public debt and unemployment?

In a degrowth society, there probably would not be any public debt. The budget would be naturally balanced: all spending would be covered by revenue from taxes. Firstly, there would be a new tax system. The government of an independent society liberated from the growth cult would expect its resources to come primarily from a direct progressive tax scheme, which is the fairest form of taxation. As the degrowth agenda involves setting a maximum income limit, progressive taxation should allow a tax rate of up to 100% on any income exceeding the maximum level set by law. As Paul Aries wisely said, additional indirect taxes on luxury goods should be maintained or created, and could also sanction the *misuse*¹¹ of natural resources, goods and services. Instead of giving volume discounts on water, gas, electricity and telephone usage as we do today, we could surtax consumption when it exceeds a specified volume representing basic needs, which would be free or taxed at a very low rate. High tax rates on property (such as country houses, yachts, racing stables etc.) should complement those measures and reduce excessive revenue gaps. If expenditures were to accidentally exceed revenue, issuing money to finance the budget deficit would not be considered taboo. 'A gentle rise in price levels', as Keynes recommended, would not pose a problem for anyone except for *people with a private income* – whom he wished to eliminate. In the market economy, borrowing money from capital markets is favoured by bankers and most politicians, as it is supposed to keep the *horrors* of inflation away; it also affords banks opportunities to make lucrative investments; and politicians do not mind using a 'solution' which allows them to defer tax increase measures. For exactly these reasons, borrowing from capital markets should be avoided as much as possible in a degrowth economy. A country like France, which for decades has systematically financed its budget deficit through debt, has a vital need for economic growth – since growth means increases in tax revenue to feed the government's budget and pay off the debt, that is, repay the previous sums borrowed plus interest. Nowadays, an increasing share of tax revenue contributes to enriching securities holders (banks, pension funds, hedge funds, insurance companies etc.), instead of benefiting the functioning of the government. Growth at any cost, with regard for neither nature nor the future, has ironically become inevitable to counteract the unfairness of the capitalist system. When 'there is no growth' in a growth economy – which more or less describes our present situation – the State is as good as paralysed and is entirely at the mercy of its creditors, capital markets, who always end up pushing for drastic austerity measures: reductions in salaries, the destruction of public services and the privatisation of whatever public services can still be sold. This dangerous strategy can cause deflation and economic depression, while leading to a terrible downward spiral. It is precisely to avoid such a trap that we should endeavour to get away from growth and build a degrowth society.

Pending such a possibility, if objectors to growth were to manage the situation in Greece for example, what policy would they pursue? They would simply cancel the debt, which would amount to declaring national bankruptcy: this drastic remedy would solve the problem by elimination. It would be a fair punishment for Goldman Sachs, who played a dual role as consultant and auditor, on the one hand receiving money to falsify the accounts, and on the other hand making the most of the Greek crisis. Such a radical solution was discarded at once, although it would have been favoured by supporters of degrowth. Financial, political, and

¹¹ Paul Ariès, *Le Mésusage*, Essai sur l'hypercapitalisme, Lyon, Parangon, 2007

European leaders have chosen to avoid default and have offered to 'restructure' the Greek debt. It must be said that, in the end, it is actually easier to resolve the problem of national debt than that of the ever-growing global debt resulting from worldwide financial speculation. According to the Bank for International Settlements in Basle, the creation of derivatives amounted to 600,000 billion dollars in February 2008, which represents 11 to 15 times the gross world product!¹² After reaching such heights, one can only fall down, and even a degrowth expert would not be able to land smoothly. Even in highly indebted countries, the debt hardly exceeds gross domestic product. This figure remains far too high, of course, but it is still manageable.

Cancelling the debt altogether would be detrimental not only to banks and speculators, but also, directly or indirectly, to small savers who trust their government. The best solution is undoubtedly controlled restructuring (which amounts to a partial bankruptcy), which is what occurred in Argentina in 2001 after the devaluation of the peso. Securities could even retain their par value for small shareholders while others would require write-downs of 40 to 60%. To wipe out the rest of the debt, it would not be a bad idea to increase tax revenues through an exceptional levy on financial products (the Hungarian populist government, although right wing, has not hesitated to do this) and at the same time set up a progressive taxation system. In France, the main priority would be to abandon the tax shield. Finally we would recommend printing money and keeping inflation under control (at around 5% per year). This Keynesian measure, which relies on a weak currency, would stimulate the economy without the need to follow the logic of perpetual growth. It would help to resolve the kind of issues that arise once the cult of growth has been abandoned. The main objective in this type of transition should really be to achieve full employment and reduce poverty. This could be achieved by systematically relocating useful activities, by progressively reorganising those that are parasitic like advertising or the toxic ones such as nuclear power and armament, and by planning a substantial reduction in working hours. This attractive programme is of course easier to describe than to execute. As far as Greece or Ireland are concerned, it would involve at least dropping out of the Eurozone and recovering the national currency, with all that entails, notably exchange controls and the reintroduction of custom duties. This selective, necessarily protectionist strategy would horrify Brussels and WTO experts. One would expect to encounter retaliation and attempts to destabilise the country from the outside, while internal sabotaging would further jeopardise national interests. Since this programme is still very remote from the necessary 'exit from the economy' advocated by degrowth, it seems very idealistic at present, but when recession hits rock bottom and we are stuck in a deep crisis, which is what is awaiting us, it will appear desirable and realistic.

* * *

Planning to drop out of the market economy and build up a society of 'frugal abundance' is bound to give rise to misunderstanding and objections. It will meet some opposition, no matter

¹² Alberto Castagnola, *La fine del liberalismo*. Guida alla grande crisi finanziaria, Roma, Carta, 2009, p.58.

what path degrowth¹³ takes and how strongly it is defended. There will be objections such as: isn't the very expression 'frugal abundance' actually a far worse oxymoron than 'sustainable development', which you keep denouncing?

Up to a certain point, 'abundance without growth'¹⁴ might be conceivable and acceptable but abundance with frugality goes much too far! This can only be perceived as an intolerable provocation, as long as our vision of growth remains unchanged. On the other hand, to anyone who is able to free their mind of the productivist and consumerist propagandas, frugality would definitely appear to be a prerequisite for any type of abundance. In a degrowth society, as in any human society, all essential needs would indeed be met, while the environment would be preserved, which means that local resources would be used sensibly for the production and consumption of material goods and services. However, it would resemble the 'abundance societies' of the Stone Age described by anthropologist Marshall Sahlins, which have never entered the economy¹⁵, thus avoiding the iron corset of scarcity, neediness, economic calculations and the *homo aeconomicus*. The imaginary foundations of economic institutions should be questioned.¹⁶ As Jean Beaudrillard rightly stated in his time: 'one of the contradictions of growth is that goods are produced and needs are created at the same time, but not with equal speed'. This results in what he calls 'mental poverty', a state of generalised dissatisfaction, which is typical of a growth society as opposed to an abundance society.¹⁷ In fact, actual poverty lies in the loss of autonomy and addiction to consumption. As a Native American saying goes: 'Dependence means being poor; independence means accepting not to become rich'. Those of us who are enslaved to so many artificial aids are indeed poor or even destitute. That is why achieving frugality makes it possible to rebuild an abundance society, based on what Ivan Illich called 'modern subsistence'. This refers to the lifestyle that prevails in a post-industrial economy in which people have succeeded – by political means – in reducing their market dependence by protecting infrastructures in which techniques and tools are used primarily to generate use-values that are neither quantified nor quantifiable by those professionals who create needs.¹⁸

Growth in wellness is therefore the fast track to degrowth because happy people are less sensitive to television advertisements and compulsive purchasing. We basically need to change our vision of growth and development, and re-introduce economics into social and political issues by going beyond it – or by eliminating it (*aufheben*), what Marxism had promised to do

13 See Serge Latouche, *Pour sortir de la société de consommation. Voix et voies de la décroissance*, op.cit.

14 As per the proposal of Tim Jackson, former environmental advisor for the labour party, in *Prosperity without Growth*, Brussels, De Boeck, 2010.

15 'In traditional societies (...), at structural level, the economy does not exist', Marshall Sahlins, *Stone Age Economics* (1972), Paris, Gallimard, 1976, p.118. 'Nothing resembles an economy in external reality, until we build such an object', Louis Dumont, *Homo aequalis*, Paris, Gallimard, 1977, p.33.

16 See Gilbert Rist, *L'Economie ordinaire entre songes et mensonges*, Paris, Presses de Sciences-Po, 2010.

17 Jean Beaudrillard, *La Société de consommation*, Paris, Denoël, 1970, pp.83-87.

18 Ivan Illich, *The right to useful unemployment*. 2nd ed. London, Marion Boyars, 1978, pp.93-94.

but was unable to. In 1923, Georg Lukacs, the most lucid Marxist thinker of his time, wrote about the future 'socialist economy': 'However, this "economy" no longer has the function any economy had in the past: it must serve a consciously managed society; it must lose the immanence and the autonomy which made it a real economy; it must be eliminated as an economy'.¹⁹ It is indeed such a socialist concept that degrowth plans to revive. Frugal abundance is a meaningful and useful concept to drop out of the consumer society, but it is also a short-term political objective and a valid answer to the neoliberal or Keynesian pseudo-therapies, in the present context of repressed depression. Such an iconoclastic project is bound to meet with incomprehension and objections.

Degrowth: misinterpretations and controversies

For clarification and sorting purposes, I have divided all arguments into two categories: 'misinterpretations' and 'controversies'. Some of them seek to clear up misunderstandings and avoid potential confusion, and others, which are very controversial, intend to prove that some points are debatable or that some statements are wrong. It cannot be denied that such a breakdown into two groups is a little arbitrary. As we try to correct some misinterpretations, we also settle scores with our opponents; having to face objections forces us to clarify certain potentially confusing issues. However, the eighteen topics presented here do not intend to answer every imaginable question about degrowth. Some of these issues are open to discussion within the group of objectors to growth: 'Should the movement become a political party'? or 'Is degrowth a form of humanism'? These topics have already been discussed in *Farewell to Growth*, so there is no need to present them again here. They are internal controversies and there is nothing more to add to what has already been said about them.²⁰ As regards the relationship between degrowth and sustainable development, which is an issue that is often raised in public debates, we believe that it is not appropriate to tackle it here. Since the degrowth movement historically originated from the need to reveal the deception of sustainable development, the subject has been abundantly discussed in all our previous publications.

19 Quoted by Anselm Jappe, 'Le "côté obscur" de la valeur et le don', in *Revue du MAUSS*, n°43, second semester 2009, p.98.

20 See *Farewell to Growth*, op. cit., p.143, for the first question and p.147 for the second one.

MISINTERPRETATIONS

Voluntary or involuntary confusion between negative growth and the degrowth agenda.

Quite often, especially since the 2008 crisis, degrowth thinkers have heard this kind of statement from opponents as well as from ill-informed supporters²¹: ‘Degrowth is what we are already experiencing’! This common mistake is made by those who have not understood that ‘degrowth’ must not be confused with negative growth; the word is intended as a provocative slogan, in response to the hypocrisy behind the mythology of productivism. In other words, degrowth as an alternative movement must not be confused with a concrete situation known as ‘negative growth’, a surprising expression imported from economic jargon, which describes a so called ‘critical’ state of affairs: a drop in the favourite unit of measurement in all growth societies, namely the gross domestic product (GDP). In other words, it characterises a recession, a depression or even the decline or collapse of a whole economy. The degrowth society project therefore has nothing to do with negative growth. Degrowth is about dropping out of the consumer society. At a push, a distinction might possibly be made between *active* and *passive* degrowth. The former can be compared to a voluntary austerity diet for health improvement purposes, when hyper-consumption reaches such a level that obesity becomes a real threat. The latter is a forced diet which can lead to death by starvation. In any case, it is preferable to see it as a unique and original initiative, thanks to which the term degrowth now features in social science dictionaries.

On the other hand, there is certainly nothing worse than a growth society without growth. On this point and this point only, the most determined French growth fanatics are correct: ‘Without growth,’ they say, ‘there is no way that the economic situation can improve in suburban areas, no matter how much the government helps. Without growth, there is no hope of social promotion. Without growth, there is no hope of stopping the downward spiral of the deficit or paying off the debt’.²² They also say: ‘Inequality is a growth engine and growth is the only way that inequality can be made tolerable. Growth carries a promise of abundance which can alleviate the sufferings of the poor, whereas a stationary state mainly illustrates the rich man’s dream that nothing will

21 Pierre-Antoine Delhommais has provided a magnificent description of the opponent in a chronicle published in *Le Monde* (newspaper) dated November 23-24, 2008: ‘Besancenot-Sarkozy, enriched by subprimes.’ The ill-informed supporter is illustrated by anti-globalisation activist Michel Husson in an article published in *Politis* n°1016 of September 4, 2008. The article has a meaningful title: ‘Recession = degrowth?’ Daniel Cohn-Bendit himself is no exception: ‘there is no longer any need to discuss degrowth: we are passively suffering the effects of degrowth with many disastrous consequences, the collapse of entire economic sectors, people forced into unemployment.’ (*Que faire ?* Paris, Hachette, 2009, p.169).

22 Member of Parliament François Blanc has published a book entitled: *La Croissance ou le chaos*, Paris, Odile Jacob, 2006.

ever change'.²³ Philosopher Marcel Gauchet is correct in his observation that in the contemporary collective imagination²⁴, 'growth has become a substitute for common good'. This is why the Attali report includes the proposal that 'Growth must become everybody's business'.²⁵

As André Gorz said during a 1974 conference entitled 'Their Ecology and Ours': 'Growth supporters are correct at least on one point: in our society based on consumption, social inequalities, privileges and profit-making, non-growth or negative growth can result only in stagnation and unemployment, and widen the gap between the rich and the poor [...]. The masses will see growth as a promise – although this will be an illusion – that one day they will rise above their "underprivileged" condition, and they will see non-growth as a life-sentence to mediocrity'.

It is a known fact that simply slowing down growth would leave our societies in disarray for several reasons, including unemployment, a widening gap between the rich and the poor, and a reduction in the purchasing power of the neediest. Governments would cut their social, educational, cultural, environmental and health programmes, which ensure a basic standard of living. We can easily imagine the disastrous consequences of a negative growth rate! Yet this regression of our civilisation and of social standards is precisely what is starting to happen. As André Gorz added, 'This decline in growth and production, which could have had positive effects in another system (fewer cars, less noise, more air, shorter working weeks etc.), will have only negative ones in this system – polluting products will become luxury goods, which will be unavailable to the masses, but within reach of the well-off; inequalities will increase; the poor will get relatively poorer, and the rich will get richer'. If we do not change course, what awaits us will be much worse: frenetic money rationing, resulting in extremely violent global conflicts. Such a situation would give rise to fascist and xenophobic movements, which are now in their early stages, and would eventually leave totalitarian dictatorships in charge of dealing with the shortages.

Degrowth means a stationary state and/or zero growth

John Stuart Mill (1806-1873) presents a vision of the 'stationary state' which is reminiscent of the degrowth agenda. The notion of zero growth in the Club of Rome's report also has a lot in common with the arguments put forward by growth objectors. The old 'stationary state' concept developed by classical economists is thus being revived. However, both stationary state and zero growth visions differ fundamentally from the degrowth approach. In both cases, degrowth does not result from a conscious choice to adopt a different model of civilisation, but is *imposed* on us

23 Henri Guaino, Future adviser to the president, in an article entitled: 'Pour une croissance durable', La Croix, October 23, 2006. We shall later rectify the erroneous assimilation of degrowth to the stationary state.

24 In Le Figaro Magazine, November 17, 2007.

25 Cf. Rapport de la commission pour la libération de la croissance, La Documentation française, 2008, p.228.

as part of our *current* economic system. Franck-Dominique Vivien aptly observes that, in contrast to Mill's analysis, the policy which has to be implemented now is a proactive one.²⁶ As for the zero growth proposal, it seeks to freeze the production system and way of life as they are now, without questioning the fundamental principles of the economic system. These two objections deserve to be analysed separately, even though the media often treats them as one.

1) *Stationary state, diminishing returns and degrowth society.*

Do we really have to 'escape from the economy' in order to find a sustainable path again? Is it not excessive, where classical economists are concerned, to say that all economic thinkers are addicted to growth? For indeed, most of them did not think it was likely that the system could grow forever. They even believed that accumulation would inevitably come to a halt and a *stationary state* would be reached. This idea was shared by Adam Smith, David Ricardo, Thomas Robert Malthus and John Stuart Mill. Nevertheless, their vision of economy is derived from Newtonian mechanics and corresponds to the logic of a growth society.

It is worth recalling that, according to Adam Smith, the development of capital combined with increasing competition lowers the profit rate until any net accumulation is made impossible. According to Malthus and Ricardo, diminishing returns in agriculture lead to an increase in land rent and an inevitable decrease in profit rate, which also results in a stationary state. For both of them, this stationary state would be rather a dark one. In such a situation, the working masses would be condemned to basic subsistence and any increase in population would lead to miserable or violent deaths.

John Stuart Mill, on the other hand, extends the thesis of diminishing returns to the industrial sector but describes this stationary state in more positive terms. Once material survival was ensured, accumulation would stop, which would put an end to the continuous disruption, stress and hardships that it generates. Freed from its obsession with growth, society could focus on educating the masses and leisure time would allow citizens to broaden their minds. 'It is scarcely necessary to remark that a stationary condition of capital and population implies no stationary state of human improvement. There would be as much scope as ever for all kinds of mental culture, and moral and social progress; as much room for improving the Art of Living, and much more likelihood of its being improved, when minds ceased to be engrossed by the art of getting on. Even the industrial arts might be as earnestly and as successfully cultivated, with this sole difference, that instead of serving no purpose but the increase of wealth, industrial improvements would produce their legitimate effect, that of abridging labour'. He adds: 'Hitherto it is questionable if all the mechanical inventions yet made have lightened the day's toil of any human being. [...] They have increased the comforts of the middle classes. But they have

²⁶ Franck-Dominique Vivien, 'Jalons pour une histoire de la notion de développement durable', p.3, in *Mondes en développement*, n° 121, 2003/1.

not yet begun to effect those great changes in human destiny, which it is in their nature and in their futurity to accomplish'.²⁷

In John Stuart Mill's work, there is an 'ethics of the stationary state' that echoes the idea of serene degrowth. 'Only when, in addition to just institutions, the increase of mankind shall be under the deliberate guidance of judicious foresight, can the conquests made from the powers of nature by the intellect and energy of scientific discoverers become the common property of the species, and the means of improving and elevating the universal lot'.²⁸ Here, Mill takes up a position that is not very different from the idea of 'happy frugality' proposed by growth objectors who follow Ivan Illich or André Gorz, 'that is to say, a model of society where needs and work time are reduced, but where life in society is richer, because it is more convivial'.²⁹

'Anyway, this theory of the stationary state conveys the idea that, with time, capitalism will progressively give way to a model of society in which the values will be more respectful of man and nature all the while following its own dynamic,'³⁰ write two other economists. But this is not the path capitalism has followed since the beginning of the neo-liberal counter-revolution. Contrary to the theory of degrowth, there is no question of breaking with economic logic. That is why supporters of sustainable development have been able to appropriate Mill's thinking, as classical economists still (paradoxically) believe in the idea of a capitalist system without growth, which improves with age. The economic mechanism is not necessarily meant to progress indefinitely. If it is not to stop completely, the machine is doomed at least to slow to a subpar pace. Economic dynamism is set to stumble against the obstacle of decreasing returns, inherent to the finiteness of nature, such as the lack of fertile land, the exhaustion of mineral resources, and other limits.³¹ However, this would probably mean the death of capitalism. Like a cyclist, the system can only keep its balance by pedalling constantly. 'Exogenous' interventions, especially political ones, are required periodically to avoid or to remedy crises, and to pep up the economy, but they do so by burning a fuel that is not renewable: the stock of natural assets.

The stationary state is thus incompatible with capitalism. From a certain perspective, it can be said that the neoclassical economists understood this. Basing their analysis on historical

27. John Stuart Mill, *Principles of political economy* (1848), London, Longmans, Green and Co., 1909.

28. *Ibid.*

29. As it is suggested by Lahsen Abdelmalki and Patrick Mundler, quoted by Franck-Dominique Vivien in 'Jalons pour une histoire de la notion de développement durable', p.3, in *Mondes en développement*, n°121, *op. cit.*

30. *Ibid.*, p.3.

31. After the 1929 slump such theories reappeared and were called stagnationist. Keynes himself could be considered, in a way, as a stagnationist. Indeed, according to Schumpeter, all his writings refer to 'nature's decreasing response to human endeavor'. According to all these authors, investment opportunities will become increasingly rare in the future. Either growth will progressively decelerate (what Higgins calls stagnating economics), or all movement will stop (stagnant economics). Keynes' vision of the future is similar to that of John Stuart Mill. Humanity, at peace and satisfied, will devote itself to culture.

evidence that the law of diminishing returns is not valid at least in the industrial sector, or over a long period of time (i.e. two or three centuries), they undermine the classical economists' theory of the progressivism/vitalism of the capitalist economy. They establish a principle concerning the perfect substitutability of human-made capital and natural capital. This hypothesis states that the decreasing amount of natural capital will naturally be replaced by more supplies, knowledge and skills, according to the relative price of each, in order to maintain production capacities and ensure the well-being of individuals over time. As a result, in theory, the economy can grow and develop without bounds. It is as if multiplying the number of ovens, using more sophisticated ones, or increasing the number of cooks would be enough to make up for a decreasing quantity of dough and to produce more and more pizzas. Unfortunately, there is no escaping the facts, and we are getting nearer to the point where increasing the number of ovens and cooks will no longer compensate for the shortage of flour.

2) *Zero growth and degrowth*

The worldwide success of the first report published by the Club of Rome in 1972, entitled 'The Limits to Growth', temporarily helped to promote the idea that growth should be stopped to avoid the predicted exhaustion of resources. Supporters of zero growth were even named 'Zegists'.³² The goal of the report's authors went beyond the idea of zero growth and anticipated part of what degrowth proposes.³³ Their analysis sought to make people react in favour of a change of direction. 'We are convinced that the realisation of the quantitative restraints of the world environment and of the tragic consequences of an overshoot is essential to the initiation of new forms of thinking that will lead to a fundamental revision of human behaviour and, by implication, of the entire fabric of present-day society'.³⁴ This is what we call decolonisation of the collective psyche. Sico Mansholt, Dutch President of the European Commission, was converted to these opinions although he had been a defender of productivism in the past, and he attempted to set Europe on this path. At the time, politicians almost unanimously rejected the idea. In France, the representative of the *Conseil National des patrons français* (CNPF, predecessor of the Medef, the French employers' association) declared that a high growth rate was indispensable. The Secretary General of the French Communist Party (PCF), meanwhile, denounced the 'dreadful program' of the leaders of the European Economic Community (EEC).³⁵ Raymond Barre, then a member of the European Commission, publicly disapproved of the

32. D.H. Meadows, D.L. Meadows, J. Randers and W. Behrens, *The Limits to Growth*. A report for The Club of Rome's Project on the Predicament of Mankind, New York, Universe Books, 1972.

33. This is confirmed in the correspondence between Dennis Meadows and Nicholas Georgescu-Roegen, reported by Mauro Bonaiuti, op. cit.

34. Ibid, p.190.

35. See Franck-Dominique Vivien, in 'Jalons pour une histoire de la notion de développement durable', art. cit., p.10.

president's vision. Brussels finally agreed that growth should be made 'more humane and more balanced'. We know how things turned out.

The economist Herman Daly, a disciple of Nicholas Georgescu-Roegen who resigned from his position as head of the World Bank, tried in the 1980s to theorise an economy without growth, which would still follow the model of development but in a different way. 'The term sustainable development,' he writes, 'which has taken on almost magic overtones, is in fact self-contradictory. It is used nowadays as a synonym for "sustainable growth", a concept that will lead policy-makers down a blind alley, when applied to our economic life. In short, we will not be able to continue growing indefinitely: sustainable growth is impossible, and any policy based on that concept is unrealistic, or even dangerous'. However, at the time, Daly did not recognise the consequences, that is to say, the necessity of breaking with the idea of developmentism (and he was reproached for this by Nicholas Georgescu-Roegen). 'The term "sustainable development" therefore makes sense for the economy,' he argued, 'but only if it is understood as "development without growth"- i.e., qualitative improvement of a physical economic base that is maintained in a steady state by a throughput of matter-energy that is within the regenerative and assimilative capacities of the ecosystem'. In other words, it means zero growth. 'Every day we discover the bad effects the economy can have on our ecosystem, which shows us that even at the current pace, this can't last any longer. Throughput growth causes environmental costs to increase faster than production benefits, thereby making us poorer, not richer. Sustainable development must be a development without growth'.³⁶

This casuist position underestimates the excesses of our system. And it does not involve giving up the mode of production, the mode of consumption or the way of living that growth established in the past. It comes down to resigning ourselves to a conservative status quo as the only reasonable solution, without calling into question the values and logic of developmentism or economism. As a consequence, we deprive ourselves of the positive effects that convivial degrowth has, in terms of collective happiness. At this point, we might just as well say 'zero degrowth' as zero growth. And yet, when it comes to countries such as the United States, Europe and Japan, whose environmental footprint amounts to between 3 and 10 planets, zero growth – or zero degrowth – is not enough. What we absolutely must do now is undertake a real restructuring of society towards frugality. This is why Herman Daly's propositions, interesting though they may be, are problematic, even if some people describe him as 'another spokesman of degrowth'. He has drawn closer to the idea of degrowth lately, as he now advocates a system in which 'we don't use natural resources faster than they can be replenished by the planet, and we don't deposit wastes faster than they can be absorbed'.³⁷ However, this project is still only

36. Herman Daly, *Beyond Growth. The Economics of Sustainable Development*, Boston, Beacon Press, 1996, pp.10-11.

37. Expression used by Jean Monestier. 'Shortly before the degrowth conference organized in Paris in 2008, H. Daly endorsed the idea of degrowth, as he was then convinced that the size of industrial economy had definitively outgrown anything we could possibly do through eco-engineering and ecotechnologies', in Denis Bayon et alii, *La Décroissance*, op. cit., p.41.

defined from a purely technical point of view.³⁸ Would such a system be compatible with the logic of a globalised, capitalist market economy? We have good reason to doubt it.

ATTAC, the Greens, deceleration and selective growth

The idea of *decelerating* growth, put forward by Jean-Marie Harribey and taken up, on his initiative, by ATTAC, to counter degrowth and the idea of 'selective degrowth' promoted by the French Green movement, is in a way similar to Daly's rhetoric of development without growth. Yet it is not as relevant, for its apparent 'realism' masks a fundamental lack of coherence: it tackles the symptoms, but not the causes. At first, a degrowth policy would indeed probably result in a mere slowdown in the growth of GDP, and not necessarily in a downturn, that is, a negative rate, since GDP is a purely quantitative, macroeconomic indicator. This could be seen as deceleration or selective degrowth, but from a microeconomic perspective it actually involves a decrease in harmful activities such as nuclear energy or the car industry, the maintenance (zero growth) of most of the 'useful' physical operations (food, housing, clothing), and an increase in the production of relational market goods and/or (especially) non-market ones. If the market value of intangible goods should increase and compensate for the losses in the primary and secondary sectors, GDP could continue to grow for some time – if we are to continue calculating this indicator using the same method – while the environmental footprint would decline. We would then find ourselves in an exceptional transition period of ecologically compatible capitalism, in which we would not follow the logic of growth or idealise it.

The arguments used by Jean-Marie Harribey, the Greens and their supporters show a rather widespread misunderstanding of what degrowth is and what it entails. They are founded on a literal interpretation of the word, and fail to grasp its political implications as the expression of a wish to escape from the productivist system. It is not a question of quibbling over an increase or decrease of one or two percentage points of GDP, but of breaking away from the religion of economic growth.

* * *

Actually, it is undeniable that the idea of a degrowth society calls to mind Mill's concept of the stationary state, as well as the aspirations of some advocates of sustainable development. Similarly to John Stuart Mill, the authors of the first report to the Club of Rome (Meadows and others) note: 'Population and capital are the only quantities that need be constant in the equilibrium state. Any human activity that does not require a large flow of irreplaceable resources or produce severe environmental degradation might continue to grow indefinitely. In particular, those pursuits that many people would list as the most desirable and satisfying activities of man – education, art, music, religion, basic scientific research, athletics, and social

38. See his article 'Life in a Land without Growth', *New Scientist*, October 15th, 2008.

interactions – could flourish’.³⁹ According to Mill, the theory of the stationary state embodies the idea that with time, the capitalist system will follow its own dynamic and progressively create a new kind of society, whose values will be more respectful of humanity and nature. Contrary to the English economist’s ideas, we can see that this is not happening and we think that breaking with capitalism, consumerism and unbridled productivity is the only way to avoid disaster.

Shallow-minded or cornucopian people – literally people who believe in the horn of plenty – may tar with the same brush all those who analyse the limits to growth and accuse them of being pessimistic – this is true of Malthus and Ricardo, but not really of Mill and Meadows – but as a matter of fact, the advocates of degrowth hold a far from pessimistic view. On the contrary, they challenge the unlimited exploitation of the Earth’s natural resources, and this can only benefit humanity.⁴⁰ There is also no reason for innovation and quality improvement to stop.

Degrowth is supposedly against science and technophobic

The media often claim that degrowth is strongly opposed to science and that ‘objectors to growth’ are technophobic.

This is a gross misinterpretation of our theory. We are not blindly opposed to progress, but we are opposed to blind progress! (As the authors of the first report to the Club of Rome so eloquently put it.⁴¹) As Gandhi – a major forerunner of degrowth – said: ‘What I object to is the craze for machinery, not machinery as such’. What we question is the irrational faith in Western science and the belief in the almighty nature of technology. As Jacques Testart said, ‘The myth of neutral science is less and less valid, since science is offered for sale in the form of ready-to-use technoscience’.⁴² The ‘worship of science’ must be challenged. We do not reject science or technology as a whole, simply on principle. Instead, in a cautious and reasoned fashion, we strongly oppose a particular conception of science, the Promethean conception, and some techniques that lead to the man’s obsolescence.

The ecological vision is facing a range of frontal assaults, such as the Heidelberg Appeal, that we have to counter-attack in order to set the record straight. This appeal was issued at the same time as the Earth Summit in Rio de Janeiro in 1992 and was signed by 3000 scientists and academics, including seventy-two Nobel Prize winners. We are accused – without evidence – of

39. D. H. Meadows, D. L. Meadows, J. Randers and W. Behrens, *The Limits to Growth. A Report for The Club of Rome’s Project on the Predicament of Mankind*, op. cit., p.175.

40. As Jean Gadrey said: ‘This is not the end of social progress, and this is not the end of innovations nor of economic dynamism. It does not consist in the stationary state depicted by classical economists in the 19th century. [...] Another kind of prosperity is possible’ in *Adieu à la croissance. Bien vivre dans un monde solitaire*, Paris, Les Petits Matins, 2010, p.17.

41. Dennis Meadows and others, op. cit., p.249.

42. Jacques Testart, *La Décroissance*, n°48, April 2008.

spreading an 'irrational ideology', and we are suspected – with good reason – of 'impeding the economic and social development' that technoscience would unerringly lead to. According to the worshippers of Progress, challenging science, or more precisely, technoscience, is equivalent to obscurantism.

The strongest criticisms were about the debates on climate change and the exhaustion of natural resources. The denials of *mad* scientists such as Claude Allègre (though Henri Atlan backs him) or Björn Lomborg, 'the sceptical environmentalist', are sometimes paradoxical.⁴³ These scientific *authorities* often venture beyond their field of competence, and develop alternately or even simultaneously if necessary, the following theses: 1) Everything is just fine, there is no threat, and nothing has been proven; and 2) Science will solve all the problems anyway. Claude Allègre even goes so far as to portray himself as an advocate of ecology, but an advocate of a *modern kind of ecology*. He actually means a kind of ecology that would solve the environmental crisis by using the very same methods which have led to it, that is to say by dominating nature and accelerating predation.

These detractors do have a strategy: they show boundless optimism by denying that there is a problem. To this end, they produce a massive amount of data, which is sometimes undeniable, sometimes questionable, but always out of touch with practical contingencies. Techniques require energy in order to be implemented. Oil made the use of tractors and chemical fertilisers possible and thus led to agricultural productivism. But sources of energy are becoming scarce. Whatever techniques we may have, they are all worthless without energy. Human ingenuity may have no limits, but geology does. Björn Lomborg and his supporters, grouped together within the *Global Climate Coalition* (a 'negationist' lobby backed and subsidised by transnational firms), are aware that energy is the key, so they simply eliminate the problem. Tomorrow, energy will be unlimited and almost free. There will be enough oil in bituminous shale to cover humanity's energy needs for five thousand years, not to mention unlimited solar energy, and the incalculable reserve of nuclear energy – especially bearing in mind the prospect of nuclear fusion! According to the scientists Weinberg and Hammond, in the United States alone, there are wide areas covered with black clay shale and granite containing 60 grams of natural uranium or thorium per metric tonne. On this basis, they designed a great plan (criticised by Nicholas Georgescu-Roegen in his day). All of the rocks would be exploited and crushed and it would then be possible to obtain enough nuclear fuel to supply 32,000 breeder reactors spread across 4000 parks close to the coastline, which would provide a population of 20 billion inhabitants with energy for billions of years – supposing that the rate of energy consumption per person was twice as high as the current rate in the United States.⁴⁴

43 Even though Claude Allègre partially reconsidered his positions after his 'trial' at the French Academy of Science, in 2010, and even though Björn Lomborg acknowledged the work of the IPCC (Intergovernmental Panel on Climate Change), it does not make much difference. Lobbies still spread their arguments.

44 'Limits to the Use of Energy', *American Scientist*, July-August 1970. Quoted by Raúl Olmedo, *Crece o Descreece? Megatendencias*, Mexico, Unam, 2009.

Of course, the industrial lobby takes up these theories (if they are not the ones to invent them in the first place), which are then echoed in political debates by both right- and left-wing parties.⁴⁵ Such visions are based on ‘cornucopian’ faith but do not stand up to a serious examination of all the facts.

As we know, nuclear fusion is still a long way off and may never be possible. ‘It is, and will remain, the energy of the future’, American nuclear experts say. But the practical realisation of nuclear fusion is so problematic that even they are sceptical. Since gaining access to hydrocarbon fields is increasingly difficult, and considering the cost of substitutes for oil, we have no choice but to question the principle of our growth-oriented society. Hubert Reeves proved it with an implacable demonstration concerning nuclear power – though he does not agree with the concept of degrowth. Currently, there are 436 nuclear reactors in the world. However, ‘today, the energy consumed worldwide amounts to the energy that 13,000 nuclear reactors would produce, if they were functioning continuously’, he wrote. And if 10 billion people had the same way of life as Westerners – as is predicted for 2050 – the total energy consumption would equal the energy produced by 100,000 reactors. How can we believe, then, that we would be able to avoid accidents, which could be even worse than Chernobyl? And even if we can find enough ore and enough money to build nuclear power plants and maintain them, what will become of nuclear waste? If we consider the problem from a long-term perspective, it is obviously absolute madness. Hubert Reeves adds that ‘energy consumption is continuously increasing, by about a factor of ten every one hundred years. Contrary to the human population, which tends to stabilise, it does not show any signs of slowing down. And this is where the problem lies. At this rate, in four hundred years the energy consumption will equal the amount of solar energy received by the Earth; in fifteen centuries, it will equal the total amount of energy emitted by the sun, and in eleven centuries it will equal the energy emitted by our galaxy!’⁴⁶ And there you have it: exhaustion of natural resources.

To solve the problem of climate change, we are faced with the same Promethean madness as is typical of technoscience nowadays. Before he passed away in 2003, Edward Teller, the father of the hydrogen bomb, proposed nothing less than to spread one million tonnes of aluminium and sulphur dust in the atmosphere in order to reduce the Earth’s exposure to the sun by 1% and thus lower the global temperature. His colleague, the astrophysicist Lowell Wood, proposes to install a 2000 km-wide mirror between the Earth and the sun in order to regulate the temperature by tilting it in different directions. The ingenuity of these miracle solutions seems boundless: creating a huge shield around the Earth to protect it from the radiations of the sun; launching into orbit billions of 60 cm-large lenses to filter the sunlight; strewing the oceans with

45 In an article published on January 21st, 2005, in the French newspaper *La Riposte* – closely linked to the French Communist Party – Jerome Mettelus accused the degrowth movement of being ‘a reactionary utopia’ because of its lack of faith in science, technology and progress. ‘Since there is no absolute limit to scientific and technological progress, our energy potential is also unlimited. Besides renewable energies (tidal, wind and solar energy, and so on), we also have nuclear power.’

46 Hubert Reeves, preface to Laure Noualhat, *Déchets. Le cauchemar du nucléaire*, Paris, Le Seuil/ARTE éditions, 2009, pp.10-11.

iron filings to stimulate the absorption of CO² by biomass, or with billions of white polystyrene balls to increase sunlight reflection, or even, to achieve the same result, *repainting* grey clouds in white by blasting particles (and increasing microdroplets by 10%); creating a ring of tiny particles in space to overshadow the tropics; making artificial clouds with the help of 3000-tonne floating structures, designed to activate generators via wave motion and reduce the sun's radiation; and so on.

For the time being, only one technological initiative has been attempted in order to limit CO² emissions: it consisted of trapping the gas inside geological pockets – especially former oil fields. The Norwegian oil rig Sleipner is a pioneer installation when it comes to burying CO² underground; it stores one million tonnes of CO² per year, but emits 900,000 tonnes at the same time! This platform cannot trap the total amount of CO² it produces. Quite aside from the dangers of this risky venture (such as leaks or sudden explosions), we are a long way off, to say the least. We cannot pretend that we have found the solution.

Once scientific utopia moves away from *concrete* realities, it enters the realm of science fiction. Alfred Vidal-Madjar – Director of Research at the French National Centre for Scientific Research (CNRS) and at the Institute of Astrophysics in Paris –claims in an interview to the magazine *Sciences et Avenir*, published in the July 2008 issue, that we will have to leave the Earth. 'I think that eventually, we will not have any other choice. Our planet and our environment are already damaged and natural resources are becoming scarce. The only way to get out of this situation is to put an end to population and consumption increase: this is very hard to achieve, all the more so as emerging economies such as China and India are about to reach the same living standards as developed countries. It will therefore be impossible to stay on Earth permanently and we will be trapped on it as if in a closed-jar'. But there is a problem: even if it was technically possible to find the right planet (how many light years away?) or to *terraform* Mars or Venus (at what cost?) and assuming that we would still have enough energy and resources to build and launch functional space shuttles, how many human beings could possibly travel aboard? The scientist acknowledges that only 'a small number of people could leave for the solar system. It would be a mere drop in the ocean compared to the billions of people who would be stuck on Earth, without any certainty that a future is possible!' Here is another nagging question, 'Is there any solution for these billions of people, still stuck on Earth?' to which he answers, charmingly: 'Fortunately, there is a treasure on Earth: oceans [...]. It will be the main escape route for humans. Once we have settled in the ocean floor, we will be protected from air pollution and high temperatures. [...]We will recreate life-bubbles in the ocean. And thanks to genetic engineering, we may even be transformed into aquatic humans, into amphibians'!⁴⁷

This is not so different from the transhumanism advocated by the American guru Raymond Kurzweil. According to him, humanity is on the verge of being saved, by controlling *manufacturing* processes and improving the abilities of its *products*. Synthetic biology tends toward this. In response to the growing anxiety about how to ensure survival on our exhausted and damaged planet, advocates of transhumanism give the following answer: we just have to

47 Quoted by the newspaper La Décroissance, in the September 2008 issue.

create a *cyberman* who can eat waste and withstand toxic radiation. It is as simple as that. Transhumanism is a sect, almost a religious one, and its members worship a synthetic superman, who would be able to withstand all forms of pollution. This clearly shows that irrational faith in rationality leads only to madness. Anything is better than challenging our way of life.

Claude Mandil, former director of the International Energy Agency, is no doubt speaking sense when he explains that 'what makes energy efficiency policies difficult to conduct is that they result in minor and incoherent decisions. If I might use a colloquial word, I would say that this idea is not very *sexy* for governments! But nuclear power, or a policy of carbon capture and sequestration, that is what they call *sexy*. It implies major decisions, a lot of money, big corporations, and it is very attractive for policy makers'.

Orthodox economists, for their part, have led the way to unbridled optimism just by skipping over the fact that natural resources are limited. With a real theoretical feat, and thanks to the ploy of substitutability of factors, nature was swept away from the factors of production by neoclassical theorists around 1880, under the influence of Philip Wicksteed (1844-1927), Knut Wicksell (1851-1926) and John Bates Clark (1847-1938). According to them, the Earth and its natural resources can be reduced to two other factors: labour and capital. In particular, human-made capital, supported by science and technology, will solve all problems. Therefore it is not necessary to oppose the on-going growth in industrialised countries because, thanks to the price mechanism, technological development will reduce pollution to an acceptable level and prevent the exhaustion of natural resources. On that basis, existing forests may disappear, but we will still be able to discover and create new kinds of trees which can survive acid rain, and even find a way to live without trees. The advocates of the neoclassical theory show absolute confidence in technoscience and trust its high priests. They gladly take up their solutions. Thus, the chemist Walther Modell proved that by studying organisms living in the toxic air of volcanoes or close to hot water geysers, we could find substances that would enable humanity to withstand the worsening of living conditions on Earth. Reacting to this suggestion, the Norwegian philosopher Arne Naess ironically asked: why not try to learn from animals living in sewer systems, so that we could get used to living in similar conditions?⁴⁸ As early as the 1960s, a few development experts seriously suggested that bacteria found in ruminants be implanted in the stomachs of the inhabitants of poor Southern countries, so that they would be able to digest grass and tree-leaves, thus solving the problem of world hunger.

That is why it is unfair to accuse the advocates of degrowth of being technophobic and reactionary simply because they ask for the right to debate about the evolution of progress and technology. Their demands are the minimum that a citizen can expect. Since modern scientific activity costs a lot, especially when it comes to 'big science' – think about the cost of building a particle accelerator – it would be normal for citizens to determine what the choices and priorities of science should be. This is, for instance, what some scientists claim for; they are

48 Walter Modell, 'Drugs for the Future' in *Clinical Pharmacology and Therapeutics* (1973: vol. 14, n°2) and Arne Naess, *Ecology, Community and Lifestyle: Outline of an Ecosophy*, translation by David Rothenberg, Paris, MF editions, 2008.

grouped in a collective which has grown up around Jacques Testart and the French association *Science citoyenne*.⁴⁹ Technoscience has eliminated lots of methods and products which originally derived from ancestral knowledge – especially rural knowledge – and replaced them with expensive products and methods, which are only beneficial to industry. We agree with many *reasonable*⁵⁰, real scientists that there should be a moratorium on technoscientific innovation. The time has come to assess scientific and technological research seriously and change their orientation, in accordance with the new aspirations of our society.⁵¹ The current ‘Prometheism’ links freedom to ‘unlimited growth of material production and exploitation of the environment’, as François Flahault puts it.⁵² The technological choices made under the pressure of economic interests leave no room for an alternative solution. ‘Those choices absorb the available skills and networks too. Their presence obliterates other possible choices because of various saturation phenomena. The influence of this research is so big that it covers everything: training programs, factories, technical and financial means, skills’ networks in installation, distribution and so on’.⁵³

Ivan Illich shows that science could set itself a goal other than that of serving the technoscientific industrial complex. He says that scientific research is all about overcoming the secondary obstacles that prevent specific production processes from developing properly. To his mind, each and every scientific breakthrough has been celebrated with pride, as if it had cost blood, sweat and tears, and as if it were for the common interest, when it was actually almost entirely devoted to industrial development. He goes on to state that advanced techniques could be used to make labour easier or to expand people’s personal production. Natural sciences and humanities could be combined to forge tools, define their functions and establish rules to govern their use. In this way, Illich concludes that individuals, social groups and the environment they thrive in would be continuously renewed to make room for the display of personal initiative and imagination.⁵⁴ This is the objective of the degrowth movement. *Non-promethean* techniques and sciences may and should be developed in the future. Taking the lead from the ecological

49 See also Labo-planète. Ou comment 2030 se prépare sans les citoyens, with Agnès Sinaï and Catherine Bourgain, Paris, Mille et une nuits, 2010.

50 For instance in France, Jacques Testart, Albert Jacquard, Christian Velot, Dominique Belpomme, Jean-François Narbonne.

51 This last idea is similar to a concern expressed by Cornelius Castoriadis: ‘Where should we draw the line? For the first time, in a non-religious society, we must face up to the question of whether the expansion of knowledge itself should be controlled. And of how that can be done without producing a dictatorship over minds. I think we can set up some simple rules: (1) We don’t want an unlimited, mindless expansion of production; we want an economy that is a means, not the finality of human life; (2) we want free expansion of knowledge, but... (with) *phronèsis*’, that is to say, caution (a concept from Aristotle, Nicomachean Ethics), Cornelius Castoriadis, ‘Ecology against the Merchants’ in *A Society Adrift. Interviews and Debates, 1974-1997*, New York, Fordham University Press, 2010, p.195.

52 François Flahault, *Le Crépuscule de Prométhée. Contribution à une histoire de la démesure humaine*. Paris, Mille et une nuits, 2008, p.24.

53 Denis Bayon et al, *La Décroissance*, op. cit., p.112.

54 Ivan Illich, *La Convivialité*, op. cit. pp.61-62.

movement, we should promote learning for the sake of learning and refuse to exploit and dominate nature. In this way, we would try to know more about it to be able to preserve it, 'to work with and not against it', as *planetary gardener* Gilles Clément⁵⁵ likes to put it. 'According to Masanobu Fukuoka, one of the founding fathers of permaculture⁵⁶, the belief that man can create better things than nature is an illusion'.⁵⁷ The fact that this sentence was pronounced by a Japanese man rather than a Westerner is no coincidence. 'There can be no convivial society without gentle technology, neither can there be gentle technology without gentle science', as political ecology pioneer Bernard Charbonneau said.⁵⁸

What we must do is encourage 'green chemistry' over toxic molecules, promote environmental approaches over genetic ones (Dominique Belpomme), and research in eco-toxicology, agrobiology and agro-ecology instead of agro-industry, GM crops and other delusions. It is a great disgrace that the biological analysis of soil in agronomic studies has been replaced by fertiliser chemistry. We are trying to rectify this problem with permaculture and agroforestry. There is much research to be done on this subject, even on the industrial level: prolonging the service life of machinery, designing devices component by component, and creating repair and troubleshooting systems (for example, with ad-hoc software). The eco-efficiency and eco-design of products also need to be improved: we need fewer raw materials, less energy, less waste and pollution, and we need to make these products easier to repair, modify and recycle.

Until alternative solutions are found, the reduction should also be extended to larger projects such as: the ITER (International Thermonuclear Experimental Reactor), highway networks, high-speed rail, incinerators etc. These projects constantly inflict serious and sometimes even irreversible damage on the environment.⁵⁹

However, cutting-edge technologies might also contribute to solving certain problems. We do not intend to abstain from using them indefinitely or on principle. It is reported that sensitive nanotubes are currently being developed to strengthen the efficiency of solar panels. They are built into plastic sheets in the form of nanorods to create a type of solar wallpaper. Similar technology could be used for murals, which would essentially turn roads and facades of buildings into enormous power stations. Reactive nanoparticles are also being produced to clean

55 Hervé-René Martin, *Nous réconcilier avec la terre*, Paris, Flammarion, 2009, p.213.

56 Permaculture (a combination of the words permanent and culture) is a kind of sustainable agriculture based on combination of plants and soil protection.

57 *La révolution d'un seul brin de paille (une introduction à l'agriculture sauvage)*, Paris, Guy Trédaniel, 2005. Quoted by Hervé-René Martin in *Eloge de la simplicité volontaire*, p.154.

58 Bernard Charbonneau, *Le feu vert*, Lyon, Parangon, 2009, p.164.

59 'The situation calls for an emergency suspension of the construction of new incinerators and of the authorisations for co-incineration', *Mémoire de l'appel de Paris (the Paris Memorandum)*, quoted by Dominique Belpomme, *Avant qu'il ne soit trop tard (before it's too late)*, Fayard, Paris, 2007.

up the environment, and specifically, water sources.⁶⁰ This is surely not a bad idea. But producers should be careful and take every precautionary measure before going down this route. For example, the most commonly mentioned risk associated with these nanotechnologies is ecophagy. According to Xavier Bonneaud, the danger lies in the possibility that nanonetworks could evolve and duplicate in unpredictable ways and consume our entire ecosystem's carbon supply in a matter of days.⁶¹ Therefore, before disseminating these new technologies and products, there should be serious discussion of this issue, for instance during the conferences or debates for citizens that Jacques Testart so cherishes.

Above all, by blindly believing in science and technology, people tend to forget that all these problems are the result of our social system and that technology is powerless against them. The principal illusion lies there.

Castoriadis expressed the idea that scientific research should be controlled by society because it is potentially dangerous, especially when theory is applied directly to domains such as economics, in which people should have a say.⁶² Dominique Belpomme agrees and goes even further by adding that science does not have the answers to all our questions; it has its own limits beyond which scientists cannot go.⁶³

60 Xavier Bonneaud, *De la ville au technocosme. Le meilleur des mondes ? (from city to technocosm, the best world ever?)*, L'Atalante, Nantes, 2008.

61 Ibid.

62 See Cornelius Castoriadis, *Réinventer l'économie*, Paris, Éditions du Sandre, 2008, p.282.

63 See *Repères pour l'avenir*, Maison culturelle d'Ath, conférences 2007-2008, p.67.