

*Money from master  
to servant*

*From supply & push  
to demand*

# **Towards a flexible economy for a sustainable and fair world**

**Willem Hoogendyk**



***Ours is a liberation movement !***

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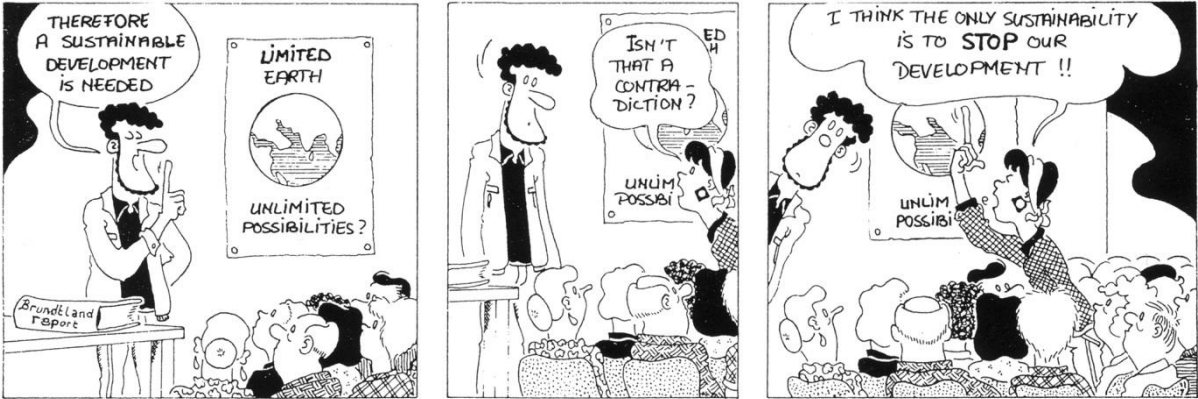
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## **Towards a flexible economy for a sustainable and fair world.**

### **Abstract**

By reducing the process of photosynthesis and needing evermore energy, modern progress is completely reversing the development of life on Earth to which humans owe their existence. That progress consists of a money-driven productivism and consumerism which has created a compulsion to growth and to continuous, often wasteful consumption of which the rich and emerging countries have become the prisoner. The mentality of modern humans has been moulded by this economy.

The current crises – ecological, financial, social – can be turned into a blessing. A drastic change (paradigm switch, metamorphose) is becoming a necessity, acknowledged by more and more people.

In order to regreen the Earth and preserve it for our great-grand children, we should calm-down and democratize the economy while turning money from master into servant. The modern waste-economy of supply and push should be replaced by a frugal one, geared to a demand within ecological bounds. Production should be made flexible. Demand for countless goods and services fluctuates, so enterprises should likewise be able to fluctuate without having to close down immediately they fall behind in the rat race, as is the situation today. This would mean *a.* making the remuneration of capital flexible, while tying business and investors closer together, and *b.* making the workforce flexible, by diversifying the sources of income of most workers (so that many of the workers will have more than one job). It will result in a *liberation of the business world.*

Under the official, WTO-ruled economy based on much import and export, we should build-up a more autonomous and self-sufficient economic ‘home’ sector, flexible and *more in the hands of the people and with useful work for everyone.* At the same time we can gradually scale down and ‘green’ the official sector while liberating it from the compulsion to growth. Ours will be an Earth-saving movement of emancipation and liberation.

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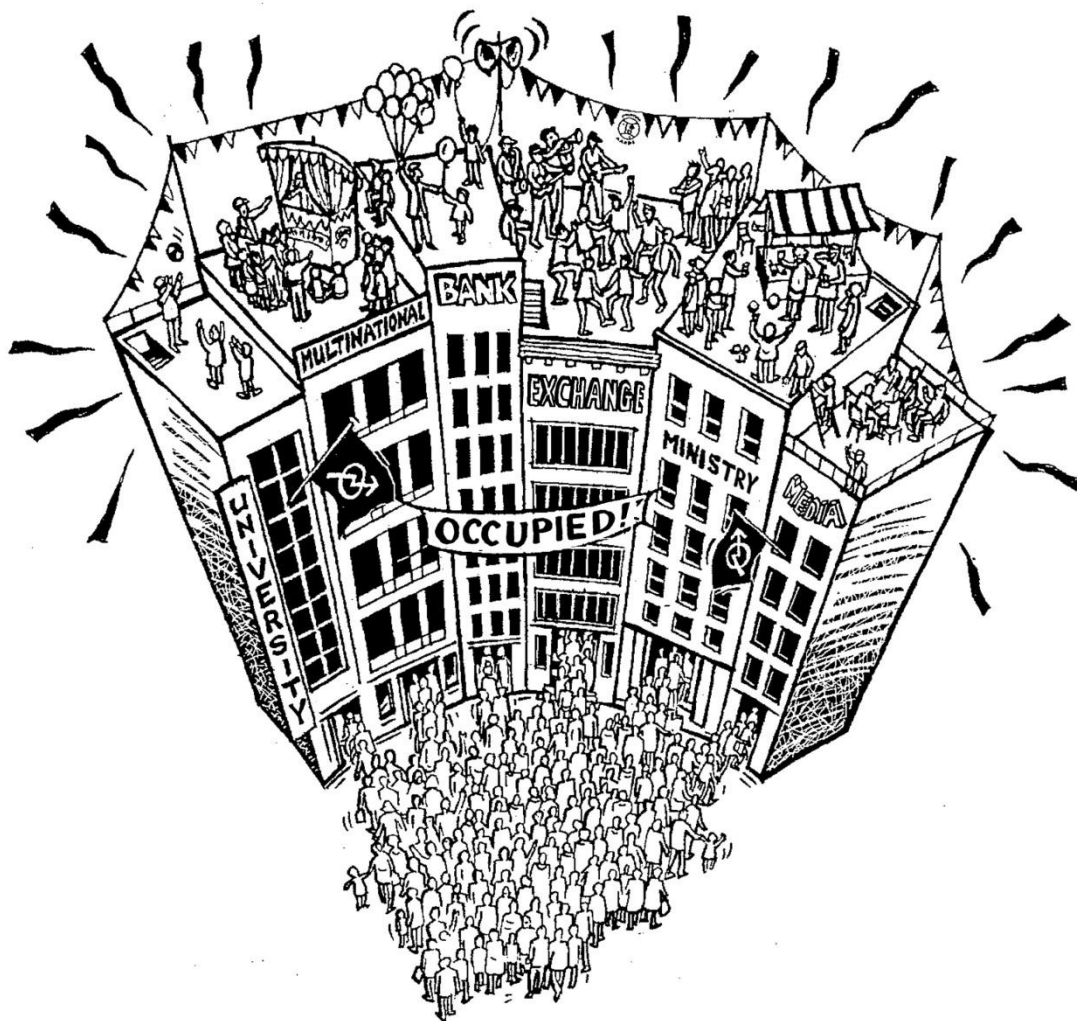
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**“We stand now where two roads diverge. The road we have long been travelling is deceptively easy, a smooth highway on which we progress with great speed, but at its end lies disaster. The other fork of the road – the one ‘less travelled by’- offers our last, our only chance to reach a destination that assures the preservation of our Earth.”**  
(Rachel Carson, 1962 (!).Silent Spring, chap 17)



*If the authorities, the business world and the politicians remain too insensible to our arguments, and many of our fellow citizens are remaining lethargic, what else is left to us than to squatter the whole society?*

# **Towards a flexible economy for a sustainable and fair world.**

Willem Hoogendyk

## **PART 1**

In nature, young ecosystems start off with a spurt of quantitative growth. In time, they reach maturity; after this point their growth is mainly qualitative. Back in 1848, the philosopher John Stuart Mill argued that a similar kind of growth should be pursued by human communities and nations. Mature economies, he thought, should seek a ‘stationary state’ to prevent the Earth being stripped of its last remaining beauty. In other words, there would be no further growth of population, nor of physical capital stock (roads, industrial equipment, buildings), but there would still be steady improvements in technology, culture and ethics. The ‘art of getting on’ (getting ahead) would then give way to the ‘art of living’.<sup>1</sup>

This is entirely in line with today’s calls for sustainability and for rich nations to reduce their ecological footprint. By 1991 the notion of a ‘steady-state’ economy had already been elaborated by US economist Herman Daly.<sup>2</sup>

In the rich countries, however, quantitative-growth-as-usual is still very much the rule. Must be. It’s perhaps a little greener here and there, and with a few other adjustments, but still with the same old mantra of continued growth. To abandon it, we are assured, would spell disaster! To remain where we are would throw us into immediate reversal! We would be booted out of the world economy! There would be mass unemployment, dwindling national treasuries, poverty all around, and chaos and confusion would reign.

Let us listen for a moment to a wise fisherman, whose tribe on the shores of Lake Bajkal has lived mainly on fishing for thousands of years. One day a bank opens an office nearby, advertising its services. A young fisherman is enticed to acquire a loan and modernizes his boat and equipment, enabling him to catch and sell much more fish than before. He has started earning money. His father is worried. ‘Should we catch more than we need for a living? Nature does not want it that way.’<sup>3</sup>

Nature is the condition-sine-qua-non of our existence, the carrier of our economies. Let’s look at how she wants it.

## **The economy of nature**

Our biosphere is a very thin layer on and around the Earth's surface, comparable in scale to the peel of an apple. Only within this layer is life possible.<sup>4</sup> Life is based on photosynthesis, that miraculous process by which plants transform water, air and soil into basic organic matter. This process is powered by sunlight. No wonder the ancients identified the four elements earth, water, air and fire as driving the life process. The energy of the sun is captured, retained and passed on, with the essential substances of life moving in cycles: water, carbon, oxygen, and

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<sup>1</sup> *Principles of Political Economy*, 1848

<sup>2</sup> *Steady-State Economics* (the first edition was already published in 1974).

<sup>3</sup> H.C. Binswanger (professor emeritus of economics at the university of Saint-Gall, CH), 1991, Introduction.

<sup>4</sup> Developed life. There is also primitive life elsewhere on Earth, e.g. in oceanic depths.

other elements such as nitrogen and phosphate. This highly complicated clockwork is kept going by the energy of the sun, which is gradually expended. Each necessary transformation in production, though, involves a loss of energy, or to be precise winding down from useful to useless as it flows through the system.

Here we need a word on entropy. It's the Achilles heel of modern people, entangled as they are in 'productivism' and counting on technological solutions. The only economists who can truly advance the idea of sustainability are those who are conscious of entropy.<sup>5</sup> Entropy – the subject of the Second Law of Thermodynamics – is usually associated with disorder, an increase in entropy representing a loss of useful energy. Entropy is created whenever energy is transferred. Some usable energy then becomes unusable, for instance in the form of dissipating heat. Since everything can be considered energy (matter, for instance, being stored energy), entropy is constantly being 'produced'. Iron turns into rust, a house into a ruin, order into disorder. The movement in the opposite direction is, from the ecological point of view, the ordering of life on the Earth's surface.<sup>6</sup> Life itself is the main cause of this modelling of the biosphere, rooted in the process of photosynthesis and fuelled by sunlight. One could say that the whole 'trick' of life's evolution on Earth is to operate in such a way that there is a significant decrease of entropy (from high to lower entropy). *All forms of life on Earth are the result of a (meagre but decisive) surplus gained on the entropy process.* Life means resisting and deferring the degradation of energy.<sup>7</sup>

The relationship between energy and ordering is a delicate one. With everything we do, with everything we make, we produce entropy as well, as an inevitable by-product. *Entropy follows us like a shadow.*

Wherever the soil is exhausted and plant life is destroyed, entropy accelerates again. Many deserts and arid lands testify to human civilizations going too far.<sup>8</sup> Similarly, an excessive energy input disturbs the optimum resistance to energy decay that has taken nature millions of years (and humans often thousands) to attain. This disturbance is the essence of the modern environmental catastrophe, accompanying the intensive use of fuels. *The fundamental problem in our biosphere is not a lack of energy, but an excess of it.* (See also the Appendix with the pinball

game.)



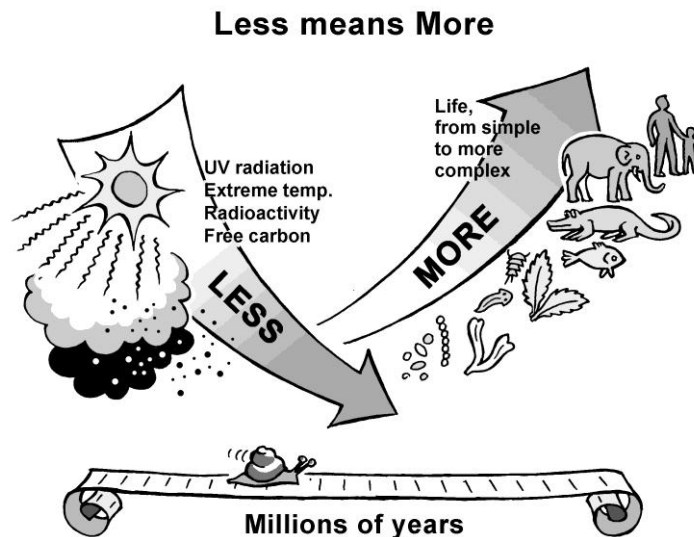
<sup>5</sup> N. Georgescu-Roegen was one of the first: *The Entropy Law and the Economic Process*, 1971. Before him was the US chemist and Nobel prize winner Frederick Soddy (1926). On Soddy, see Daly 1996, p. 173

<sup>6</sup> The bio- or ecosphere. Only a very thin layer over our planet where life is only possible. The 'peel of life'.

<sup>7</sup> The best-known example is the food chain.

<sup>8</sup> As I like to put it: most sandy areas on the globe show where there was once civilization.





*The decrease in various kinds of radiation, the moderation of temperature, and the storage of free carbon have allowed life to develop on this planet. It is life itself that has largely brought about these changes, and thus the essential conditions for its own development: a process of self-organization. The reversing of this process, for which we humans are mostly responsible, has immediate consequences for life on Earth and clearly for the most recently arrived forms such as human life. The effects of such a reverse on the global ecosystem, and thus on our economies, will be gigantic. Once we have understood this, we won't need detailed research or long arguments about how much was done by mankind and how much by nature itself, and what the precise effects will be for the future. We are drastically and catastrophically reversing the very process that brought about our existence!*

## **Reversing the life process**

In the course of its evolution, our biosphere has undergone changes, both through the action of existing life forms, and by enabling new life forms to appear. Radioactivity has diminished, temperatures have become more moderate, and humidity has increased. Metals and other materials, including a lot of carbon, have been stored away outside the 'peel of life', much of them in limestone and in what are now our fossil fuels. The oxygen molecules freed up in this process have in turn served as building blocks for the ozone layer ( $O_2$  becoming  $O_3$ ), which filters out ultra-violet radiation. Free oxygen (acting as a parasol), less radioactivity and many other factors were probably decisive for ocean life going ashore and for the appearance of big mammals, including ourselves! This is the self-organization of life.

Each new alteration permitted life to develop further. The human species is one of the most recent forms of life to appear, which means we are extremely dependent on the composition of the biosphere and on all the qualities that evolved at an earlier stage. Moreover, it's good to remember that our species is just one tiny part of a complex system, and that a part can never have a good view of, or understand, the system as a whole. Today, we seem to be ignoring this truism completely. The many ongoing debates about how much of this or that substance we should use, or just how much humans contribute to global warming, show just how unaware we are of what is going on. One thing is sure: our actions are disturbing delicate

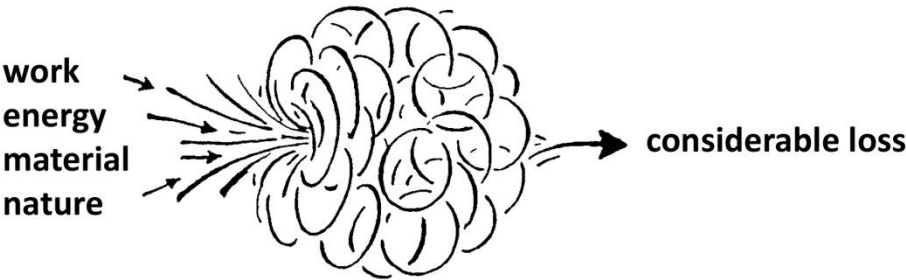
balances. *We are now engaged in completely changing evolutionary processes on which we depend, and nature is beginning to harshly make us pay the consequences.*

Once we realize the enormity of this conclusion, we also become aware that all the discussions about ‘how to supply the energy we need’ only show the participants’ poor ecological awareness. Anyone who really understands ecology and entropy knows that we already use much too much energy. The question we need to be asking is: ‘What are our *real* needs?’. And, in the wealthy countries: ‘How are we going to achieve the necessary reduction in the overall volume of production? How do we get working on the Big Shrink, the drastic operation of Pruning Back?’



### Ecosystems

*In our biosphere, the materials essential for life move in cycles. The energy from the sun, which fuels this process, passes through the ecosystem, going from a useful state to a useless one. Turning to society, many people attach high hopes to the widespread recycling of materials, instead of throwing so much away. We should, however, keep in mind that the speed of these natural cycles determines the consumption and loss of energy in these processes. The point with recycling is to respect nature’s limitations, and make it only the last resort. Repairing and re-using products, including packaging, is in most cases far better. Of course, the best option is to make only products we really need, and to make them last a long time. (A delay of the decay!).*



### The Money Economy

*Like ecosystems and the whole biosphere, the money economy is a circulating system. But contrary to the natural system, in which energy (the finite amount we get from the sun) circulates materials, in our economy it is the money that circulates, thus ‘sucking in’ and ‘emitting’ labour, resources, fuel, land and nature. Since money can be created, there are fewer and fewer limits on the circulator, and consequently the process of consumption is happening faster and faster, and on a global scale today. The circulating part of the system is not a passive ‘follower’ being driven, but the driver, the prime mover.*

Faced with these circumstances, and a general environmental awareness that is still underdeveloped, we have to realize that we have no choice but ‘deep’-green ecology (as opposed to light-green environmentalism). It is time we make major changes, to reduce modern human activity and to question ‘sustainable development’, which too often justifies the pursuit of growth and ‘business as usual’.

So now we know how to answer engineers, politicians and the like who tell us we can't turn back the clock. In actual fact, this is exactly what *they* (and all of us) have already done by reversing the evolutionary process. Now, the whole job is how to get the clock running forward again *properly*. The necessary changes may seem backward, but only to those who still think in these outmoded ways. As for economists, don't waste time listening to the many of them for whom ecology remains *terra incognita* or of secondary importance. Their writings can go in the paper recycling bin!

Let us now return to economics and analyze more closely its ‘spiralling’ dynamics, in which our society has gotten entangled.

### **Money must grow**

Most economists say it's the ‘real economy’ and not money in itself that generates growth. Growth is driven by trade and cross-border exchanges, by competition, and by a growing population with new needs and desires, as well as by scientific and technical development and creativity. Money is only following and facilitating economic activities. If production and consumption didn't need money, it would be of no use and could never act as a driving force or a prime mover. Providers of money, they claim, have no major influence.

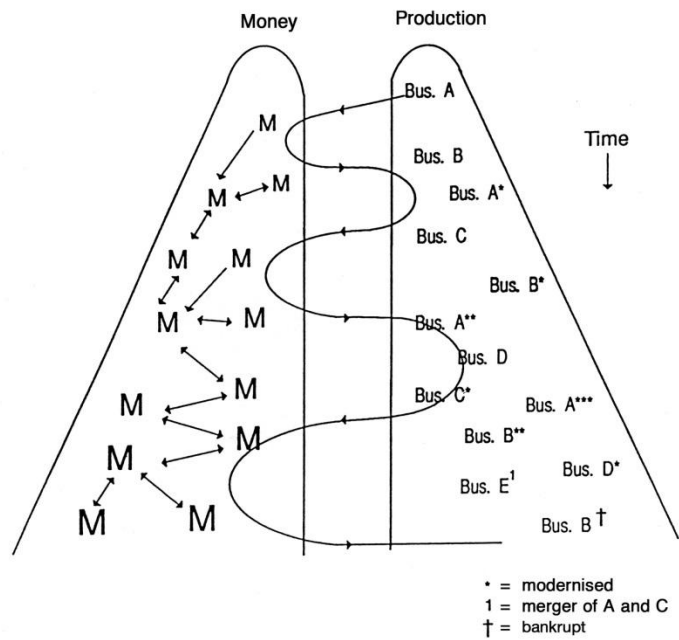
To this I would reply that in our society there's always something to buy, a reason to borrow and something to invest in, and that this situation perpetuates itself. Moreover, and more importantly: *an effect may, over time, develop into a co-cause, and from a co-cause into a main cause or even the main cause.*

Under what conditions, then, would it be possible for money – a mere means of exchange – to become a driving force? It should be a non-perishable, non-degradable means of exchange, and the sole one, in a market where it reigns supreme over the other means of production. There should be have-mores and have-lesses. A certain shortage of money must be maintained so that to acquire money, which has become a commodity on the financial market, one has to pay for it with money. *So money has itself as its price.* By and through being used, money multiplies and its power grows through its accumulation. Additional money must be fairly easy to create, but certainly not by just anyone. Slowly at first and then faster, a money-driven growth economy will emerge, which will turn the whole of society into an all-encompassing growth system, an insatiable creator of needs.

It seems to me that in the history of the rich countries, these conditions have gradually been met, by an interplay of factors, in which the money system itself has gradually moved to centre stage.

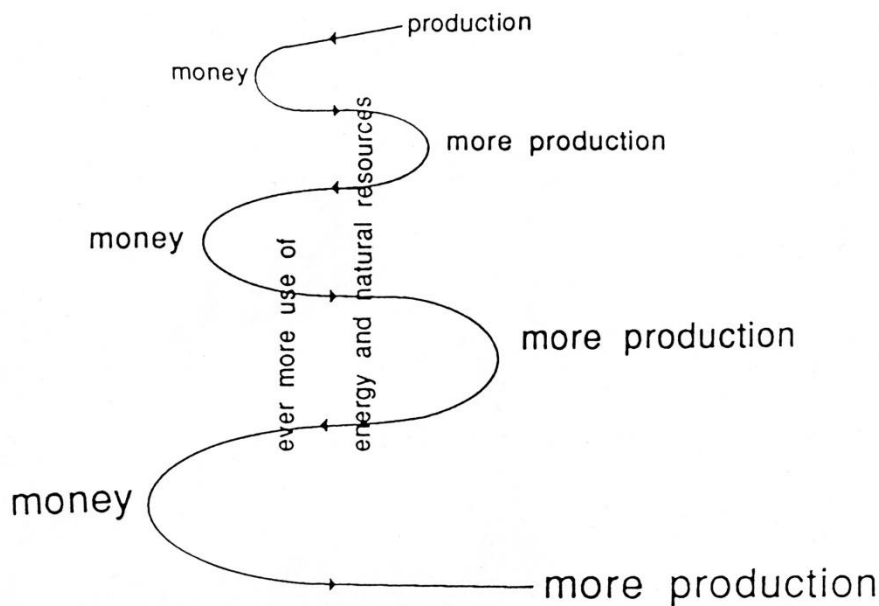
## Money pushing production

The 'real economy' has developed from a money mover into a growth machine, which constantly needs and 'devours' enormous amounts of money, and which has been *at least partly if not completely manoeuvred into this situation by the money-must-grow system itself*. This is how I arrived at my heretical hypothesis: *business needing money is caused by money needing business*. There is not only addiction to growth, but an equally great *compulsion to grow*. Therefore, production must be freed from the 'modern' money system in order to make it manageable and beneficial again.



*The system of money-must-grow and competing capitals are the main factors behind the overheated competition between businesses. The process is reinforced by the creation of fiat money.*

## Spiral of Money → Production of goods and services



*Ever more use of energy and natural resources*

## Theory as camouflage

The US futurologist Hazel Henderson used to say: ‘Give a group of students a basic course on economics, and they will be brain damaged for life.’<sup>9</sup> Let’s try a cure.

The Mercantilists of the 17th century assigned a great deal of importance to the role of gold or other money currencies in the economy, whereas the Physiocrats of the 18th century insisted on the essential importance of nature. These two convictions have disappeared from the classical and neo-classical theories (Smith, Ricardo, Walras) which the 19th-century bourgeoisie welcomed with open arms. In this way their means of power – capital – was shifted behind the scenes in a period that democratic movements were on the rise.

Economists started to separate the financial domain from that of the real domain (of production and consumption). This new ‘classical’ theory considered the owner of capital mainly as a saver, who was seeking to invest his surplus. Money was only supposed to *follow* what was happening in the real domain. The economy, in fact forced to grow, was presented in theory as being made up of various balances (supply & demand, money volume & commodities, e.a.) The old cooperation between man and nature had been reduced to one between labour and capital. The market had become the Market, including land and labour.<sup>10</sup> ‘Thanks’ to Adam Smith’s invisible hand, the micro level (the enterprise) started to dominate the macro level (society). This in turn has resulted in economic calculation being limited to very restricted criteria, and costs being more and more externalized (i.e. taken less and less into account). These days, free exchange, insofar as it is practised, is supposed to be based on Smith’s ideas and Ricardo’s theory of comparative costs. The latter is based on both capital and labour being quasi-immobile (tied to a country or region) – a situation exactly opposite to today’s, with Capital flying all over the world and Labour, too, having become rather mobile. Herman Daly on the arguments for free trade: ‘Too illogical for words!’<sup>11</sup>

The various production factors (capital, land, machines, materials, labour) are represented as being equal. This masks the fact that money is the dominant factor, since it can acquire the others. We have also started to use the word *capital* when talking about machines, roads etc. Today, *all* factors of production are called *capital* in the triad of financial capital, physical capital and human capital. A nice cover-up for the dominant factor!

The system of money-must-grow, which results in the current frenzy of production, is justified by the mantra that human needs are unlimited. What are in fact producer societies are called consumer societies, and supply is represented as based on demand. What has become an economy characterized by acquisition and money-making is represented and treated as a subsistence economy. While practice has remained mercantilist, the official theory has become classical or neoclassical. Mainstream economics perverts reality, and the money system had been completely eliminated from the economic debate.<sup>12</sup> Aren’t the dominant ideas generally the ideas of those who dominate?

We use to say that clothes make the man. We can also say the economy makes the man. First the cash economy modelled modern man to a *homo economicus*, a calculating,

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<sup>9</sup> Among her publications: *Paradigms in Progress*, 1991

<sup>10</sup> Karl Polanyi, *The Great Transformation*, 1944

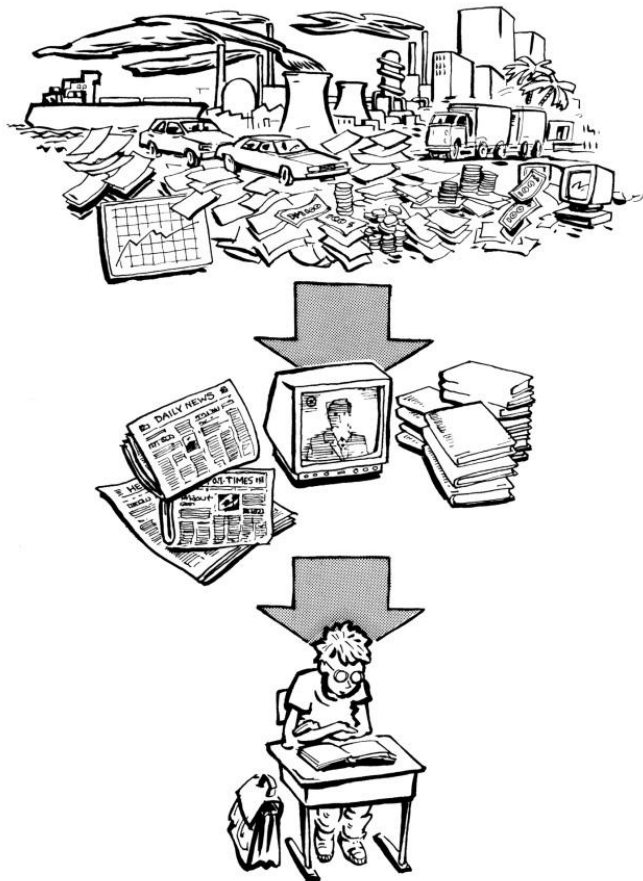
<sup>11</sup> Lecture at Institute of International Social Studies, The Hague, 1996. Also in Daly 1996, p. 153.

<sup>12</sup> See for instance H.C. Binswanger, 2006, p. 162.

individualist citizen. As a result, it's easy for economists to say: 'Behold this man. Of course the economy has become what it is now! Capitalism best suits human nature.' *Capitalism has created man in its own image and consequently this image has allowed capitalism to justify itself.*<sup>13</sup>

However, all individuals, classes and elites who benefit from money being a means of power have an interest in perpetuating this economic theory developed by the dominating classes of the last centuries. Moreover, the reality of how things are has become even more opaque now since for many, the system looks like a beneficial one. The development of savings banks has turned many people into small savers. The credit system, it must be acknowledged, also has a facilitating, even 'democratizing', function. Employees get involved when their salaries consist partly of shares in their company. Moreover, in developed countries a number of important accumulations of capital are used for social purposes such as pensions, national health insurance and unemployment benefits. In these cases, interest and dividends do go, or seem to go, to the general good, which definitely helps to obscure our full view of the monetary system.

In placing the monetary system at the centre of everything<sup>14</sup> and in affirming that it has become the driver of the economy, making growth a *must*, I am aware of having made myself a suspect of heresy to traditional economists. I comforted myself by referring to G.B. Shaw, who asserted that new ideas often start their careers as heresies. NB. Since the financial crisis things have improved!



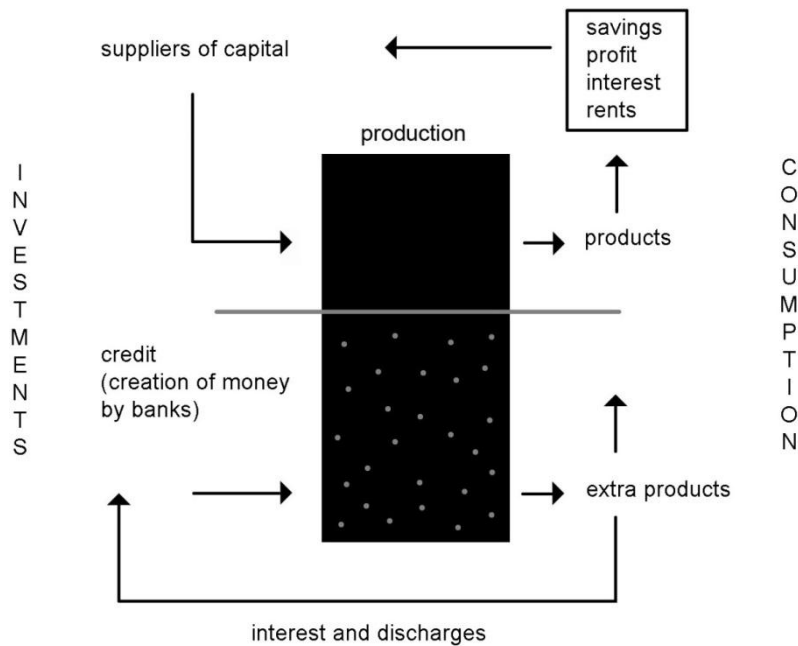
"Our needs are unlimited."  
 "The market is wonderful."  
 "Money is just a facilitator."  
 "Planning? Recipe for failure!"

<sup>13</sup> The young fisherman on Lake Bajkal, in the introduction to Binswanger's book mentioned earlier, tends to get more individualized and become such a homo economicus. The author concludes: 'Where the cash economy establishes itself, humans are subject to change.' To paraphrase Daly & Cobb: the modern economy is overstimulating our ego muscles. We surely have social muscles too, but they are atrophying since this economy demands too little of them. (1990, p. 140)

<sup>14</sup> No doubt influenced by Marx and Keynes, but first experienced by witnessing the bank's chokehold on my father's business. My *The Economic Revolution* and Binswanger's *Geld und Natur* date from 1991!

## Money-creation by banks

Facilitating, pushing and enslaving



*The lower black space (the profitable area of the fiat money!) should be considered as much and much bigger. As for the consumption, this too is boosted by crediting: consumer credits.*

### More on the money system

I will dwell just a bit longer on the money system, since it is unknown territory for both the environmental movement and for those who want to restore a more social type of capitalism (the Rhineland model – battered in the global competition - as opposed to the rougher Anglo-American version).<sup>15</sup> Many of their strivings fail since they do not or not sufficiently address the wider context: the money system, the financial powers and their doings, property rights, the control over investments and over the decision-making structures, the legal constraints etc.

As we know, most money is created by banks through credits for production or consumption. It is fiat money, created out of the blue. Banks are supposed to keep some of the money entrusted to them by savers as a reserve. However, over the course of time they have managed to lower this reserve from 12% or 20% (depending the country) to currently about 1 %, causing grave concern in many countries since the credit crisis of 2007. This money creation is undoubtedly facilitating, but it is also pushing and certainly enslaving. It is enabling, since it stimulates entrepreneurship and consumption. The payment of interest is enslaving and requires surplus production or higher prices. Finally, since no previous savings, no sacrifice, is required, the system is highly unecological.

The master stroke of the money economy is the injection of this new bank money into society, in the form of credits, before the production to be undertaken with that money has

<sup>15</sup> Thomas Piketty, Ha-Joon Chang and many, many others.

started. In this way, the purchasing power, which is to meet the new goods by the time they are marketed and will enable them to be bought, is already generated in advance.<sup>16</sup> Moreover, offering consumer credit turns dormant desires into realizable purchases. Thus, *money precedes, and even creates demand*.

Let us turn to Keynes for a moment. He is well known for his ideas about stimulating public spending in times of recession. Seldom put in the picture (the dominating picture!) is his opposition to the cumulative oppressive power of money in capitalism. '[For] a little reflection will show what enormous social changes would result from a gradual disappearance of a rate of return on accumulated wealth. (...) it would mean the euthanasia of the rentier, and, consequently, the euthanasia of the cumulative oppressive power of the capitalist to exploit the scarcity-value of capital. Interest today rewards no genuine sacrifice, (since) there are no intrinsic reasons for the scarcity of capital. (...) this may be the most sensible way of gradually getting rid of many of the objectionable features of capitalism.'<sup>17</sup> He attacks the system of interest, which indeed is a more automatic money accumulator than the dividend system. The latter follows the ups and downs of a company, but this closer relationship between investment and company is thwarted by the great mobility of stocks. My slogan: *the more capital is mobile, the more the economy is unstable*. Keynes again: 'The divorce between ownership and the real responsibility of management is serious within a country when, as a result of joint-stock enterprise, ownership is broken up between innumerable individuals who buy their interest today and sell it tomorrow and lack altogether both knowledge and responsibility towards what they momentarily own.'<sup>18</sup> The Norwegian economist A. Hallenstvedt qualifies the system of easily buying and selling shares as 'the institutionalized irresponsibility of capital.'<sup>19</sup>

Accumulation of capital means withdrawing money from somewhere else. The 'loss' is mitigated by banks creating more money. However, this creation is privately steered, with its course set for short-term profit. *The invisible hand of the market has become the visible fist of Capital*. Even the state is very much the prisoner of the current economy. Keynes wanted money to circulate well in order to further economic activities. So did the Belgium merchant Silvio Gesell, the inventor of negative interest<sup>20</sup>, and his followers, the 'circulists' (my term) who promote a *Freie Wirtschaft*, a free economy. The problem now is: we want money to circulate for fighting poverty, and for environment-beneficial projects. But on the other hand we want to stop the use of money for wasteful or unnecessary production and consumption. It's clear that to overcome this dilemma we need a more collective grip on the economy. The private sector, ruled by money and competition, can only manoeuvre very limited.

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<sup>16</sup> Binswanger, 1991, p.102.

<sup>17</sup> 1973, p. 221 and 376. One could suggest that Keynes wanted a capitalism without capitalists.

<sup>18</sup> 1933, p. 236..

<sup>19</sup> In *Det Gode Norge* by Dag Hareide. (Oslo1991)

<sup>20</sup> If people hoard money at home, it loses value after some time, unless you buy stamps to stick on the bank-notes – a whip for stimulating circulation and hence economic activities. This system of demurrage was successfully tried out in some central European municipalities after WW I when the economy was in ruins. In barter systems (as the Swiss WIRring) interest rate is often lower than that maintained by banks. Criticism of interest is rather popular among green reformers. They tend to forget profit-making as an important money-accumulator.



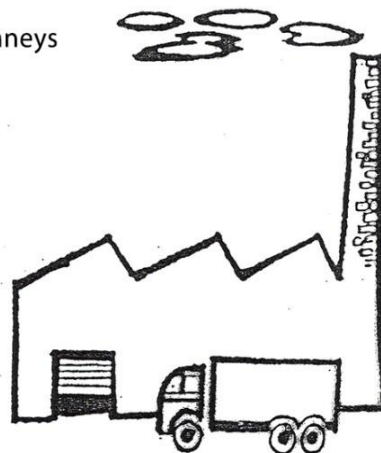
## Compulsion to produce continuously-I

We are all prisoners  
of the smoking chimneys

The investor  
wants profit

The workers  
want a salary

The state  
wants tax income



**Hence:**  
**ongoing maximised production,**  
**also of what is not being consumed all the time**

*Capital, Labour and the State all want to keep seeing the smoke coming from the factory chimneys!*

## Needs

Since perpetual growth and our current productivism are often justified by the mantra of our needs being unlimited, laying the blame squarely on us as consumers, a word about needs.

If our needs are unlimited, why is there such massive advertising and marketing to make us buy? Why all the creation and suggestion of needs? Why all the pushing and cajoling to have us consume?

The ancient Greek philosopher Epicurus distinguished between needs (which are natural and necessary) and desires (which can be natural or unnatural). Maslow's well-known pyramid arranges the needs of the individual in a hierarchy. Keynes distinguishes absolute needs, which are not insatiable, from other, relative needs, which satisfy the desire for superiority and which may indeed be insatiable.<sup>21</sup>

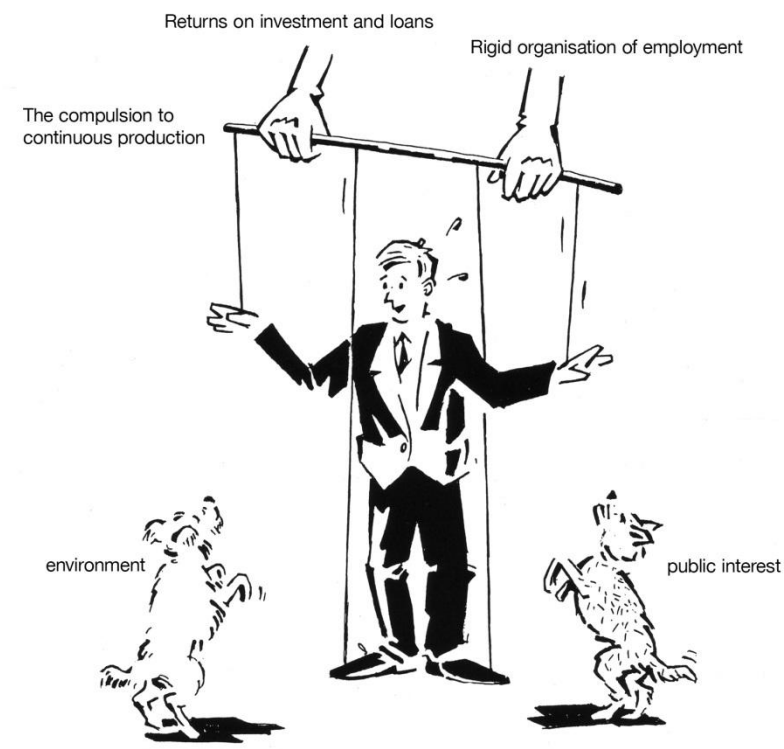
I distinguish four categories in line with modern times:

- a. Basic needs ('natural and necessary'): food, clothing, shelter, love, sex, communication, work, social recognition, etc.
- b. Needs compensating for past losses: for example, pools for learning to swim because the water our grandparents used to swim in has become too filthy, playgrounds because cars have now taken over our streets, etc.
- c. Needs for reducing, repairing or preventing damage: water purification plants, catalytic converters for our cars, the liming of acidified lakes and forests and so on and so forth – the realm of the booming eco-industry.
- d. Needs created by past developments: for instance, the need for new jobs for those who have lost theirs as a result of automation; the accelerated need to renew machines because of the fierceness of competition; or the increased need for transport, due to physical planning based on the geographical separation of housing, work and recreation.

<sup>21</sup> 1931, p. 326.

Needless to say, needs b, c and d have increased enormously. In fact, most of the activities we as a society perform revolve around them. They form the compulsive activities generated by our 'prison', the production spiral. Since our responses, whether in the form of compensation or repairs, are insufficient and usually leave the root cause of the need untouched, they stimulate the spiral by creating a continuous stream of new needs. It is an expanding, self-reinforcing spiral of misery, driven by money and consisting of the overproduction of commodities and of pseudo-solutions. The former prime minister of the German *Land* of Saxony, Kurt Biedenkopf, said, 'The increase in production no longer serves in the first place to satisfy needs, but the increase in needs serves to keep up industrial production.'<sup>22</sup>

### Compulsion to produce continuously - II The imprisoned entrepreneur

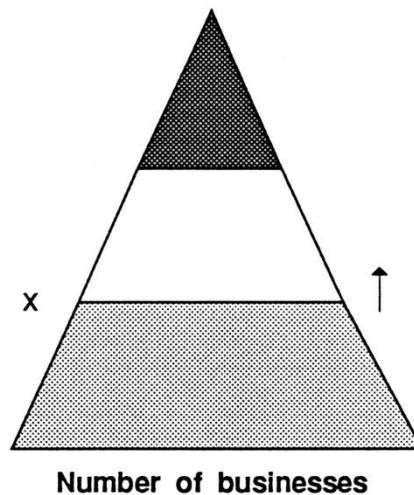


*The money-driven compulsion to produce continuously and ever more has caused the necessity to consume and waste continuously and ever more.*<sup>23</sup>

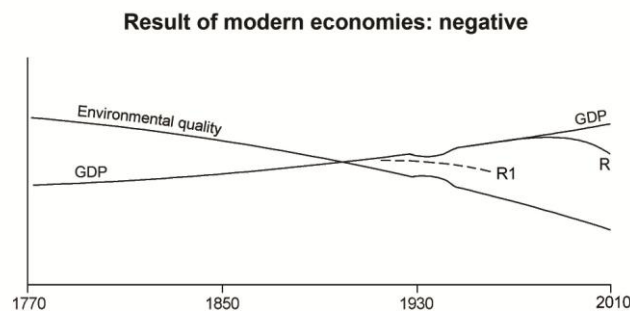
*Obliged to remunerate invested capital and subjugated to a rigid labour organization, the entrepreneur must produce continuously and at full capacity, so that it's difficult for him to care for the dogs.*

<sup>22</sup> Wachstum bis zur Katastrophe?, Die Zeit, 26-9-91.

<sup>23</sup> Also think of the enormous market of capital goods, machines needing to go ever faster, roads ever wider, weapons and chemicals ever more efficient. This market is rather remote from the individual buyer in the supermarket or the shopping mall...



In many branches of a growth economy, the situation is as pictured here. Because of continuous scaling-up and intensification, businesses (including shops, farms, etc.) are constantly being pushed out, made bankrupt or merged into a larger set-up (at bottom). At the top are the businesses that are likely to last for some time – few in number, but together representing a large proportion of production. Those in the middle all still think they will make it. However, the line marked X – the red line every business knows about – is constantly moving upwards in a growth economy. As a mobile guillotine... Result: an enormous loss of capital (including machines, knowledge, craftsmanship) because of the many bankruptcies.



**Result of modern economies: negative!**

Critics have elaborated welfare indexes which take account of environmental and social costs left out of official GDPs. They show a recent decline of welfare in the rich countries (R). Even more complete ecological yardsticks show that mankind's economic pillar has already been seriously collapsing much longer. Think of the millennia of deforestation and erosion caused by human activity, and the more recent but massive use of fossil fuels. The major economies have been running in reverse for a long time (R1)!

But enough of the spiral of misery. Let's look at creating the opposite, the spiral of progress - sustainable progress, that is.

**"Yet there is hope. On a hotter planet, with lost deltas and shrunken coastlines, under a more dangerous sun, with less arable land, more people, fewer species of living things, a legacy of poisonous wastes, and much beauty irrevocably lost, there will still be the possibility that our children's children will learn at last to live as a community among communities. Perhaps they will learn also to forgive this generation its blind commitment to ever greater consumption. Perhaps they will even appreciate its belated efforts to leave them a planet still capable of supporting life in community."**

Herman Daly & John Cobb

*For the Common Good* (1989), concluding words.

## PART 2

### A flexible economy

The current turbulence in the financial domain of the economy should not camouflage the need to transform the *real* domain. In my opinion, the money-driven economy of supply, which has become disastrous for our biosphere, should be replaced by the old economy of demand – a demand which must remain within ecological limits – while re-localizing it at the same time. Our current volumes of imports and exports, and the intensity of transportation they imply, are no longer tenable, from the perspective of our energy dependence alone.

What I am proposing is that we make production and trade *flexible*. Since demand often fluctuates, companies should be able to fluctuate as well, without immediately losing out to their competitors. As observed, the greater mobility capital has, the more unstable the economy is. To remedy this, it would be advisable to flexibilize the remuneration of capital<sup>24</sup> by linking investors more directly to their companies. When sales slump, as they normally do with many businesses, the providers of capital would receive less money and would not be allowed to desert the company. A flexible remuneration of capital would thus also require a reduction in its mobility.<sup>25</sup>

Entrepreneurs do not only want to hold on to the capital they are obliged to serve. They would like to keep their employees too. However, this constraint weighs less heavily than the needs of capital, so once things get rough they will nonetheless be obliged, perhaps after taking a few cost-cutting measures, to fire workers. Employment could be organized less rigidly, which would flexibilize labour. This implies a diversification of sources of income for many workers, who would then have several different jobs. A company could then continue to operate with fewer personnel, without needing to close its doors. The workers who cannot at that moment be provided with work (until demand picks up again) can turn to other paid activities, which they can start right away. This diversification of work holds true for all people capable of work, including upper management. It would result in a greater variety of work, which is what many workers want anyway. In fact, many people are capable of performing (and are now performing) other activities outside of their main job. Some like to do odd jobs or repairs, help local farmers and gardeners, or assist other entrepreneurs temporarily sort of employees. They could help out at sports clubs and sporting events, or drive people with mobility problems, while others would make good (assistant)teachers or could care for those near and dear to them, or the sick or disabled. These skills will be well put to use in the new local economy, which once it has been profoundly ‘de-carbonated’, will require more manual labour. For many workers, *job security will be replaced by income security*. The new distribution of (useful!) work should be in the hands of the people themselves, mostly on the local level, but also on regional and national level.

The flexibilization of labour proposed here (and which will concern many of us!) has nothing to do with the kind of flexible work many employers today want to switch to by

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<sup>24</sup> This idea (Hoogendijk, 1991, p. 91) has been supported by Binswanger, 1994, p.119.

<sup>25</sup> To more directly link the investor to the company, one could opt for the legal form of the foundation, in which both parties are represented. This could be furthered by replacing loans with shares, i.e. replacing (fixed) interest by (flexible) dividends. This resembles Islamic banking practice.

offering temporary contracts and negotiating loopholes enabling them to fire people more easily.<sup>26</sup> A situation should evolve in which most of us would hold several jobs during the week, month, year, or a longer period. The particulars will depend on the individual's principal professional activity or 'core product'. But remember, there should be *no flexibilization of labour without flexibilization of capital!* As we enter the 21<sup>st</sup> century, we should at last consign the inequitable feudal relationship between Capital and Labour to the dustbin of history.

Besides the normal, free market, a certain amount of planning will be essential for the vast majority of work classed as public services. Also, large investments would have to be subject to democratic control. In democratic countries, the necessary political structures already exist at the municipal, departmental/provincial, and national levels. They only need to be put in charge of economic affairs.

Of course, a number of goods and services will have to be always available, such as milk, bread, tap water, electricity, toilet paper, newspapers and other media, as well as such essential services as education, justice, health care and security; their production should go on uninterrupted. Here the workforce doesn't need to be flexible. But we could organize things so that even people working in these areas could participate in basic tasks within their own communities, for example working in the collective kitchen gardens, sports clubs or retirement homes, according to available time.

The astonishing result of these proposed flexibilizations will be *the freeing of production and of enterprise* – not to be confused with the 'free enterprise' of liberal ideology. Both entrepreneurs and employees will be less dependent on the ups and downs of their product. For many salaried workers, job security will be replaced by income security. They will have less stressful, more varied and more interesting lives.

### The liberated entrepreneur



*By making both the remuneration of capital and the organization of employment flexible, the entrepreneur will be freed from the compulsion to produce continuously and at full capacity, and, at last, be able to care for the dogs.*

<sup>26</sup> If not purely to make more profit, flexible contracts are from their point understandable in view of the pressure of competition.

## Two-track strategy

In my opinion, the main strategy for such a change in our globalized countries should now be a two-track one. With one hand we should calm down productivism and mark out a new path for the production system, which despite the crisis is still overscaled and compulsive, and the unbridled worldwide ‘overtrade’ accompanying it. With the other hand we should build up an economy which is green, more equitable, on a fitting scale and, to prepare us for the post-petroleum age, as self-sufficient as possible. If we’re lacking inspiration, we need only look at the innovative alternatives already operating in various parts of the world.<sup>27</sup>

These operations should always go hand in hand, like two communicating vessels, one emptying while the other fills. It should be understood that part of this double manoeuvre will consist of maintaining or converting interesting and suitable aspects of existing industrial technology and equipment. However, if we do not make a clean break with the bad habits of the past, nothing will really change; we will only be a bit more selective. Otherwise society will continue charging towards the abyss, but at a slightly more leisurely pace. Desperate times call for desperate measures.

That being said, it might be more strategic to build up a green economy without immediately attempting to prune back the dominant one of energy-intensive manufacturing (whether for domestic needs or exports), which has already been hurt by the current recession, if not depression. Many people are making a living in our current economy, and it is an important source of income for the State. It would be wiser not to fuel feelings of bitterness among much of the population by eliminating these jobs.

In a village or urban district, the work and care needed could be inventoried and, in consultation, divided among the available people (in principle everyone, including those with “proper” jobs and vital pensioners). We envisage everywhere local work centres and local, social banks; and perhaps the introduction of a basic citizens income. People will engage according to available time, capacity and skills. It is participatory attribution of tasks and the budgeting there of. The residents will thus get more grip on their own economies – emancipation through collective self-activity.

On the other hand, while we create a parallel green economic sector, it seems eminently possible at the political level to try to divert new traditional investments, e.g. in the infrastructure (new highways, larger airports) towards greening the traditional economy and from there to the really sustainable and social sector.

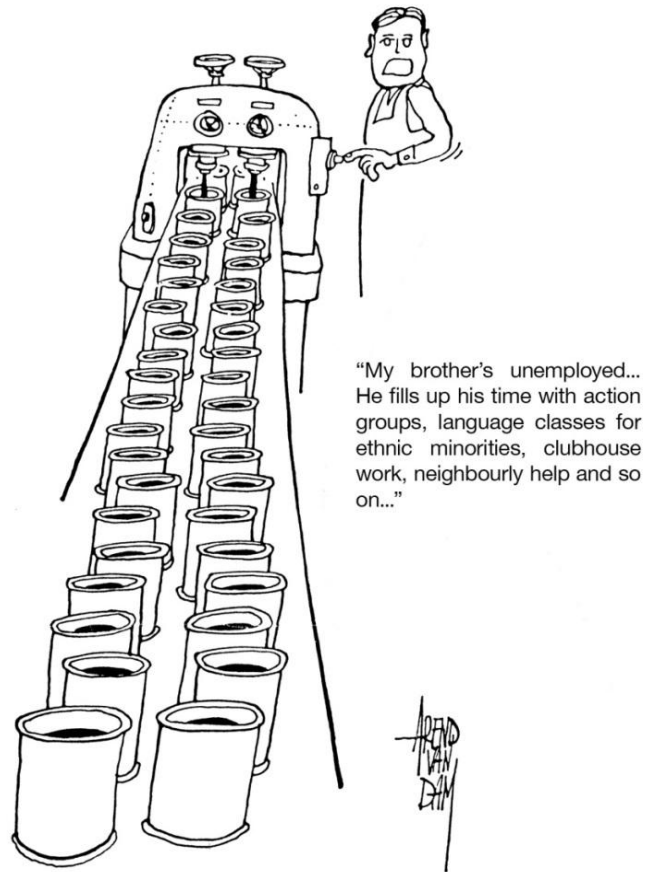
As it gradually quits the great casino of globalization, this economy will be re-localized, green, democratized and on a human scale. Everyone will participate in it, contributing according to their abilities. Production will be everyone’s business. The new work ethic will be **‘Whoever takes from the planet and the community has to give back to them’**. Thus we will all have to work, at least part-time, for the community. Conversely, society – that is, us – will create enough jobs for us all. It’s simply a matter of organizing things differently and adapting the current system of social security benefits, which ultimately keeps many people

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<sup>27</sup> From organic farming to communal kitchen gardens, from free bicycles and car-sharing schemes to the restoration of local employment, from solar panels to wind generators, from planting trees to regreening the neighbourhood, from share, repair and re-use to local exchange and currencies.

stuck at home, often on the dole. And this number will rise because of the jobless growth in the official economy.

In this model, work will become the product of the workers themselves once again, and it will not be alienating. As economic activities are organized more collectively and fairly, differences in income will even out. Useful and necessary goods will continue to be produced, but not beyond the boundaries of what the Earth can bear. New activities will be developed to replace imports, as long as these are clearly products we need. This sector will be able to absorb all the workers who have lost, or stand to lose, their jobs in the formal sector, still involved in the global competition and subject to further automation and the whims of hedgefunds, banks, multinationals, the EU and WTO etc.



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**Here an interval with four remarks:**

Firstly: In fact, by developing this extra convivial productivity, it means adding to the current growth .... growth! Of the good kind, that is, but growth it is. And of course, from that more resilient base we can start gradually but firmly slim down the official economy.

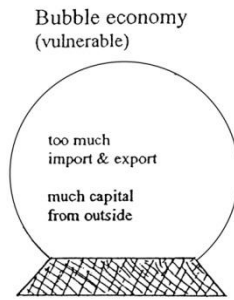
Secondly: The project will work best if there is a *material* need to realise it. Better than *preaching* change etc. Diminishing income, poverty and scarcity will thus help. But also intensive ecological education, to make people realise it's for our survival.

Thirdly: Ours is a *liberation* movement. A liberation from the prison which is the compulsion-to-grow economy with its race-to-the-bottom, banks, multinationals, big funds, elites etc. And states that try – at best – mitigate inequality by means of making the cake bigger (growth!) and not by means of sharing the cake fairer. Mind you, most of our adversaries are not baddies but imprisoned poor souls which we should set free!

Finally: Because of our brains, we humans are the avant-garde of the fascinating anti-entropy movement, performed by Life-on-Earth. We should be proud of that position. And not ruin it, but make it turn out well!



## The transformation of a rich country's economy.

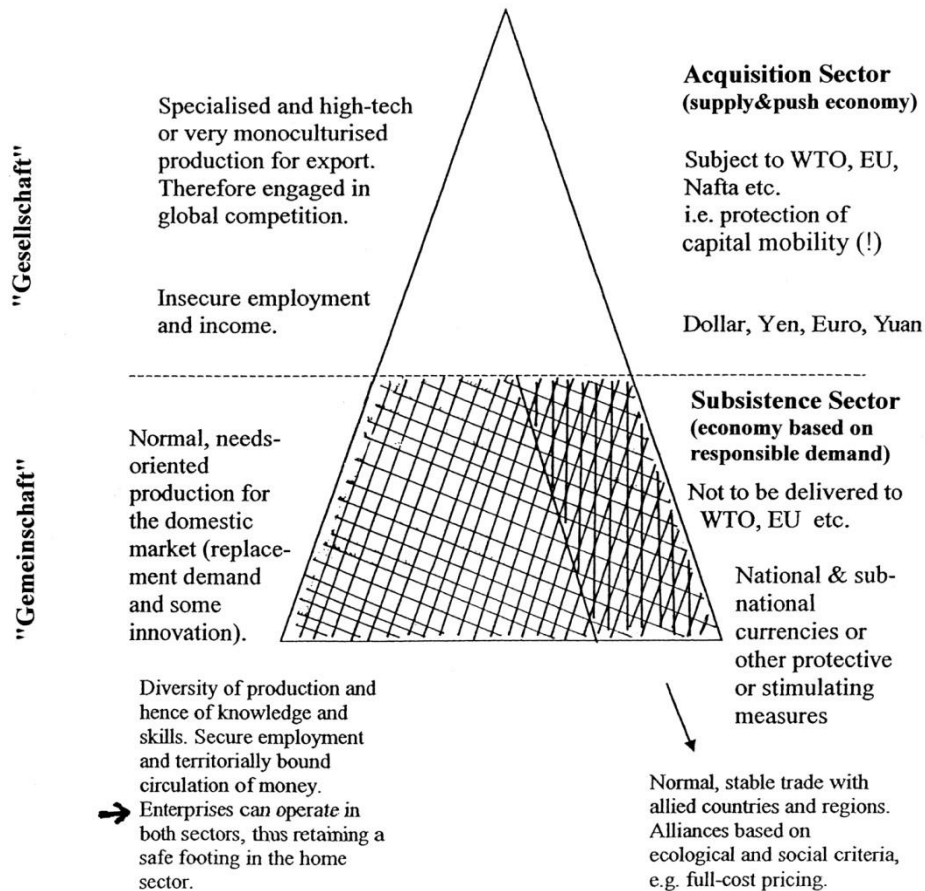


*Sustainable basis  
still existing or  
under construction*

← Situation now ... and where to go



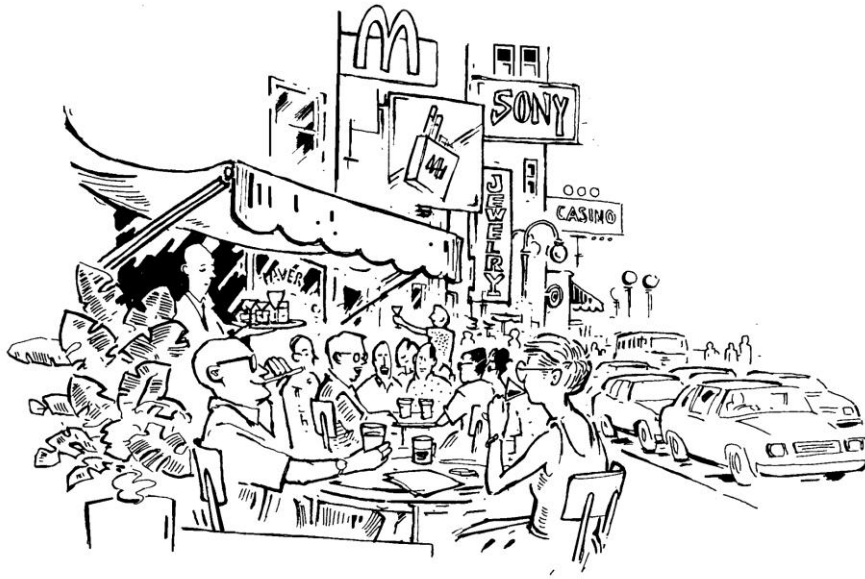
Draft of a National or Regional Economy



*Basis extended.*

*Vulnerability much reduced.*

*From a vulnerable, trade-dependent balloon economy to a calmed-down subsistence economy. Such a transformation could be one of a whole country defending itself against further globalization (i.e. international capital), or one of a region defending itself against the central government which is yielding too much to globalization. Principal instrument: re-localization. Principal goal: less vulnerability.*



*The lifestyle and lack of awareness of the rich people and wealthy middleclass in the rich and emerging countries are the real obstacle to survival. No idea upon what or whom their wealth is based. I.e. the routine work on the fields and paddies, in the mines and harbours, in the workshops and factories, in the markets and the transport. Routine work, considered by - often – youngsters in the rich countries as 'too unpleasant' for them. For them, work must be fun.*

*Once the shortage of energy or other resources forces us to adopt a more frugal way of life, it's clear that as urbanized as we are (and many of us spoiled!), we'll have to do much of the work that we've now relegated to countries far away. And surely, even routine work can be organized in an acceptable, even agreeable way.*

## **An economy of our own**

The new, calmed down, stabilized and regionalized economy, which should progressively replace the old out-of-control economy, will certainly find support in existing alternative solutions. But it can and must also lean on underutilized structures as well as currently unemployed human resources: the unemployed, struggling artisans and businesspeople, women, the less-educated and all those declared to be too young, too old, too slow, too disabled or too inexperienced. It should be abundantly clear that everyone will work according to their abilities and without their being exploited.

This other economy, 'by and for ourselves' will be based on our demand and will respect ecological limits. Money will play a role, but its role will be that of a servant and not of a master, and the organization of labour will be flexible, as described above. Keeping money circulating for a longer time in a region stimulates its economic activities.<sup>28</sup> It goes without saying that in this economy, the primary activity will be organic agriculture. To prepare for the post-petroleum era, we will have to bring about a huge economic and technological transformation, above all in this fundamental sector. This will be quite a challenge to the aspirations of our technicians and scientists.

We will no doubt be accused of a certain protectionism. Our response will be that this re-localization, necessary to counteract the tentacles of globalization, goes for every region on the Earth. Besides, doesn't liberal ideology scrupulously protect the flows of capital soaring over our heads everywhere in the world, in search of the highest yield? No, we are not opposed to a certain amount of globalization, or to commerce. We are even less opposed to fair and equitable international trade. *The problem is the excess of it all.* The same holds true for competition, the system of credit, transport, innovation, a rising birthrate and so on. **You can have too much of a good thing!**

Even Keynes, a committed free-trade fan, changed his mind during the crisis in the 1930s. 'I sympathize, therefore, with those who would minimize, rather than with those who would maximize, economic entanglement between nations. Ideas, knowledge, art, hospitality, travel - these are the things which should of their nature be international. But let goods be homespun whenever it is reasonably and conveniently possible; and, above all, let finance be primarily national.'<sup>29</sup>

## **Small and medium-sized enterprises (SME)**

We will have to come to an understanding with the business world. The political parties on the left traditionally harbour a mistrust of business, which gets them quite a lot of mileage. However, the left should keep in mind the inextricable fix that businesspeople, particularly the true entrepreneurs, are in. Note that the representatives of the business world are often the big

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<sup>28</sup> In Europe, there are already many regional exchange systems and barter circles with their own currencies, started as a response to economic decline in rural areas and urban districts.

<sup>29</sup> 1933, p. 236.

bosses of large corporations, who have the time to go to meetings. Unlike real entrepreneurs, these people are actually personnel who do not ultimately bear any of the real burden of the company.<sup>30</sup> To construct the domestic sector that we want to develop, that is, an economy on our scale and which will be in our hands, small- and medium sized businesses will need to take some distance from current management structures. We would do well to offer some new prospects to small business owners in the form of concrete measures. A nudge from the parties on the left wouldn't hurt either.

I think it is important to go into some detail on this point. By the very act of doing their jobs, workers reinforce the conditions of their subordination. Their labour creates a surplus of money, which feeds the capital invested. (Note that the welfare state has mitigated this phenomenon.) Few people realize that most businesspeople are in the same situation; through their work, they also reinforce the capital that uses them (and which, obviously, they in turn use). Companies operating principally with exterior capital (shares, loans) work to feed the capital (that is, the power) of these funds, the banks and wealthy individuals.<sup>31</sup> This accumulation of money drives up competition directly (when the money is reinvested in the same branch) or indirectly. There too, no one seems to be aware of this.

This crucial information has to be taken into account in our strategy for change if we want to free production and trade from the money-must-grow system. In effect, we must unleash a *liberation movement*: liberating business from the compulsion to grow, and from this absurd system of perpetual and maximum production. This change will be a huge relief for all of society! Moreover, it can serve politically as a bridge between the left and much of the right, enabling all of us, including the heads of SMEs, to stand up against the current monetary system.

How long will this financial system last?



*The domination of capital over labour, as illustrated by the German painter Georg Grosz in the 1920s. The author has taken the liberty of adding an intermediate layer: the entrepreneurs and managers, as well as scientists, government, etc. Note that capital is depersonalized today, with the character of the tycoon replaced by the banks, investment funds (including certain important social funds) and wealthy large corporations. Moreover, a large part of physical labour (the bottom layer) is done today by machines or by people in other, often poorer countries. **An alliance between the business world and the workers aimed at liberating us from the current money system would be an important step forward.***

<sup>30</sup> If the company does well, they get a bonus, and if it does badly, they take off, pocketing their golden parachute.

<sup>31</sup> This phenomenon manifests itself less directly in enterprises operating with their own capital, but since this capital has to increase or at least not lose value, the entrepreneur is still compelled to grow.

**Regreening the planet**

As for our main source of wealth – photosynthesis – it might be a good idea to use all the money available (and not through loans!) for an undertaking that is both immensely important and immensely inspiring, which could generate worldwide solidarity and give the whole nasty operation of shrinking production a positive perspective: *the regreening of our planet*.

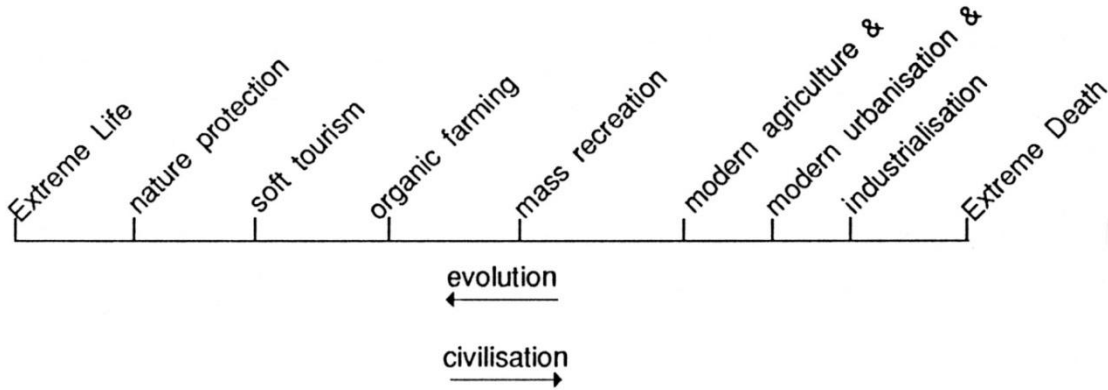
This operation would:

- safeguard the topsoil we have left
- create new soil
- protect the planet from too much sunlight
- fight famine
- spread genuine wealth
- and, on top of it, absorb carbon dioxide.

It seems only right to restore photosynthesis, which has taken millions of years to give us the vast resources we are now using, using the revenues we are pulling in from it. We ought to devote most of our petrodollars, oil-euros, coal-yuans, biofuel-reales and gas-rubles to replanting the world. We should create new photosynthesis out of the old! We could take an example from Richard St. Barbe Baker, whose ‘Men of the Trees’ planted an estimated 26 trillion trees worldwide.<sup>32</sup>

By the way, this operation does not legitimize the current schemes purporting to compensate our greenhouse gas emissions by planting trees, here or elsewhere in the world. Carbon-offset airline flights, green energy, and other carbon-neutral projects are often inadequate or even misleading. Regreening our planet will only have any meaning if we drastically reduce our production volumes at the same time.

As we all know, the military is the biggest expense on the world's account books. At the same time, the lands that nations so dearly want to defend (or attack) are being polluted, poisoned and eroded (partly by these same military endeavours). If only we could harness all the manpower, science, energy and materials now being consumed by armaments and armies, and divert it to combating erosion and desertification!



<sup>32</sup> An interesting method is currently being developed by the Naga-foundation in Africa: where the soil has become impenetrable, deep trenches are being dug to capture the rainwater, hydrating the soil from below..



The cartoon was drawn by Scott Willis of the *San Jose Mercury News*.

*The reader will understand this cartoon. And also that it should not justify reckless logging in developing countries.*

*Question: Has Europe not cut too many of its forests too? Yes, but old mistakes should not justify new mistakes. We hope humankind is getting wiser...*

## **Frugality**

Let's admit it, the coming times will not be easy ones. The only people who still deny with a straight face that we're in trouble are naïve technocrats and politicians. All the rich countries of the world know perfectly well what's in store for them: oil and other natural resources are becoming scarcer and prices will become exorbitant, and they will have to deal with the severe effects of climate change, serious shortages of food and water and fertile lands lost to erosion or rendered useless by the disappearance of bees and a shortage of phosphate. Tribes and nations will be battling each other for these rare commodities. No, the future will not be rosy.

We need a Drastic and Generalized Material Contraction, i.e. a draconian reduction of the production and consumption of goods. We have to admit that *we can no longer allow anything to be produced for which there is not a genuine need*. For people used to comfort, the future will mean less freedom as regards consumption. They may have to participate in producing basic goods and performing social services and accept the rationing of goods and occasionally-empty shelves in the supermarkets.

The silver lining is that our grandchildren will be grateful for the draconian restrictions we will impose on ourselves. A material contraction doesn't mean a cultural one – on the contrary. The recompense for our efforts and our sacrifices will be the more collective life of solidarity that we will be obliged to invent, and by the new meaning we will give to our lives, which for so many have become shallow. The nonmaterial delights and the potential flourishing of a culture and civilization will more than compensate for what we will have to leave behind.

### An exercise in Economic Shrinking

	Gross	-	Repair, compensation, etc.	=	Net result
Now	100	-	60 <sup>1</sup>	=	40
	↓ shrinkage				↓
Future	40	-	10 <sup>2</sup>	=	30
	Shrinkage by 60%		=		step back of 25%

*The unwinding of the spiral of misery will not be as catastrophic as it might first appear. A gross shrinkage of as much as 60% may well result in a far smaller reduction in the net result (say, 25%), because the costs for repair, compensation, etc. will be considerably lower. Many environmentalists and green economists estimate that the net result of modern economies has already become outright negative (say, 150% for repair, compensation, etc.), so that **any shrinkage is pure gain**.*

New opportunities will arise for us, since these events will probably speed up our emancipation. The current crisis could precipitate the beginnings of the Big Turn advocated by progressives. However, up to now the emancipation of our populations at large has been financed not so much by sharing the ‘cake’ equally as by making it bigger. When the cake stops swelling or even starts to shrink because the preservation of the biosphere requires it or because all kinds of shortages compel it to, we have a problem. With or without a crisis, the sustainable society will be a frugal one. We can no longer finance our emancipation and comfort simply by making the cake bigger, i.e. by simply producing and consuming more. **The crisis and the de-growth which will follow it, will put our civilization to the test.** There is a risk of social and political struggle to a large extent as we make our way to a sustainable world. Let us hope that many people of good will understand just what is at stake, so that the struggle will be a relatively peaceful one.

Keynes again: ‘The difficulty lies not in the new ideas, but in escaping from the old ones which ramify into every corner of our minds.’<sup>33</sup> The enormous transformation proposed here also implies a questioning of the fixed roles shared by all the actors today: government, municipalities and other levels of administrations, political parties, the business world and trades unions. These institutions should wake up too, and take part in the transformation. Let us acknowledge here the essential role played by people working to transform their institutions from within. Also, the principal actors will be ordinary people in their roles as citizens and residents.

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<sup>33</sup> 1973, p. xxiii.

## Towards global convergence

(ecological, economic and cultural)

The history of the world can be viewed as a series of wars and conflicts. And the outlook for the future looks distressingly similar as we contemplate the imminent battles for access to water, energy and raw materials, the tensions between religions (often with underlying conflicts between rich and poor), the struggles over markets or simply for power.

However, we can also emphasize the occasions when people and nations have come together over the course of history. The English and French dukedoms are no longer fighting each other, and another war between France and Germany looks unlikely. There are also signs that civilization is progressing, such as the emancipation of women and advances in human rights, democracy and civil liberties, an independent judiciary, workers' rights and animal protection. We also know that civilization can be a thin veneer: we are civilized as long as we're doing well... Often it's two steps forward and then one, or even two, back.

Be that as it may, it does seem as if we are stumbling along on the way to a Global Village, a world society. An attack from space aliens might get us to unite faster, but they aren't here. There are, however, *our* attacks on our own biosphere, which supports all life on the planet, thus our lives too. This amounts to nothing less than suicidal behaviour. The resulting shortages can result in new conflicts. But the bright side of this **ecological** disaster is that it also may help us forge new alliances and find solutions together. It may contain the potential to lift our current problems to a higher level, encouraging and uniting us as we realize our minor problems are eclipsed by the environmental issue. Environmental education and awareness-raising should therefore be pushed worldwide *now*, both in emerging economic powers like China, India and Brazil, and in the rich countries where a substantial reduction of economic output and consumption will be required to make room for responsible development in the poor countries.

Our **economies** also require joint action that may bring us closer together, to free ourselves, i.e. our industries and trade, from the compulsion to grow and to bring about the change described in the *context* of production, notably through the taming of the current money system. A worldwide movement of economic *liberation* can bring people even closer together. We can change from having money-driven supply-oriented economies to demand-oriented economies (which respect ecological limits) while developing the local level and tuning down what is over-scaled. A world-wide movement, sparked by the 2008 credit crisis, could free humankind from the current dictatorship of money accumulations.

As for **culture**, the modern age is challenging old traditions and religions. In places where this is going too fast, religions are seeing a rise in fundamentalism. In times of insecurity, in the absence of hope of a better world, people fall back on old beliefs (with the help of their clerics). Modernity has its negative aspects, especially insofar as it is in the service of capital, which dominates production and drives us to consume indefinitely; some say consuming is a new religion. The shallow materialistic culture which this has brought about is receiving criticism from both conservative religious circles and the anti- and alterglobalists. This overlap be of help as we can learn a great deal from ancient cultures: to begin with, their sense of community and convivial economies, their sensitivity to natural limits and their spirituality and respect for wisdom and traditions.



I personally think that we are slowly but surely evolving towards a culture in which our ethical and social feelings are not only dictated from above by an authority or Supreme Being, but have also firmly (re)descended within each of us. Modern economic theory makes humans into competitors, but at heart we are still social beings.<sup>34</sup> The necessary socio-economic change should embrace those from all walks of life!

## Historical context

Human beings have always endeavoured to develop their economy in one way or another. In the feudal age, when economic performance was stagnating due to a variety of traditional obstacles, the emerging merchant class took over the forces of production, freeing and revitalizing them. This situation was consolidated when the merchants won the *relations* of production (political power). These forces were slowed down again several centuries later, this time by the merchants' descendants, the industrial bourgeoisie, who had become too conservative. The new elite of 'mobile' capitalists, benefiting from the struggle of an emancipating working class, ousted the industrial dynasties, took over their factories and, by gaining political power, managed in turn to be the ones driving the forces of production (forces wholly steered and shaped by capitalism). (See more extensively Appendix 2.)

The truth is that if we fully take the ecological devastation caused by our modern economies into account, they have become negative forces.<sup>35</sup> A new movement is needed to counteract this tide. We need a severe regime change, one that goes beyond a change of political colour – a genuinely new power that will create a green and fair economy right now. By means of a *transformed class struggle*, we could break the power of Capital, currently in the hands of managers who actually harm the economy and who have turned productive forces into destructive ones.<sup>36</sup> This transformation requires participation in the struggle by not only workers, leftists, Greens, the poor and marginalized, farmers and other entrepreneurs caught in the vise of Capital, but by *all people of good will*.

The dialectical movement between the forces and the relations of production is already apparent in the small ways we have started to pursue this transformation. Everywhere in the world, and *out of necessity*, economic alternatives have been initiated by the citizens themselves, in the cracks that have appeared in the money-driven capitalist/productivist cement.

The ecological catastrophe, just like the growing disparity between rich and poor, effectively calls for an inversion of power. Unfortunately, as of yet not everyone shares this

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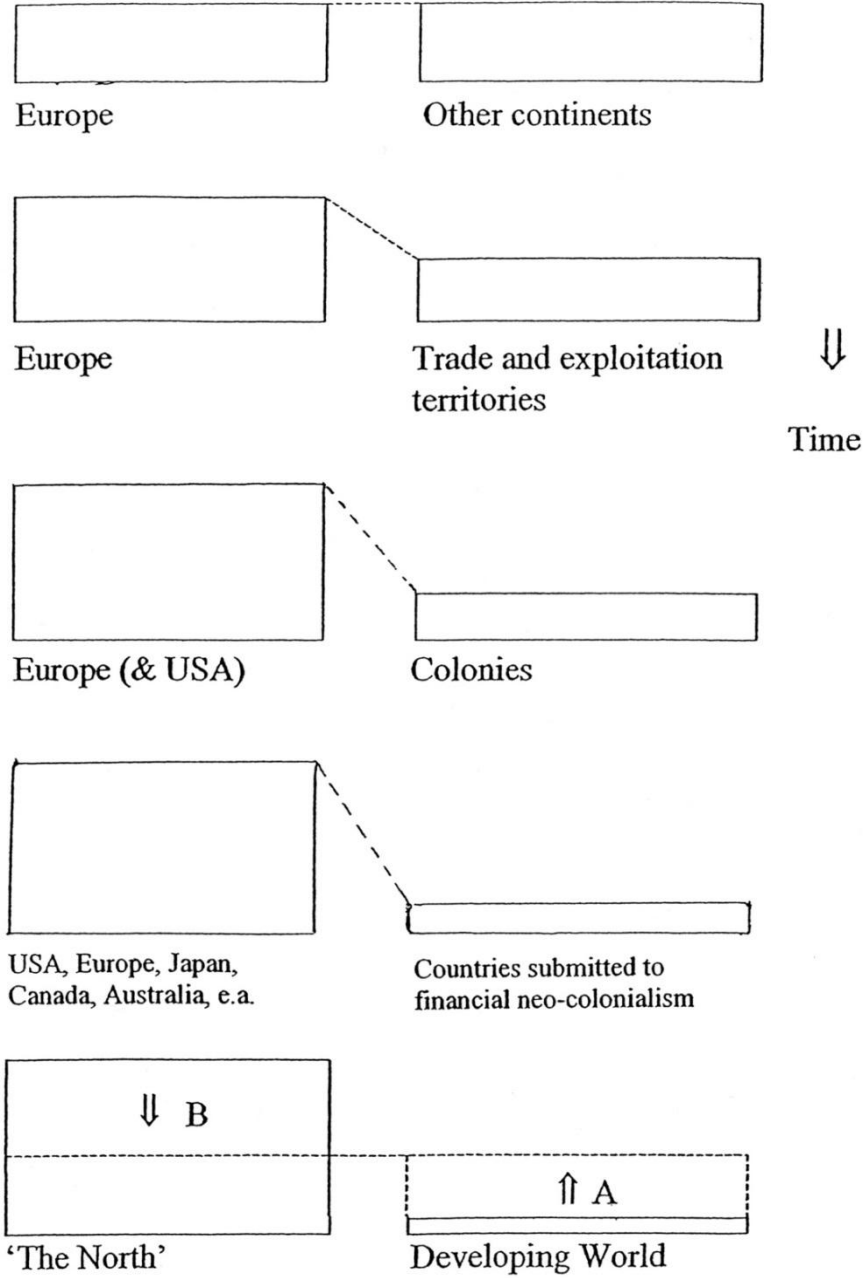
<sup>34</sup> Recent evidence from the research of anthropologists, ethnographers and primatologists illustrates how *cooperation* has shaped human evolution and enabled the 'survival of the fittest' i.e. (contrary to the liberal individualization) the fittest *species*'.

<sup>35</sup> Mark Lynas on climate warming: 'If we had wanted to destroy as much of life on Earth as possible, there would have been no better way of doing it than to dig up and burn as much fossil hydrocarbon as we possibly could.' (2007, p. 254)

<sup>36</sup> Compare Marx and Engels in *German Ideology* (1845): 'At a certain stage of evolution of the production forces, one sees a rise up of the forces of production and the means of trade which under the existing conditions can only cause disasters. They are no longer forces of production, but forces of destruction (machinery and money). (...) Thus things have now come to such a pass that the individuals must appropriate the existing totality of productive forces, not only in order to be able to act autonomously, but, also, merely to safeguard their very existence.' (1977, p. 230 and 271) NB. This is all very remote of Stalinist thinking and doing!

feeling of urgency. As Guy Debord of the Situationists said, 'The world already has the dream of such a time; it has yet to come into possession of the consciousness that will allow it to experience its reality.'<sup>37</sup>

**The global distribution of prosperity**



*Because of the ecological limits, B (drastic economic shrinking) is imperative in order to allow A (some growth).*

<sup>37</sup> 1967, para 164.

## In conclusion

Nevertheless, having a historical perspective could infuse us with courage and hope. What is more, it could reinforce our resistance to the obstacles we will inevitably encounter in our pursuit of a better world.

It is now up to us – de-growth activists, alter-globalists, greens, social militants, responsible entrepreneurs and officials and all people of good will – to take matters into our own hands. We still have a long way to ‘Mens nova in terra sana’, to a new spirit on a healthy Earth. It’s a long way to a new paradigm, a new civilization. But it is in essence a ‘liberation gaialogy’, and many stepping stones to it have already been laid all over the world. ‘The ecological conversion of our societies holds out the promise of more *joie de vivre*.’<sup>38</sup> It is also an exercise in intelligence, as we try to close the Pandora’s box that we have opened in our arrogance, and to truly understand the processes that govern us from way over our heads and that are leading us to the abyss.

Perhaps the awareness of the threat is what will save us from the dramatic deterioration of our environment, part of which may now be irreversible; only a menace of such magnitude is capable of generating enough momentum for change.

The challenge now facing humankind – the transition from a growth economy to a steady-state economy and restoring the beauty of our planet – is certainly greater than the one faced by our ancestors in their evolution from hunter/gatherers into farmers.

*Homo faber* trying at last to become *homo sapiens*, and human beings trying to become worthy of the idea of humanity.

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He participates in several groups involved with sustainable economies and alternative solutions. He is a member of the European group of environmentalists ECOROPA and of Transition Towns Holland, and is a *correspondant* for the French review on de-growth Entropia.

His 1991 book *The Economic Revolution – Towards a sustainable future by freeing the economy from money-making* is currently being updated. First versions in Indonesian and Czech. The French edition is in preparation, and a Spanish edition will be finished in autumn 2014.

His articles include Regreening the Earth (In *Crisis, Innovation and Sustainable Development*, Elgar UK 2012), Les paramys au pouvoir (In *Entropia*, nr. 7, 2009), Let’s

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<sup>38</sup> Serge Latouche (of the French de-growth group & review Entropia), 2009, p. 56.

Stop the Tsunamis (2005) and Let's Regionalize the Economy – and cure ourselves of a host of ills (2003).

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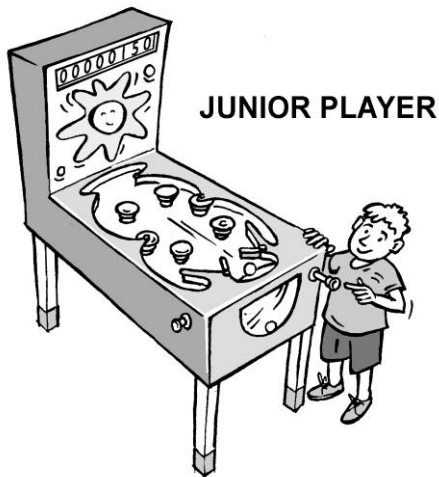
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**Life's masterstroke:  
doing ever more with (the same amount of) energy**



Imagine a pinball machine. Let the sloping playfield represent our biosphere, that thin surface 'peel' of the Earth where life is possible, warmed by the rays of the sun. And let the balls stand for that energy. Most of the balls roll straight back out of the playfield. During the daytime the Earth's water, soil and rocks are warmed up a little – and that's it ! Having been usefully available for a while, the energy soon dissipates back to space, entirely useless. Almost at once, energy degrades.\*

As life evolves in the biosphere, some of this energy is captured, retained and passed on – and ever more effectively so. Nutrient cycles and biological diversity become increasingly diverse. Life learns the art of pinball – how to keep the balls on the playfield for a while – and starts scoring! With time, human beings and their cultures get involved in the game. Generally with two steps forward and one step back, felling too many trees, hunting too many animals. Gradually, though, they learn how to conserve energy and extend the useful life of matter (matter = stored energy).



As life becomes ordered more, then, it does more and more with the same amount of energy – the sun's. The pinball flippers are used to keep the balls on the field for longer and longer. Life and humanity are fast becoming pinball wizards! Their score soars to ever greater heights. The point at which energy finally degrades is postponed for longer and longer.

So what happens if there's suddenly a super-abundance of energy? As when humanity started using vast amounts of fossil fuels? Suddenly there are a huge number of balls in play. They just keep on coming! We start losing our pinball skills, for a game like this is no great challenge for us wizards. We can sit back and relax, become lazy even. And forget all about thriftiness, about being economical with what we have.

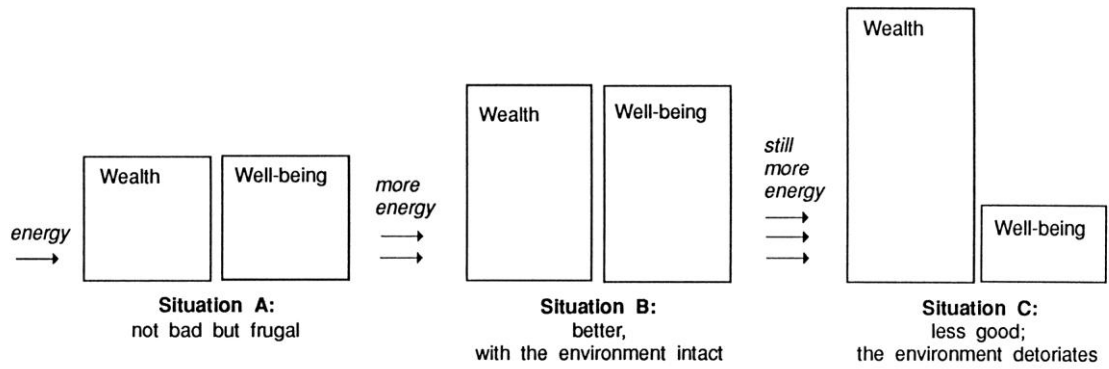


Instead of housing adapted to the season's climate, we now have majestic glass boxes radiating heat. Cellars are a thing of the past, as we now have fridges. Clothes and other personal effects we rarely use for long, no longer mending them but going out to buy something new. We throw away vast quantities of food. To get around, we all have our own private car. And have based almost the entire physical structure of our existence around it, separating the spheres of work and private life and so on. Once local, production is relocated ever further away, and we become completely dependent on trade

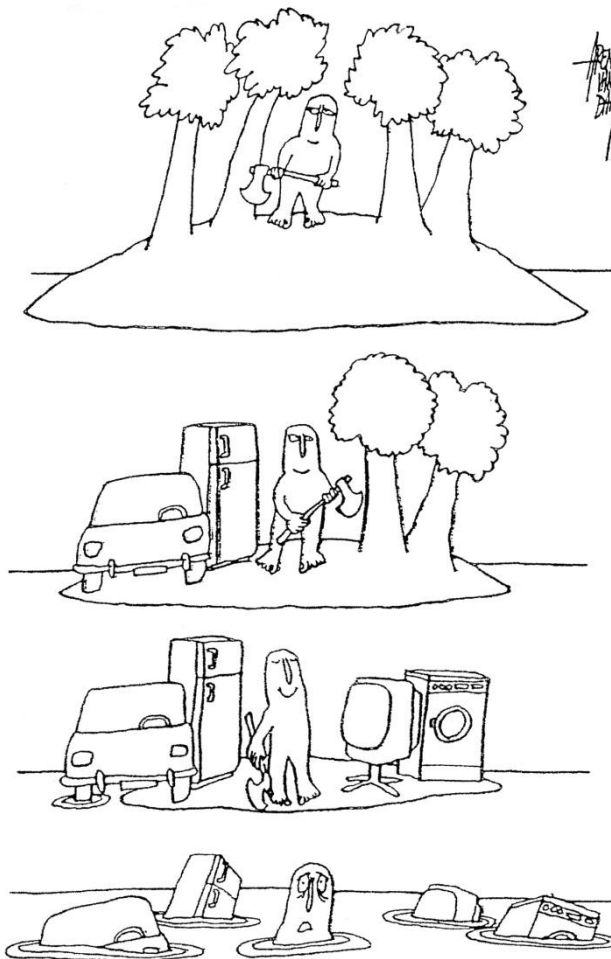
and thus on (fossil-fuelled) transport. Our economy becomes an economy of wastage, of squandering, our society a throw-away society, addicted to energy – huge shots of it.

So, oh dear if that flow of energy starts declining. Then we're really up the creek without a paddle. We've forgotten how to play pinball and the flippers have grown rusty. We try to conserve energy, to develop new sources. But we don't succeed, at least not enough. The economy remains as unintelligently designed and structurally wasteful as ever. What we should really be doing is switching to a calmer and smarter economy: a low-entropy one.\* One with far less energy, which we once again learn to make far longer use of.

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 \* No energy is ever lost (1st Law of Thermodynamics), though. It just changes from being available in useful form (to us humans) to being unavailable. Whenever energy changes its form, or is actively converted from one form to another, some of it is lost to friction, decay, decomposition, 'warming of space' and, more generally, disorder: also known as entropy (the 2nd Law). The intricate ordering of life on this planet thus stands in complete opposition to this trend and is by some people termed negative entropy, or 'negentropy'. Thanks to our vast consumption of fossil and nuclear energy, society has moved from being low-entropy to high-entropy.



*We don't need to go back to A!  
A step back (forward) to B is enough*



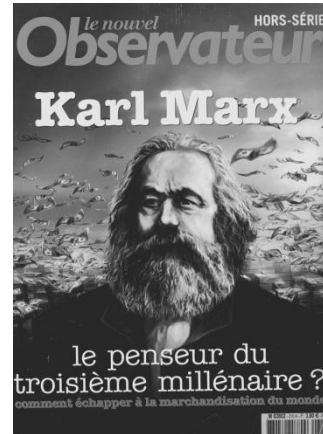




## Forces and relations of production

Some teachers and activists are interested in the author's attempt to place the economic and cultural development of our societies in a historic-materialistic perspective. It's a good counterweight to the current idealistic period. (Idealistic in the philosophical sense, as opposed to materialistic. It is idealistic to preach loving thy neighbour or to call for solidarity while allowing such a fierce and mercilessly competitive economy to develop.)

One of our most prominent materialistic thinkers was Karl Marx, who is still often listed among the top ten philosophers. In 2003, so well before the credit crisis, a major French magazine, *Le Nouvel Observateur*, even devoted a 99-page special issue to him, subtitled: *The thinker of the 3<sup>rd</sup> millennium?* Building on the work of earlier researchers, Marx made a distinction between a society's infrastructure or foundation – its economy, available resources, technological level, etc., or the production *forces* – and its superstructure – its legal framework, politics, culture, the power structure, or the production *relations*. From the materialistic viewpoint, the infrastructure predominantly determines the superstructure.<sup>39</sup>



The illustration [graphic presentation? Diagram?] that goes with this text puts into historical perspective the movement that is emerging after the euphoric period of the infallible New Economy (with Reagan and Thatcher, 1980 – 2005) to question and criticize the current situation. Although the development of the forces of production is shown here as a connecting thread running throughout our history, we needn't consider it the inevitable 'dictatorial' bottom line, as Marxists generally do. However, this approach could generate hope and help us to feel that we are part of a greater historical process. It would make us more resilient in the face of the inevitable setbacks we will encounter in our struggle for a better world.

Over the course of history, the development of the production forces has from time to time been hindered by the superstructure. Notable examples are the feudal obstacles at the end of the Middle Ages (such as guilds, toll roads, the interdiction of interest) and obstacles produced some centuries later by the industrial bourgeois families (traditional marketing, hindering innovation, opposing external money). Generally, periods of economic stagnation result in a regime change (change of production relations, sometimes through a revolution, silent or more noisy), which reactivates the development of production forces. The feudal system gave way to the more entrepreneurial urban merchants. In the early 20<sup>th</sup> century, the bourgeoisie lost power to the more dynamic managers of the major industrial and financial corporations, as well as to the State.

This process is a dialectical one; in other words, one of thesis & antithesis. Against the thesis – the feudal system – a class of merchants, turned into an urban elite, emerges as an antithesis. This class then comes to power, giving new stimulus to the production forces. Moreover, it forms a synthesis with the old rulers. This synthesis in time becomes the new thesis. The merchants become factory

<sup>39</sup> Compare this with the study of the human mind, in which the enormous influence of our instincts, suppressed experiences and other unconscious, often physical motivations is increasingly being acknowledged.

owners and thus producers and, as capital accumulators, turn into the bourgeoisie – the next new thesis. Against this, then, a new antithesis emerges: labourers starting revolts.

We have now arrived at the era of the utopian socialists (such as Owen), anarchists (such as Bakunin) and the more scientific thinkers Marx and Engels. In their *Communist Manifesto* of 1848 they describe how the entire world is formed, and will be formed, by bourgeois power (and indeed, this sounds remarkably like our globalized world of today).

The *Manifesto* did not have much impact at the time of its publication. There was not a strong labour movement yet. The main political struggle was in the higher echelons of society, where liberals were trying to gain political influence over royal power. Democracy came about step by step.

However, tensions were rising among the lower classes. Labour conditions and housing were often miserable. Black air hung over the slums.<sup>40</sup> Colonized peoples were being exploited. This stage in history was described by Marx and Engels in *German Ideology* (1845) as follows: ‘At a certain stage of evolution of the production forces, one sees a rise up of the forces of production and the means of trade which under the existing conditions can only cause disasters. They are no longer forces of production, but forces of destruction (machinery and money).’ (See also *Das Kapital* I-13-10.) This statement is very much the condition the world is in today! Its relevance is clear just by looking at the ecological catastrophes and social disintegration around us. The solution, proposed by the authors, also applies to us today: **‘Thus things have now come to such a pass that the individuals must appropriate the existing totality of productive forces, not only in order to be able to act autonomously, but, also, merely to safeguard their very existence.’** (op. cit.)<sup>41</sup> Conclusion: a regime change is necessary for our development and very survival. But to be successful there must have been developed enough supporting economic (i.e. material) momentum.

Although I am not a Marxist scholar myself, it seems to me that even back in the 19<sup>th</sup> century, Marx reckoned that the revolution foreseen by him and his friends could indeed be accomplished peacefully in a liberally advanced country through profound democratization. And, indeed, some countries (like Holland and some other Western-European countries) with mitigated capitalism (the more socially responsible ‘Rhineland’ model) have certainly taken steps in that direction, such as some restriction of free enterprise, protection of workers and tenants, some market control, fiscal correction of over-enrichment and the like. This all came about because of the pact between the capitalist powers and the trade unions, an understandable one since it resulted in a real improvement of working conditions. *But this pact ignored more radical warnings that higher wages and the like would not free labour from the dominance of capital.* (‘Economic growth may liberate societies from the natural pressure requiring their immediate struggle for survival, but then they are not liberated from their liberator.’ Guy Debord, *The Society of the Spectacle*.) Marx too had warned that if workers demanded an increase in wages or better working conditions, it should only be done within a general questioning of the dominant system.

Moreover, the gains made by labour and the improvement of working conditions were made above all for economic reasons. Production, propelled by money and thus grown into something enormous and continuous, need{s equally enormous and continuous} corresponding sales to go on. This led to the expansion of the money circulating over the mass of the population, notably in the form of higher wages. (Remember Henry Ford: ‘I will pay my workers enough that they are able to buy my cars.’) This rise in prosperity quelled any lingering thoughts of revolution! The price of emancipation was not so much a more equal division of the pie as an enlargement of the pie. The majority of the population

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<sup>40</sup> It was Engels who provided Marx with fresh information from the factories and slums in such cities as Manchester where he had looked around with his proletarian friend Mary Burns. Recorded in his *The Condition of the Working Class in England*, 1845. Though son of a factory owner, Engels may well have become a communist even earlier than Marx. (Communist, socialist – the terms were not so different then.)

<sup>41</sup> How opposed this is (individuals! autonomous activity!) to the socialism as perverted by dictators like Stalin!

became so strongly anchored in capitalism that – it's a suggestion - universal suffrage and democracy became possible. They could be allowed by the ruling class and its economy. The ethical striving of socialists, liberals and progressive Christians thus got considerable, if not decisive, support from the side of the economy. (I don't know if Marx foresaw this. He was generally anticipating such a deterioration of conditions (*Verelendung*) for the working class that they would revolt against the bourgeoisie. In Marxism, this historical process was supposed to end with the establishment of Communism worldwide. As mouth-watering as it sounds, this kind of approach reminds of Francis Fukuyama, who predicted 'the end of history' after the fall of the Iron Curtain and the global victory of Western free enterprise.)

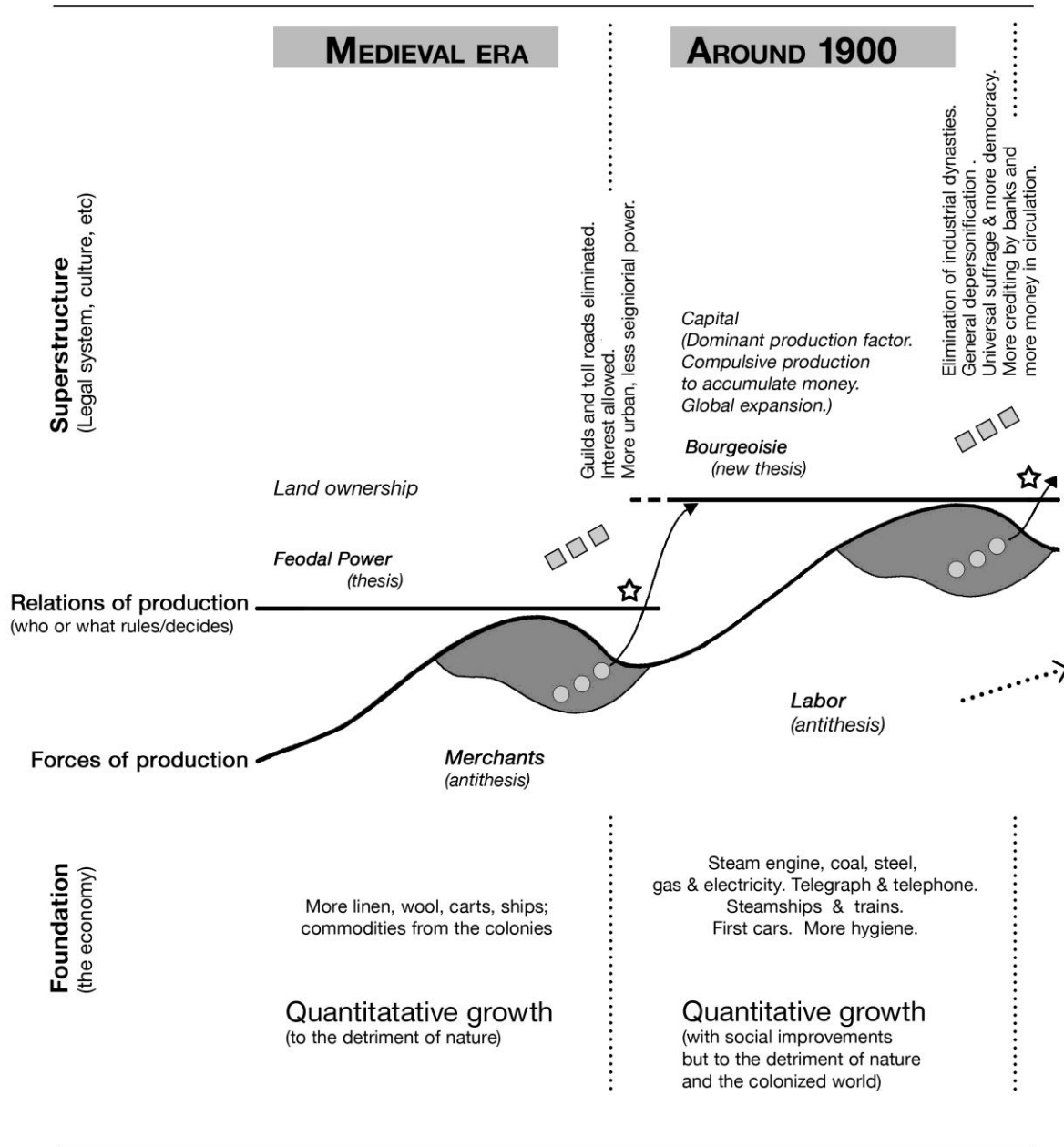
It should be noted that, at the end, the real antithesis to the bourgeois class turned out not to be the labourers but the managers of the financial and economic corporations, banks, institutions and networks, appointed by the capital requirements. Should the real counterforce to capital-driven productivity yet to be developed? It is sketched hereafter.

A revolution or paradigm shift has already taken place well before it gets its political finalization. The French Revolution began centuries before 1795. (Many so-called revolutions – perhaps even Russia's – were actually coups d'état.) A new society is gradually being born from the old one. The illustration shows 'cracks in the cement' to indicate points where society is shifting and rumbling, and where unrest is growing. The system is starting to reveal some serious defects. The malaise is becoming a general one. **It is first in the superstructure, in the cultural realm, that we see these signals. They are interpreted by sensitive and visionary writers, artists, comedians, philosophers and journalists, as well as concerned citizens, activists and politicians with the same faculties.** (This article is part of this signalling.)

More recent methods of calculating our economies - that is, with yardsticks which take into account environmental degradation, resource scarcity and social disintegration – show that they are no longer growing, but are rapidly starting to show negative outcomes. We urgently have to stop 'the forces of production becoming forces of destruction'. We have to change our current quantitative growth into more qualitative growth that includes social and cultural improvement. Drastic short-term material de-growth will yield us long-term moderate growth that is markedly less material. We can go from immoderately producing market goods to meeting real needs and to conserving and regenerating nature. From an economy of supply, or even obscene over-supply, to an economy built around a normal, reasonable demand. In Aristotle's terms, from an acquisition economy to a subsistence economy. Let's stop putting out the fires and tackle the pyromania itself!

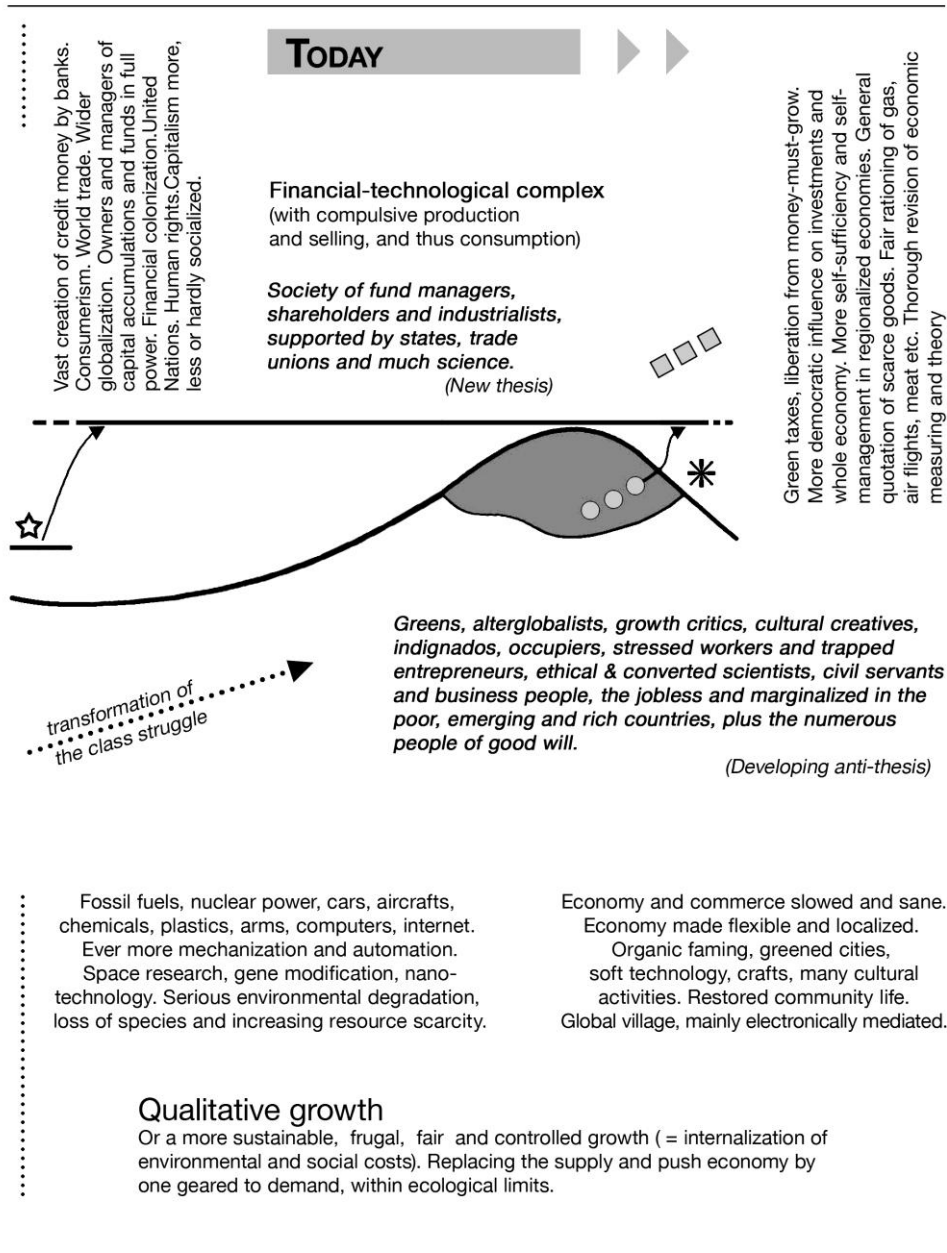
All right, but how can we bring this about? Repeating the old class struggle will not work, although Labour (including most businesspeople) is still subservient to Capital as the dominant factor of production. But many workers in the developed countries have a better life than their grandparents and they lost political awareness. Most people in the world want to live in the rich capitalist countries or want the kind of life people have in those countries. But while the welfare of many has improved, misery continues to grow too, as the *Verelendung* (impoverishment) is now also being shouldered by the marginalized in the rich countries and by the poor countries and by nature. Capital still rules over all our productivity, trade and consumption. Wage-earners and most entrepreneurs are in the service of Capital. But they try to make the best of it and are not critical. Current economy is regarded as the unavoidable (and best) situation. So we're better off aiming for **a transformation of the class struggle**. A movement of all of us united against the current system and in favour of a less damaging

# Forces and relations of production (I)



- Legend:
- = things start brewing
  - = start of the change (cracks in the edifice)
  - = explicit reference in the superstructure (rise of political awareness, education!)
  - = political change in the relations of production

# Forces and relations of production (II)



\* = Several studies show: the rich economies don't grow anymore if one includes the costs for ecological recovery, now kept externally. To add to this the damage to local communities and their production everywhere.

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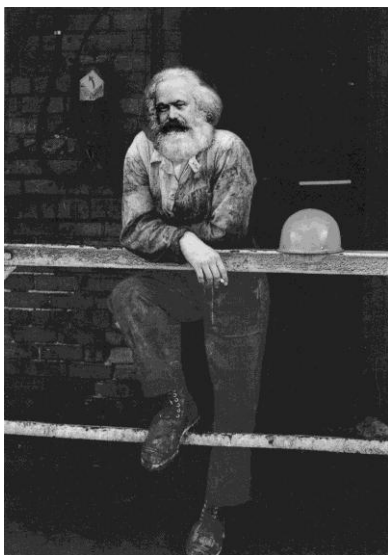
and more social economy. It should include ecologists, de-growth activists, Third World, Peace and Human Rights activists, ‘cultural creatives’, Occupiers and, surely too, the small- and medium-sized business owners, farmers and ethical entrepreneurs, just to start with. It would be a joyful movement determined to put an end to an out-of-control system that has us all trapped in the compulsion to grow, and in doing so to conserve a still-magnificent planet and to work for sustainable and fairer societies.

Even a socialist or leftish-progressive government will mean precious little difference in the forces of production, as long as the economy does not profoundly change. It's merely someone else minding the shop. (However, it may make small but worthwhile changes, since, as the illustration shows, **the new society is emerging from the old one.**)

The illustration shows the *political* aspect of the struggle for a sustainable world. Thus, there is a need for a change in the division of power (such as who makes decisions about investments, controls the accumulation of capital, and directs technology, resources and land). The diagram shows the need to combine awareness-raising and the political struggle in parallel with a change to an economy adapted to current needs: an economy on a more human scale, more self-sufficient and sustainable, closer to people and more in their own hands.

All over the world we are seeing ‘cracks in the cement’, economic alternatives initiated *out of necessity* by individual people. These humble beginnings will enable small changes to take place in the *relations* of production (say, a village or neighbourhood committee which has managed to take control of its own projects). This little gain of power will allow for more transformation of the forces of production, which in turn can modify the relations of production. The extension and acceleration of this evolution of both the relations and forces of production will bit by bit (and given a period of crisis, we hope more quickly!) bring about a paradigm shift, a peaceful but real **revolution**. Thus, once again we’ll see that real revolutions ‘happen’ once their goals have already been accomplished. As Guy Debord put it: ‘Revolutions will be celebrations or they should not take place at all.’ (op. cit.)

To conclude by paraphrasing the end of the Communist Manifesto: **We have nothing to lose but our chains and the poisoning of our bodies and minds. We have the whole world to save. Men and women of good will and of all lands, unite!**



*“Anglo-American or Rhineland capitalism, State capitalism called communism, a credit crises and economic booms and busts – is my time over or is it still to come? Meanwhile, I could do with a course on ecology!”*

*Illustration: Irene von Treskow*

**The Economic Revolution – Towards a sustainable future by freeing the economy from money-making. (1991)** By Willem Hoogendijk, an early Dutch environmental activist.

*A pioneering book about making our economies flexible and social, dating from 1991. Still some copies at Amazon or at [wh@aarde.org](mailto:wh@aarde.org) Interesting for libraries and archives!*

### **Summary**

#### PART ONE - ECONOMICS – AN ATTEMPT AT HERESY

Contrary to the conventional wisdom, contemporary production does not have a positive effect but a negative one. Just consider the destruction of the environment - the very basis of all production, of all life. Our world is like a car racing towards an abyss, and only a real U-turn can save us. Every tap on the brakes, every bit of slowing down and shrinking is positive, is ... *real* growth.

The 'money-must-grow system', however, dictates continuous production and continuous (old-style) growth. It also gives rise to a narrow-minded, lop-sided kind of production, mainly of commodities that yield quick profits. There is a money-driven compulsion to produce and hence a resulting compulsion to consume and waste. Moreover, the negative 'spin-off' from this production - environmental degradation and human inequality - constantly creates new needs which we try in vain to repair with new production, that is by technical means. The official economic theory reinforces this process by obscuring reality, just as the financial domain has delinked from the real economic sphere of production and consumption. Although consisting of small steps, each logical in itself and some even creating genuine wealth, the path we are pursuing is in fact an ever widening spiral of misery.

#### PART TWO - THE LIBERATING U-TURN

We must find ways to liberate production from the grip of current finance, and its compulsion to growth. This will enable entrepreneurs to act in a truly responsible manner. Employment should be organized more flexibly, separating it from the obligatory production – continuously and to the maximum - of a single kind of commodity or service. The economy should change from based on 'supply and push' to one geared to true demand, a demand that stays within ecological limits and is able to fluctuate.

A two-track strategy is called for. One track is reducing, converting or halting the current, traditional mode of production. The other entails constructing a more intelligent form of economy, attuned more to basic than derived needs and building on the many alternative solutions already being practiced all over the world. Enterprises will be able to operate more intelligently in such a calmed-down economy made flexible and truly sustainable.

By shrinking the economy, we could turn the spiral of misery into a spiral of progress - real, durable and socially just progress. The financial crisis in many parts of the world and the reaction of the people to it are accelerating the start of this turnabout.

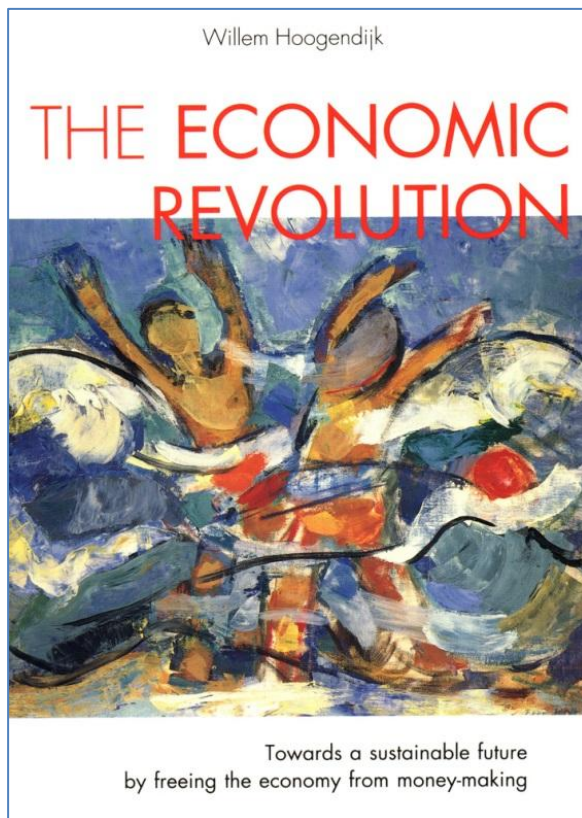
PART THREE – SUGGESTIONS FOR MISCONDUCT

This part contains suggestions about what people, businesses, authorities and organizations can do to prepare for the Great Turning. It goes without saying that these activities go beyond just furthering recycling and biking, or installing filters on factory smokestacks. Helping other people to develop a fresh view of economy and society is one of our primary tasks. Alternatives are being developed all over the world, which looked at together, already make a blueprint for a more intelligent and humane society.

The end-notes are quite substantial and intended for the more inquisitive reader. Special themes are treated in the appendixes, such as ecology and money & nature.

*The more than 70 illustrations in the book make it attractive to a wide public, even to people who ‘don’t read books’.*

*Herewith a few from the old book and the update-in-preparation.*



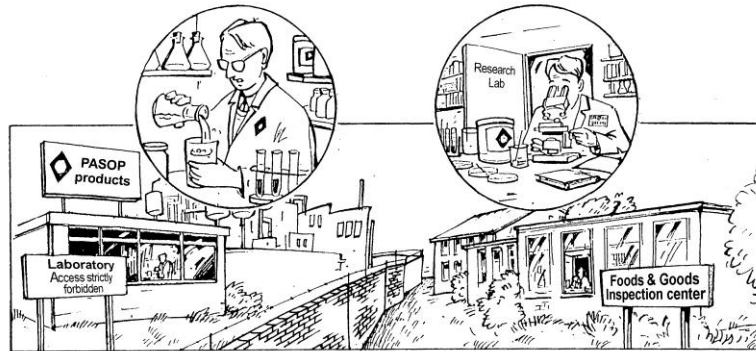


**Characteristics of the world views**

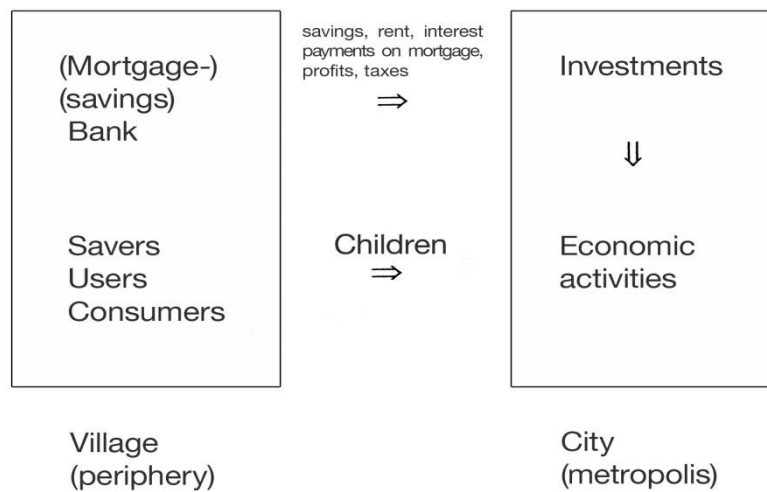


Source: RIVM, Netherlands



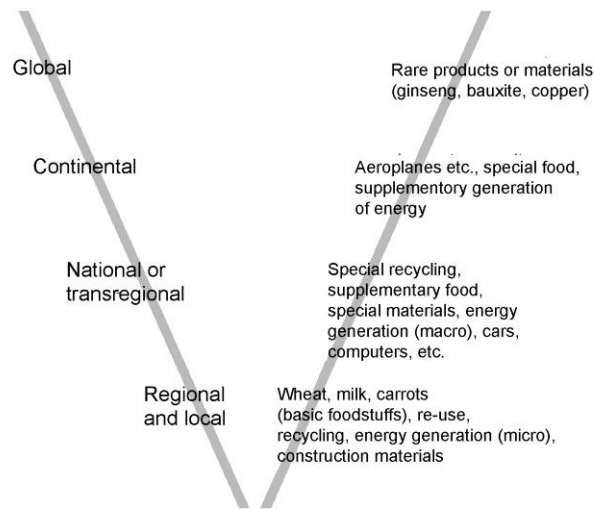


*The absurdity of a private sector, separated from the public one.  
The freedom in the first, needs the control in the other.*

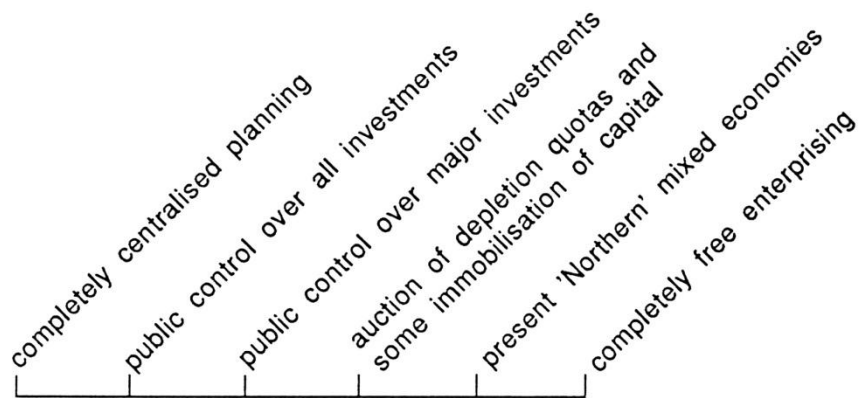


The permanent money-drain...  
Result: villages and entire regions lose their services: schools, library, medical care, shops, public transport, discos.  
Workers go away. As well as the children, thus following the savings of their parents.

Every product its own "region"



*Of course, we can't grow copper in our vegetable garden!*



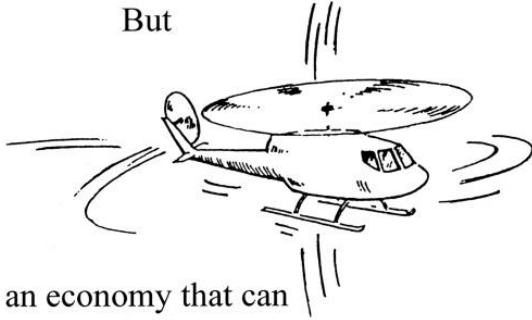
*Types of economy, inspired by Herman Daly.*

*Not included is the regionalized, calmed-down people's economy.*



Not an economy  
that must fly on  
in order not to fall.

But



an economy that can  
go forth or  
backwards  
or mark time.



*Globalized humans will be  
firmly footed in the local.*

#### Some reactions:

- *"A highly accessible and commendably brief book."* , Resurgence (UK)
- *"Thought-provoking, stimulating and deeply hopeful"*, New European, UK.
- *"Important suggestions to achieve the U-turn."* , Down to Earth, New Delhi.
- *"I liked the way in which you succeed to make things simple."* , Ivan Illich.
- *"Lively and clearly written. Wonderful drawings."* , Herman Daly, University of Maryland, USA.
- *"An important contribution. Certainly money is a driver of the growth mania. I wish your book every success."* , Alexander King (Club of Rome).
- *"Excellent."* , Susan George (Trans National Institute).
- *"Pragmatic, with a revolutionary and liberating perspective."*, Trouw (Netherlands).
- *"Useful cross-grained ideas."*, Raad voor Milieu en Natuur Onderzoek (RMNO - Netherlands) report no. 141.

**One-liners (i.e. conclusions of arguments) from *The Liberating Turn*:**

*The fundamental problem in our biosphere is not a lack of energy, but too much.*

- *The entrepreneur's need for money is created by money's need for enterprise.*
- *The cardinal virtues of the past have become the cardinal sins of today. (cf. H. Daly)*
- *Capitalism has created man in its own image and consequently this image has allowed capitalism to justify itself.*
- *The invisible hand of the market has become the visible fist of capital.*
- *The more capital is mobile, the more unstable our economies become.*
- *Flexible employment? Not without capital made flexible!*
- *Let's make unemployment a thing of the past!*
- *The polluter should not pay, but should stop polluting.*
- *Environmental education should be subversive, or she should not be!*
- *The new society emerges from within the old one.*
- *Our elites deserve the whip, the people to be educated.*
- *One needs neither hope to start nor success to carry on.*  
(Motto of William of Orange, founder of the Netherlands.)