

Can Money work for the Evolution of Agriculture?

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Introduction: The cow as our mirror and our mentor

What is at stake at the global level is that people have to learn to adjust their cultures to nature. Mankind is causing an extinction of life forms to such a degree that we are in danger of becoming extinct ourselves. In the Netherlands the challenge of adjustment of culture to nature is exemplified in the way we deal with cows. The cow is an icon of Dutch identity and the way Dutch cows live expresses our agri-culture, our culture of dealing with nature. Half of the Dutch surface area is covered with grassland in which we traditionally have grazing cows. Cows give us milk that we transform into a range of dairy products, which have been important in our trade relations with other countries and a source of our wealth as a nation. But the cow is losing its value in our economy. With the devaluation of the cow we are witnessing that a part of Dutch culture is transforming: the part that is representing our relationship with nature, with each other and with ourselves. Milk prices are decreasing ('spring water is more expensive than milk') and farmers are investing in milk quota instead of buying land. Milk quota represents 15% of the cost price of milk and this percentage is increasing every year. More quotas per hectare imply that farmers become dependent on fodder bought from elsewhere. A fast growing number of farmers are keeping their cows inside year round (in 2005, 19% of farmers). Another observation is the development of milk robots and new housing systems with artificial light to enhance milk production. These are the signs of an industrialisation process that we have seen before with pigs and chickens. Animals are devalued and limited in their possibilities to express themselves in ways other than through milk, meat and eggs for people. In the industrialisation process animals are becoming machines in which respect and love for the animals is lost. The culture of working with nature is impoverished. The quality - i.e. the poverty - in our relationship to our cows, to the farmer and to ourselves is reflected in the price we pay for dairy products. This is a blind alley.

If it is our deep conviction that we have to learn to adjust, to attune our cultures, including our agricultures, to nature, and that money plays an important role in this attuning process. This raises for us, as researchers, some core questions:

- *What is the challenge for farmers and consumers in attuning our agriculture to nature in terms of values, changing worldviews and growing consciousness?*
- *What is the vision of the world we live in when agriculture is attuned to nature?*
- *What is inspiring us today in Dutch initiatives of endogenous sustainable agricultural development, i.e. bottom-up, inside out, of farmers and consumers?*
- *What is the role of money in agricultural development today and what role could it play for the attuning of agriculture to nature?*

We will take a nomadic route through these questions and will start with looking at some Dutch initiatives before we focus on the role of money which is the key issue of this essay.

Crisis as a Challenge

Mainstream societal and agricultural development moves away from nature, but there are signs of hope. We will mention some of the initiatives aiming at a (more) healthy relationship of people to each other and to nature.

In 2001 Foot and Mouth Disease hit the Netherlands and, because of the Dutch export position in global dairy markets, healthy cows were not vaccinated against the disease but killed. The Dutch population did not accept that and Stichting Milieubewustzijn (the Foundation for Environmental Consciousness) offered Dutch people an opportunity to act positively, bottom-up, going the way from powerlessness to strength from within. Farmers and citizens were invited into a project called 'Adopt a Cow Now!' in which farmers and citizens were asked to commit themselves. Farmers were asked to step into a process together with citizens, aimed at becoming more sustainable. And citizens were asked to step into a process with farmers and become an adoption friend, paying an annual contribution of 100 florins (45 Euro) per year, meeting the farmer twice a year and becoming part of a learning process. The project issued a newsletter five times per year called 'Koevoet', which is a Dutch word for 'crowbar'. Koevoet was thus meant as a crowbar for sustainable agriculture supported by Dutch citizens. At the start the project got a lot of media attention and grew quickly into a network with 70 farmers and 2000 citizens and stabilised at that level.

Foot and Mouth was hardly gone when a 'silent killer' of cow welfare appeared. CLM Centre for Agriculture and Environment observed in 2002 that dairy farmers started to keep their cows inside all year round and got media attention for it. Market research discovered that consumers were willing to pay a premium price if cows were given the opportunity to graze. One medium sized dairy co-operative, CONO, responded to that and offered farmers a premium price for grazing cows. In organic and biodynamic farming grazing was already part of the production standards. At governmental level the discussion arose whether grazing could be paid for in agri-environmental programmes or if it could be made a condition for income support to dairy farmers.

In 2003, Stichting Milieubewustzijn, CLM and Biologica (the Dutch platform for organic farming) started a project called Lokale Boer Consumenten verbanden, which can be translated as local farmer consumer associations. The word 'conshuman' is hinting at the difference between the consumer choosing for short-term self-interest and the human being willing to balance short-term self-interest with long-term common interest. A network was established of 20 farmers working directly with consumers via subscription systems, farmers markets or farm shops. These farmers want to deepen the relation with their consumers and want to develop their farm to the needs of their consumers. In the associations different forms of mental and spiritual support, labour or financial support for farmers are to be found in return for the values the farm offers to the people. The project was explicitly presented as a social learning process with many questions and few answers at the start. The project made a quick start, because the interest from farmers was high, but stagnated immediately after its start because the three organisations were not on the same line and donors did not provide the funding needed to implement the project as planned. Nevertheless, the project survived because Stichting Milieubewustzijn, CLM and some of the farmers that had stepped into the project were committed to it regardless of project funding. Over the course of three years the network deepened the questions without external funding. A key question that came up was the balance between giving and receiving. In the fall of 2004 the farmers and consumers involved in the project discovered that farmers are programmed to unconditional giving in a context of consumers saying 'it is not enough give me more'. During an emotional meeting we discovered and felt the pain of robbery of human dignity. In that pain we also discovered our identity as a network.

Stichting Milieubewustzijn and CLM, in 2004, got the opportunity to learn about the process behind robbery and how this can be transformed into fair trade and association. This opportunity was a design project for a 'Buurderij'. A Buurderij is a non-existent Dutch word that is a mixture between the Dutch word for farm and the Dutch word for neighbour. The challenge in the Buurderij project was to design new forms of social and economic organisation in the countryside. In the design process we discovered that our relationship to money is a key factor in the industrialisation process in agriculture and in robbery of human dignity.

In the summer of 2005 Stichting Milieubewustzijn and CLM invited a number of organisations to become part of a new social learning network called 'LoeiGoed!' Loeigoed is a Dutch expression for extremely good but the first part of the word refers to the sound of cows. Notice the value we put on the sound of cows in this Dutch expression. The idea

behind LoeiGoed was to scale up co-operation between different organisations to come to a joint initiative in which Adopt a Cow could find its place because the project needed a new impulse to stay alive. The partners in LoeiGoed had difficulties in defining common ground. In the autumn of 2005 Stichting Milieubewustzijn helped the 'Adopt a Cow Now' project to become an independent self-supporting organisation, called 'Koevoet'. With that decision farmers and citizens co-operating in the project will stand on their own feet and will have to decide on their own path, but maintaining the original goal: ongoing process of sustainability through learning and experiencing new forms of relationships, social and financial commitments.

Towards the transformation of a mechanistic worldview

The contradicting developments with regard to the cow can be better understood if we take a look at the different worldviews underlying them. The worldview underlying the mainstream development of industrialisation of dairy farming can be characterised as mechanistic while the worldview underlying the signs of hope can be characterised as organic. In a mechanistic worldview reality is perceived as a machine while in an organic worldview reality is perceived as life, as a living system in continuous movement and adaptation. Elisabeth Sahtouris (1999) made an overview table of the differences between the two worldviews¹.

Mechanic	Organic
Allopoiesis	Autopoiesis (self-creation)
Inventor created	Self-created
Hierarchic structure	Holarchic embeddedness
Top-down command	Holarchic dialogue/negotiation
System engineered	System negotiated
Repaired by engineers/experts	Repairs itself
Evolution by external redesign	Evolution by internal redesign
Exists for product or profit	Exists for health and survival
Serves owners' self interest	Serves self/society/ecosystem

The key word in the organic worldview is autopoiesis, which is according to Chilean biologists Humberto Maturana and Francisco Varela (1992) the process they define as life. They consider a living being as a closed entity capable of generating and renewing its own components, consistent with its environment. This means a living being, from organism to organization, is able to organize and maintain itselfⁱⁱ. If this concept is understood the other words in the overview table follow logically from it.

We would like to use this overview table with regard to the use of *land, labour* and *capital* in agriculture, as a mirror of our worldview. A worldview is not just our perception of reality but it also shapes it, for example through the use of land, labour and capital by individual farmers and the farming sector as a whole. If one perceives the world as a machine one tries to create and treat cows, people and other living beings as if they were machines. Agricultural development, in a historical perspective over 200, years started based on land with a large labour force and little use of technology and capital. In the industrial revolution the labour force was replaced by machines until it took the form of a family farm. In the green revolution a further intensification of land use can be seen with increasing yields per hectare. In livestock keeping of pigs and poultry, agriculture became disconnected from land, followed shortly afterwards by glass houses producing vegetables and ornamental plants on rock wool. The industrialisation process went on and in glasshouses and in livestock systems robots are taking over from human labour. The mainstream development is that agriculture is disconnected from land and labour and becomes increasingly reliant on capital (interest paid to banks), mining of fossil energy and automated technology. Based on a mechanistic worldview it took 200 years to create agriculture as a machine, and the machine is perfected each day up to the boundaries of the living systems we are working with. Innovation is based on the idea that a cow is a machine. However, a cow is a living being, just as we are, and not a machine.....

So, increasingly intrigued by the difference between machines and life forms we started to be interested in life itself. The more we discover about life the more we are amazed by its complexity. We start to understand that machines are simplified tools compared to life

itself. Through this growing consciousness individuals start to change their values and behaviour but feel the systems and structures do not fit anymore. The current systems and structures and the collective worldview underlying it start to be questioned. One of the outcomes could be that they shake and eventually will disappear, and will be replaced by something else. The key question of humans and of humanity is one about consciousness: *In what world do I want to live, do We want to live?* The proposed answer in an organic worldview is a world that maintains and strengthens health and life of soils, plants, animals and people. *If we choose that path: what are the values we need to have in common? And if we are clear about our worldview, can we create (e.g. capital-) systems and structures to make it work?*

Adopting an organic worldview

Assume people would adopt an organic worldview. How would this agriculture look like, regarding the use of land, labour and capital? In the global organic movement, IFOAM, consensus has been reached recently on four ethical principles of organic agricultureⁱⁱⁱ. The principles of *health, ecology, fairness* and *care* are presented as the roots from which organic agriculture grows and develops. The principle of health states that organic agriculture should sustain and enhance the health of soil, plant, animal and human as one and indivisible. The principle of ecology states that organic agriculture should be based on living ecological systems and cycles, work with them, emulate them and help sustain them. The principle of fairness states that organic agriculture should be built on relationships that ensure fairness with regard to the common environment and life opportunities. The principle of care states that organic agriculture should be managed in a precautionary and responsible manner to protect health and well being of current and future generations and the environment.

Our first comment on these principles is that we are very happy with the ethical underpinning of organic agriculture. And we fully agree that land and people are of central concern for the development of agriculture. People are the central players and people define their relationship with land in their individual value systems, in collective worldviews and in production processes on the ground. The four principles can guide the organic movement to innovate more in the social and cultural areas. But what challenges us is the implementation of those principles into daily societal practice where 'capital' is the key driver of mainstream agricultural development. This raises the question: *'How could the role of capital, and especially of money, be transformed in such a way that it catalyses the evolution of a more endogenous and sustainable agriculture?'* A question of transition management towards organic evolution, or even more precise: towards organic-cultural evolution.

The role of Money in Evolution

The role of capital, and especially of money, urgently needs to be reconsidered in relationship to humanity's global challenge to adjust our exploitive cultures to the carrying capacity of our planet. As we said before, our relationship to money is a key factor in the industrialisation process in agriculture. We will explain how money works in a mechanistic worldview and how money can work in an organic worldview for quality of life on earth.

Mainstream agricultural development, based on the mechanical worldview, is increasingly disconnected from land and labour and becomes increasingly reliant on capital (interest paid to banks), mining of fossil energy and automated technology. Systems based on high levels of capital input give more revenue than systems based on land and labour. In other words capital gives more revenue than land and labour. A certain amount of money invested in technology, will generate more output and revenue than the same amount of money invested in land or paid to people. With regard to revenue on labour this goes so far that farmers become redundant and have technology do the job for them. The farmers quit farming, take part-time jobs elsewhere or scale up and incorporate other farms. Agriculture becomes the art of buying cheap inputs, interpreting input and output data and watching T.V. monitors. In many cases this is not the job farmers had chosen when they started their farm. The new generation of farmers prefers the term agrarian entrepreneur for their job and, indeed, it better reflects the relationship they have with nature. With

regard to revenue on land, in glasshouses this goes so far that with the input of capital the living soil is substituted by substrates, which are more productive. In general the technology is not designed to enhance quality of life of soils, plants and animals but to maximise revenue per Euro invested. Our conclusion about the consequences of that mechanistic worldview is that labour and land are subordinate to capital. People, animals, plants and the earth are used to make money. The money system we have constructed as society has enslaved us to work for money. Paradoxically this is being called economic freedom. The money system is a 'robbery of human dignity' because we seem to do anything for money. In a mechanistic worldview this is not a problem because we get what we want. We have envisaged the world as a machine and here we are.... machines ourselves. Thus, so far, the role of money in evolution has enslaved people to think and act as machines. So, the concept of evolution itself is full of values; *evolution of what, of who? Where is the way out?*

Examples of Money in a more organic-cultural evolution

The fact that we perceive becoming machines as a problem indicates we are at the end of the mechanistic worldview. People grow up, become more self-conscious and do not want to become a machine producing more and more just for money. Grown up people want money to work for them. In the current thinking and system this is only possible if you have a lot of money. A lot of human creativity is put in becoming very rich, often at the expense of others. But there is also creativity found in the design of money systems that can work for everybody and not just for a few. We have the opportunity to work with two designers: Christopher Houghton Budd who is working on an associative economy, and Hank Monrobey who is working on a Citizens-Multi-National.

We need to examine the question: How can money work in an organic worldview, in a living system which is able to organise and maintain itself, consistent with its environment, as well as in a culture that intends to grow in consciousness about global interconnectedness and take responsibility for it?

We first need to reconsider money. According to Christopher Houghton Budd^{iv} an economic historian unmasking our economic reality, money has no value in itself. Money is always an expression of value attributed by people to a good, service or idea. Money needs to circulate to have value and cannot be stored without losing its value. Possession of money makes no sense when it cannot be properly used for the creation or maintenance of human values. To make proper use of money three qualities of money need to be distinguished: *purchase* money, *loan* money and *gift* money. These three qualities are consistent with human nature. Purchase money represents the material existence of man (tangible), loan money represents the spiritual existence of man (intangible) and gift money represents the human soul. Purchase money works in trade to pay the bill for the costs of production made in the past. Loan money (capital) works in the present for the production of goods and services to be sold in the future. Gift money works in education and human development in general. Gift money works towards the future and is most appropriate for innovations in which the risk of failure is inherent. Moreover gift money has a function inbalancing the two other qualities of money (like the human soul is balancing what we experience as a spiritual being with what we experience as a physical being). Currently these qualities of money are working, but most people do not consciously use them. The result of continuous substitution of land and labour by capital is that the world is drowning in loan money, while there is a shortage in purchase money. In practical terms banks are drowning in loan money while people are unemployed or have little purchasing power. In other words we overvalue the production processes in the present with unrealistic high expectations on the revenues it will deliver in the future while we undervalue what we have achieved in the past: prices for products and services are too low and therefore incomes are too low. As a result we have continuous inflation in the use of loan money (capital) and continuous deflation in the use of purchase money. Because we do not separate these two qualities of money we do not observe this reality. In our statistics we observe a nominal inflation and that means we become poorer, we have less purchasing power with our income. What we fail to recognize is that we lose purchasing power only because the capital component (loan money) in product prices increases. This is a dead end road, which leads to a big bubble of loan money that has no connection with what is

actually produced. We will be simply increasing the capital costs in our products and services at the expense of labour and land and quality of life generally.

We need to learn to use these qualities of money more consciously and to balance past and future by balancing the qualities of money. Once we have discovered how to use money consciously money starts to work for us. To be able to use money consciously we need to start to strictly separate purchase money and loan money. We do not need to wait until humanity as a whole is ready for it, because individuals and businesses can start to do it immediately. People can use accounting for that purpose. The use of purchase money becomes visible in the Income and Expenditure account. The use of loan money becomes visible in the Balance Sheet. The use of gift money becomes visible at the closing of the entries. That is the moment that it is decided where the profit goes. This needs to become a more conscious choice, and will be a great challenge for people to become detached from the possession of money as a goal in itself. What can replace the attraction of possession of money in an organic worldview is the attraction of enabling people to fully express their potential in life, people consciously serving their own goal in life by enabling other people to serve their goals. This process of becoming conscious about money also has to take place at the global level. To restore the balance in economic life globally we have to accept that a big part of what we still believe is loan money, needs to be used as gift money. In other words, we can chose to give away or spend our savings consciously, or to just lose it in the Enrons and Parmalats around us.

The Citizens-Multi-National (CMN), which is being designed by Hank Monrobey^v takes a different approach, but one that fits in the picture presented above. The Citizens-Multi-National can be perceived as a money system based on purchase money. The essential feature of the system is that purchase money is circulated more quickly (26 times in stead of 6 times per year), therewith substantially reducing and eventually phasing out the need for loan money in trade. This is achieved in the same way as multinationals work, by internal overbooking between firms in a holding structure. By transferring every Euro spent to a collective account number the money can be used to pay bills immediately. This system works if there are sufficient firms in the structure who are trading with each other, and it substantially reduces capitals costs. The competitiveness of multinationals largely depends on savings of capital costs. Logical if you consider that more than 50% of the cost price of products is capital costs and Value Added Tax. The Citizens-Multi-National is a 'holding' owned by enterprises and consumers and they divide the bonuses otherwise earned by the C.E.O.s of multinationals.

A second key feature of the CMN is that for each transaction a 2% transaction cost has to be paid, of which 1.6% is used to build a capital reserve that can be used to avoid inflation or deflation in the system, but which can also be used for investments. The Representative Board of the CMN makes decisions about the use of the capital reserves. The effect of the Citizens-Multi-Nationals on quality of life depends on the consciousness of the participants as represented by their Board. The system already works (partly) in the mechanistic worldview (used by multinationals) for continuous price cuts and exploitation of life on earth. The intention of Hank Monrobey is that the system is used for the well-being of people and the system can indeed work for better quality of life, if the people in the system want it. In any case the Citizens-Multi-National will be helpful in raising consciousness of consumers and businesses with regard to money. In the CMN consumers and businesses co-operate in a network and have to take responsibility for what money does in the network. If the networks are not too big, and there is enough trade within the network, the local CMN structures will provide a good learning opportunity for everybody involved in sound treatment of money.

Considerations and Conclusions

In this essay we took a nomadic route through challenges for farmers and consumers in atuning agriculture to nature, visions on farmer-consumer relations, and inspiring Dutch initiatives which are bringing the vision to life. We elaborated on the role of money in agricultural development today and its potential role in the future. In this section we will only discuss and summarize the role of money.

Can money work for the evolution of endogenous and sustainable agriculture? Yes, there is plenty of opportunity to use money consciously for the enhancement of quality of life of

people (farmers and consumers), animals, plants and soils. First of all, by using purchase money to pay a fair price for agricultural products and services provided by farmers, but also by using loan money at suitable conditions or by using gift money, the culture we build around life can be improved. As long as the big money systems move in the wrong direction the new culture is the result of individuals making conscious choices with their money. Individuals can make money work for them.

Can money work to the service of sustainable use of land and labour in Dutch dairy farming? Yes, there are many hopeful initiatives. What needs to be done now is to connect farmers working in this direction, organise dialogue on learning experiences and give these farmers a stronger voice in society, and get more experimental space. Equally the stories of the people who have experienced the quality of life on these farms should be publicised. Gift money is needed for that purpose. What is needed at farm level is investment in the quality of land use and labour use. Farmers should learn to improve the quality of their soils by intervening less. Loan money is needed for that purpose. What is needed at consumer level is to pay a fair price for dairy products coming from farms supporting life, as well as for related services. Purchase money is needed for that purpose.

It is hard to adopt an organic worldview and take responsibility for it if you have grown up and live in a world in which a mechanistic worldview dominates. Our personal experiences are that we felt, and feel, a terrible shame and pain when we fully recognize(d) the consequences of our worldview and behaviour expressed in our use of money. We are conscious that we are also 'guilty' of shaping the world we live in, if we look at our own use of purchase, loan and gift money. It takes courage of each individual to go through that process, and it requires compassion for consumers who are hesitating. What has given us the courage to tackle the shame and pain is that we also recognized the freedom we would gain by taking responsibility for our acts, and the accompanying joy and power of co-creating living systems and a culture attuned to nature. That we will become coherent and authentic in our values and our acts, each of us in an own unique way: 'Walk my Talk' and 'Talk my Walk', and so making the difference by 'Being the Change'. Of course it is a long process to make an organic-cultural worldview work fully in each farmer or consumer and at the level of society and humanity as a whole. But each person becoming authentic will inspire other people to follow the same path. Structures and systems based on this new more Conscious Cultural Evolution will be even more helpful. Some sparkling examples are already shown in this essay.

Coming to the harvest: individuals, nations and unions of nations have to learn to balance the value given to the past (through trade), the present (through investments) and the future (through innovation). The stability of our money is an expression of that balance. The society that succeeds in balancing the qualities of money will harvest stable money without inflation and deflation. But we as humanity will harvest more: the survival of our planet earth, of our human dignity and the sparkling emergence of a Conscious Culture.

ⁱ Sahtouris E., *Earthdance - living systems in evolution* (1999), <http://www.sahtouris.com>

ⁱⁱ Varela F., Maturana H., *The tree of knowledge*, Shambhala, Revised edition (1992).

ⁱⁱⁱ IFOAM Head Office (2005). Principles of organic agriculture. www.ifoam.org

^{iv} Look at Centre for Associative Economics. www.cfae.biz

^v Hank Monroby (2004) *Op weg naar een nieuwe Gouden Eeuw*