

ORIENTING KNOWLEDGE SOCIETY TOWARDS SUSTAINABILITY AND INCLUSION: A WIN-WIN SCENARIO FOR THE EU

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INTRODUCTION

“When vision vanishes, people perish”
Bible, Proverbs: 29:18

Something very forward looking happened at Lisbon Summit meeting in the spring of 2000. At the meeting of The Council of Heads of State, an important decision was taken affecting the future of Europe. What was this decision, why was it so important, and why was it worthy of the description, forward looking?

The decision was to work towards a Europe that will be the most dynamic and competitive knowledge-based society in the world, but in a socially inclusive and sustainable way. Its importance lay in its recognition that knowledge was becoming an important source of wealth. It was forward looking because instead of speaking of technologies, Europe’s political leaders spoke of a knowledge *society*. They also made a link between competitiveness and sustainability, which is crucial for the future. And in pushing for social inclusion they recognised the importance of capitalising on the rising new inclusive logic of knowledge management. In one single statement, the Lisbon Summit meeting set the stage for a win-win scenario in the European Union for the first decade of the 21st century.

1. THE KNOWLEDGE SOCIETY

A key feature of the knowledge society is that it is a post-capitalist knowledge market. It is already clear that information and communication technologies have already resulted in deep transformations of society. But even deeper changes can be expected. Power increasingly lies in the availability of human creativity in interactive networks (human capital) and less in the ownership of capital and technology. Why is this so?

To transform information into knowledge, capital and technology are necessary but not sufficient. And human creativity is absolutely necessary. Verna Allee [1] has said “the electronic economy in California collapsed because they looked only at technological progress. They had not understood the importance of the institutional transformation of the companies and of society. They had not changed their vision. Most of those *top* companies were dinosaurs in terms of human management. This is the real reason why they collapsed. Others like Cisco or E-Bay had enormous intangible assets and human capital. They are prosperous.”

Even though knowledge society is post-capitalist, it will probably remain a *knowledge market* system, but in a different shape. And this is not a value judgement against or in favour of industrial capitalism. A rapid and deep shift is taking place. And the core values of capitalist society are shifting in silence: they are becoming peripheral or obsolete and the importance of this shift is surprising.

Classical economists are increasingly speaking of *intangibles* when they refer to the knowledge society. It seems that one important part, possibly the major part, of the economic system in United States and in European Union, has become intangible. This means that the classical economic tools are not efficient anymore for measuring and managing this growing part of economies. Classical tools are becoming rapidly obsolete [2,3].

Another feature of the knowledge society is the importance of inclusion. People are deeply rooted in the industrial mentality. It is really difficult for everyone to understand that the exclusive logic of the industrial society is silently being transformed into an inclusive one. This is a 180° turnaround. If knowledge is not shared, it is impossible to increase it, because machines cannot do this: it is a distinctly human activity. Worse, if knowledge is not shared, it loses value. It is affected by a negative interest rate. This is the new logic permeating *networks of excellence, intelligent territories, learning regions, life-long learning*, etc. The more people who are included, the more a region will become intelligent. This is *win-win* logic. But there is something even more shocking: the entrepreneur of the 21st century may become a champion of inclusion in the knowledge society. Indeed the more people that are included the more qualitative knowledge an entrepreneur will produce.

In affirming that the knowledge society must be competitive in an inclusive way, Europe has chosen the right way forward, even though many of the important actors in business, in administrations, in Universities, and the public, have not yet fully understood this new challenge.

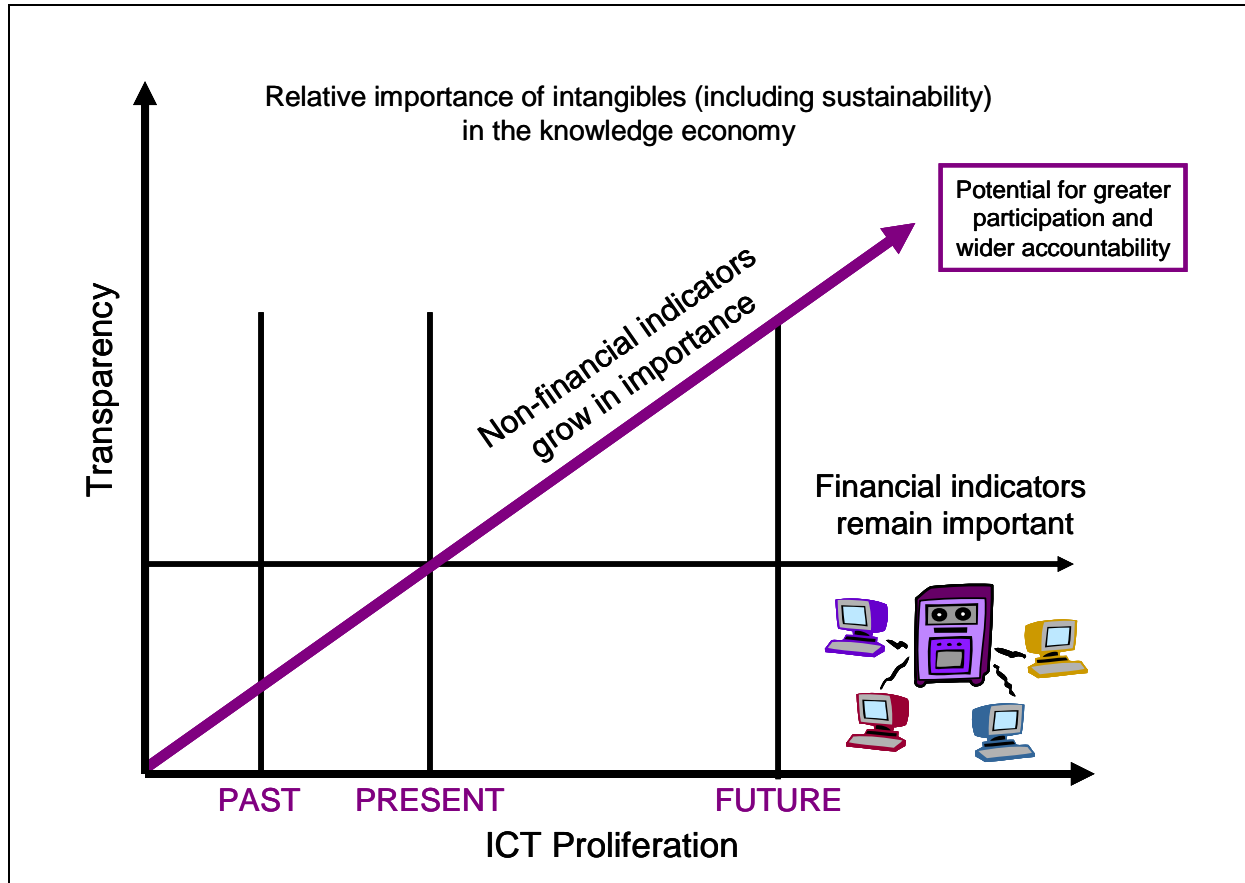
Importantly for the knowledge society, sustainability is a key intangible asset. But most economists have a problem with sustainability. They consider that it is a cost and they are right. If an enterprise wants to become entirely sustainable then this does have a cost.

The story of *Interface*, the Carpet Company, which became 95% sustainable, is a good example [4]. Enormous sums of money were spent on reorienting the whole production system, but this does not appear to be the main reason that *Interface* became the world leader in carpets. Why was this so? What happened?

It seems that the personnel, the clients and broadly the stakeholders, became so deeply proud of their enterprise that its energy was transformed completely. The enterprise suddenly acquired a new and deeper meaning, a new image, because it was contributing to the survival of nature and humanity. The brand, the reputation, the meaning, that is to say, the non-financial assets of the company increased by 1000%. This is a huge increase of intangible value! Yet it is not visible in the old measurement system.

In the knowledge society, it appears that the non-financial assets, or intangible assets, that is to say those that are a source of future benefits that do not have a physical or financial embodiment, are growing in importance. This is happening because knowledge is more important, and the way to measure knowledge is mainly qualitative and non-financial, thus

intangible. But intangible assets are something that cannot be recognised very well with the old tools. Thus, while sustainability is a cost in financial terms, it is an intangible asset in a knowledge-based enterprise. Now, if the importance of the non-financial assets increases, this means that sustainability is a real key element of a win-win strategy for Europe.



© Marc Luyckx, Brussels & Verna ALLEE, Martinez, California. + NESKEY = "New Partnership for Sustainable Development in the Knowledge Society". (Research on a roadmap for 2010 presented to the EU Commission DG Infooc. in 2003.)

Figure 1: The growing importance of intangibles in the knowledge society

Figure 1 illustrates that intangibles grow in importance in the knowledge economy as information and communication technologies enable greater communication of indicators and increases transparencies. The potential is for greater citizen participation and wider accountability between sectors of society. As new intangibles, sustainability, and social inclusion grow in relative importance.

Figure 1 also shows that society has reached the point where the line depicting non-financial assets and measurements crosses the line depicting financial assets. While financial assets will remain important measurements, non-financial assets and measurements will become predominant in the future.

In the classical industrial approach, sustainability is caught in a *win-lose* game, which is correct if only at the line depicting financial assets is considered. No *win-win* is possible. However, in the knowledge society, the line depicting non-financial assets and measurements indicates a growth in the importance of intangible assets. And sustainability is an intangible asset. So at the moment when intangible assets become increasingly important, sustainability

becomes key success factor in the knowledge society. This is now a *win-win* game. More sustainability implies more intangible assets, which implies increasing new competitiveness.

For similar reasons social inclusion, which is embedded in the new logic of the knowledge society, also becomes a very important and crucial intangible. If an enterprise is considered as socially inclusive, it will produce increasingly valuable knowledge, and the intangible brand will increase enormously since the enterprise will be considered as a very positive social factor for society at large. While social inclusion is a cost in the industrial logic of *win-lose*, here more social inclusion leads to more knowledge creation, and hence more intangible assets. This again is a *win-win* outcome.

2. ELEMENTS OF THE KNOWLEDGE MARKET

INDUSTRIAL CAPITALISM	KNOWLEDGE SOCIETY: POSITIVE SCENARIO	KNOWLEDGE SOCIETY; NEGATIVE SCENARIO
Competitiveness is linked to availability of capital and top technology.	Human creativity, institutional change, and new vision are more important.	Efforts to exploit human creativity in the old structures and the old industrial vision.
Aim: producing and selling many cheap material goods.	Aim: produce quality of knowledge, thus push human creativity and networks. Immaterial assets.	Danger of manipulation.
Trade: either the item or the money for the item; what is sold is lost.	Knowledge that is shared is not lost. Exchange and sharing of knowledge in networks are the only way to increase knowledge. <i>Win-win</i> logic.	Danger of taking without exchanging.
All industrial policies are based on scarcity and exclusion.	All policies are based on abundance of information and inclusion, because sharing is the only way to produce more knowledge. Or ...	People try to steal knowledge without sharing. Dangers of virus and pirates of new kinds.
All industrial policies, defence and business, are based on secrecy. Patenting is the norm.	Disappearance of secrecy and patenting! Information always <i>leaks</i> . Or ...	Refusal of this evolution. Soft Fascism. Wars and violence.
Capitalist debate: who owns the means of production? The right-left debate.	The capitalist debate is over. Individual propriety of the means of production – the brain. Or ...	Subtle or violent manipulation of human brains.
Human capital is not an asset: it is a social cost.	Human capital becomes a central asset in production, management and new	Management as manipulations of human capital, to make it submissive

	measurements and accounting. Or ...	to machines and old style profits.
The concepts of <i>industrial progress, growth</i> and <i>competition</i> are quantitative.	Progress, growth and competition become <u>qualitative</u> . Or...	Refusal of this qualitative definition of progress, growth and competition.
Objects on the market have no ethical value.	Knowledge has an ethical value. Or ...	Manipulation of ethics and meanings, even religions.
The overall strategy is mastering and domination of nature and markets.	General strategy is reconnection and sustainability and qualitative growth.	Towards a new and worse mastery and domination!

Figure 2: From one form of logic to another

Figure 2 shows the chief characteristics of a positive view of the knowledge society compared with industrial capitalism. But as the third column indicates, all the new values emerging in the knowledge society can be subverted into their opposites.

Towards an immaterial society

Industrial society aims to produce and sell a maximum number of material goods, and the industrial economic approach is limited to a materialistic view. Economic discipline is built on reducing everything to numbers, or even equations. The challenge for economists is to find new ways or new approaches of placing human behaviour in equations. And the only possible measurement in capitalist society is a quantitative and material one.

Now, there is a real problem, because knowledge is immaterial. Some economists are making great efforts to express and measure knowledge into quantitative terms. Their work however does not seem to convince the majority of the economic community.

Economists do recognise openly that an increasing part of the economy is *intangible*. Baruch Lev states in a book [5] on intangibles: “An intangible asset is a claim to future benefit that does not have a physical or financial embodiment. A patent, a brand, and a unique organisational structure [...] I use the terms intangibles, knowledge assets, and intellectual capital interchangeably.” Lev also observes: “Intangibles are frequently embedded in physical assets (for example, the technology and knowledge contained in an aeroplane) and in labour (the tacit knowledge of employees), leading to considerable interactions between tangible and intangible assets in the creation of value. These interactions pose serious challenges to the measurement and valuation of intangibles. When such interactions are intense, the valuation of intangibles on a stand-alone basis becomes impossible.”

The classical capitalist quantitative (material) measurement methods are not working. The economy is already in another value system. And the difficulty is that shifting to an immaterial qualitative approach will suppose a change in economic methods and axioms. Economics may have to become a multidisciplinary topic, involving philosophers, sociologists, anthropologists, psychologists, politicians, and even theologians: men and women.

The main obstacle to this rethinking of economics is the *clerical* behaviour of the corps of world-class economist. They do not seem very inclined to accept new ideas and fundamental changes in methods. In the modern world there is a new dominating class functioning like the medieval clergy. Economists are a good example of this modern functioning. They behave like the theologians at the end of the Middle Ages. When one of them begins to think out of the box, he is ostracised and reduced to silence. Herman Daly, former research chief at the World Bank, gives an excellent example of this ostracism in his book [6]. He reports that since he published his first critical article he has never again been invited in any world congress of economists.

These kinds of practices are not very tolerant, but they are structural since they are embedded in the modern approach to economics. There must however be tolerance for human behaviour. It is unfair to accuse people. However there is another obstacle, which is in everyone; the materialistic approach to life has become embedded in all. Materialism has become second nature, it is in peoples' minds, and it is in the modern approach to life, so that immaterial information is not perceived. It is just not seen. Everyone will all have to open up again to another set of values.

Beyond trade towards sharing

Trade is a recent idea. It is a transaction where goods are exchanged for money, and nothing more. Once this exchange has taken place, the transaction is considered as completed. No follow-up is foreseen. This concept of trade seems eternal, because people have never known anything else.

However in the Middle Ages, in Europe, the concept of commerce was very different. It was much richer and holistic. It was mainly based on exchange and gift. For example, if a farmer needed seeds and his neighbour had plenty, then the neighbour would give the needed seeds in exchange of something, or for money, or for free. And the farmer would accept to remain in a debt of honour. Which means that, in case of necessity, it is agreed as evident that the farmer would come and help his debtor, or that he would give his neighbour a present on the next good occasion.

If the farmer went to the market, in town, and bought seeds, he would have to pay, but he would have also uses the trip to the town to gather information on agricultural methods, political affairs, etc. He would also perhaps have looked for a good husband for his daughter. The exchanges in city and town markets were much larger than monetary transactions; they included exchange of knowledge, of human relations, marriages, etc.

It is only during the industrial period, in the 19th century, that the concept of trade became so narrow. Society has shifted from commerce to trade. What has been eliminated completely is the community-building idea of reciprocal debt. This notion of debt has been considered very negatively by industrial capitalism, perhaps under the influence of Puritanism. Popular wisdom today places pride in having no debts. There has been a complete reversal of values.

In the knowledge society, when people exchange knowledge, they do not lose it, and the receiver is linked by a kind of debt. The advantage to the donor is not necessarily money. More important is the knowledge that comes back, enriched by the receiver's creativity. This is the reason why new entrepreneurs are insisting so much on the compelling necessity of sharing any information received by their employees. In some firms in Silicon Valley, if an

employee holds onto knowledge more than 24 hours without sharing this with others, that person is automatically dismissed. This new rule means that in most of national and regional administrations, the majority of the personnel may potentially be dismissed immediately.

There is thus a radical change in the very basic concept of modern industrial trade, in which it is impossible to *have the item and the money of the item*. In a certain sense, in the knowledge society it is possible to have the *knowledge and the money of the knowledge*. There is a shift to a new logic of exchange and sharing. This means also that money is losing its central position in the knowledge transaction, because a knowledge transaction is possible without money. Money is also quickly dematerialising and disconnecting from post-industrial production. It is becoming increasingly speculative and abstract. Thus it loses its societal usefulness. Society is witnessing the end of the industrial concept of money. What is the future?

With a company such as Microsoft, there is a lot of money involved. But the way Bill Gates has made his money seems new. He had knowledge, understanding the importance of the user-friendly approach of Apple, and selling it to the IBM system, but he had little capital and no infrastructure. It has been enough to make a fortune. However, taking the case of software that operates computers (computer operating systems) there is the established Microsoft Windows and the newcomer Linux. The latter is open-source and capable of being improved by users. Comparing the two, Microsoft still appears to be industrial. Will Linux win in the long run? Is Linux much more knowledge-based than Windows? These are still open questions.

Beyond scarcity and exclusion

Capitalism and its money system are based and built on the values of scarcity and exclusion. The whole of the market functioning is also based on those same values. One company has a new product and the other does not. The whole of the concurrence and pricing system is also based on this scarcity. If goods are not scarce, it is not possible to get a high price for them. And the consequence of this scarcity is the exclusion of those actors on the market who have not got a similar patent or product available.

A very different set of values is emerging. In the knowledge society information is overabundant. The challenge is to transform this information into knowledge, which is less abundant. Only the people can do this, or better, several people. And so it is a question of survival to circulate information to a maximum of people. The fabric of knowledge is built on inclusion. The more people who are included the better and quicker information will be transformed into knowledge. The behaviour found in industrial capitalism, trying to cultivate the scarcity of information, will rapidly result in knowledge becoming obsolete! A shift in values is therefore obligatory.

Thus a new proverb can be created: *“Knowledge is like love; the more people give, the more they receive!”* This may be shocking to capitalists, but in truth it is difficult for the majority as well, because people have so well internalised scarcity and exclusion as guiding values. They are deeply embedded in peoples’ minds.

This new logic, which is quickly invading society, can have a very positive impact in geopolitics. Why not apply this inclusive approach to Africa? Why not share with the poorer continents, information and knowledge? A tremendous return may result and because of this

there may be hope for a new start for them. This will naturally presuppose also that there will be a new redistribution of income: humans cannot be creative if they are hungry and anxious for the survival of their children. The eventual return of knowledge may be unexpectedly high.

Is this a utopia? These countries may be able to switch more quickly to the knowledge age, precisely because industrial values are not so deeply embedded in their minds and in their structures. Their so-called *traditional* or *under-developed* societies are still based on a strong sense of sharing, giving, and including. These values are exactly the right ones that will allow a jump into the knowledge society.

Beyond secrecy and patenting

Secrecy and patenting are core values of the capitalist system: secrecy before applying for patents is the logic. This point is very much debated. Many thinkers are still defending the patenting system and there have been extended negotiation on intellectual propriety rights within the forum of the World Trade Organisation, where the West is fighting to defend intellectual propriety rights. And it seems a very legitimate fight.

However, Harlan Cleveland [2] addressed the issue in 1985, when he stated that “information always leaks”. This means that secrecy will become increasingly more difficult: “Information is porous, transparent. It leaks: it has an inherent tendency to leak. The more it leaks, the more we have, and the more of us have it. The straitjackets of government *classification*, trade secrecy, intellectual propriety rights, and confidentiality of all kinds fit very loosely on this restless resource.”

Information does indeed leak. And there will be more and more leaks, for example, on the web. It is even possible to learn through the web, how to build a nuclear bomb! It is becoming increasingly difficult to keep information secret. And this difficulty will probably increase, precisely because of the ultra rapid development of information technologies.

Knowledge is the central asset of the new society. If secrecy is not anymore possible, what type of structures will there be? Once again, people are so embedded in the old system, considering it so evidently eternal, that there are difficulties in trying to conceive something else. Perhaps there is a need to rediscover the notion of collective propriety and co-operative management, which tribal societies have been using for millennia.

An excellent example of this is the international agreement on the oceanic bottoms which after years of fighting, has been determined in the United Nations' Convention on the Law of the Sea, in 1982, and the subsequent agreements and programs following the Rio Earth Summit in 1992. Perhaps the time has come for humanity to rediscover old truth and create new concepts leading to a more sustainable world.

The worst scenario will be the West pushing to enforce rules for the protection of intellectual propriety worldwide.

Individual ownership of the means of production

This is the most destabilising new characteristic of the knowledge society, because it means the end of capitalism and of Marxism, and of the right-left debate. Here lies the theoretical

basis and explanation why the left is so much in crisis in Europe and in the whole world. Indeed, the whole strategy of Marxism and of the left was the fight for the ownership of the means of production by the workers. Meanwhile the right was fighting for the ownership by the entrepreneur or by the owner of the capital.

Now this is all over, because the means of production in the knowledge society are the individual brains of employees. This means that every evening employees are going home with the means of production. Every evening, entrepreneurs remain alone with their capital, their factories, but without the main means of production. There is still capital, but it is far from being the central asset. Society is definitely not anymore capitalist.

The new challenge for the knowledge entrepreneur is to make sure that the means of production are coming back to work in the morning. This also explains why management is shifting towards human-centred management. It is a question of survival for the enterprises, if they do not want to lose their best tools of production. There is thus a re-humanisation of management.

However the human brain alone is not productive. Humans must interact to create new value. This is the fundamental reason why there is so much discussion about networks. Networks of creative humans are indeed the value creation tools of this new society.

When human capital becomes central

Human capital is becoming central. Many entrepreneurs have learned this, by the facts, when they have lost the best brains of their enterprise, and thus, one important part of knowledge creation. They have been forced to completely change their management style. This is the optimistic scenario. And happily it happens often.

However, some businesses have been forced by market pressures to abandon the *new* management practices, and to go back to the old vertical, short-term profit-centred management. But these old practices are not the future.

However there is another scenario, which must be taken seriously. It consists of modifying humans, through life engineering, to make them conform to the technological system. Andrew Kimbrell, founder of the *International Centre for Technology Assessment*, in Washington DC has said, "Corporations, academics, and researchers came to realise, albeit slowly, that current technology is not compatible with life [...] To deal with this historic dilemma, the technologists and their corporate sponsors outline a breathtaking initiative. This initiative was not to change technology so that it better fits the needs of living things, as we were so eagerly advocating. No, they had and have a very different and stunningly self-serving approach. They decided to engineer life, indeed reality itself, so that it better fits the technological system. It is in this chilling context that the enormous significance of the current revolutions in technology can be fully appreciated. Here we have the key to the otherwise bewildering high-tech headlines and to much of our social malaise."

Thus a shift of values does not necessarily imply a rosy future. Every value can be used for the good or evil. This depends on the free choice of humans. And the evil forces in people and in society cannot be underestimated.

Towards qualitative progress and sustainability

Another basic value of industrial capitalist society is an unshakeable faith in progress. In the pre-modern agrarian society, the dominant time value was stability, and change was seen as undesirable. The astronomers Copernicus and Galileo had negative experiences as a result. In modern and industrial society progress has superseded stability, almost to the point where stability is subject to ridicule. And capitalism has added a turbo drive to this concept of progress, by introducing the new undisputed value of unlimited quantitative growth.

The problem is that in a finite world, infinite growth is mathematically impossible. Many people feel this, but people prefer not to mention it, as the benefits of growth continue to be reaffirmed.

The good news is that in the knowledge society, knowledge can be of excellent, good or poor quality. This means that knowledge, like human creativity, are measured in qualitative terms, and very poorly in quantitative terms, precisely because the productivity of knowledge is linked more to its quality than to its quantity.

Peter Drucker observed in 1993 [7]: “Above all, the amount of knowledge, that is, its quantitative aspect, is not nearly as important as the productivity of knowledge, that is, its qualitative impact. And this applies to old knowledge and its application, as well as to new knowledge.” This little quotation is very important. It is the signal that there is a new logic, based on quality. This is a new landscape, in which the economic rules are not yet known. But this also means that the basic concept of progress will have to be refined. People will have to accustom themselves to a qualitative definition of progress.

This will be another watershed for the global society. This new definition of progress is changing the way society will be seen in the coming years. This means that there is a shift underway from a society that aims at producing the maximum quantity of goods, and finding a market for them, towards another society that aims at increasing the quality of knowledge. Does this mean that more globally, the aims of world societies will be to increase the quality of life for everybody? This is one possible option, which is probably the only way to prepare a sustainable future.

One of the main problems in society is that people feel compelled by market logic, to produce everyday, more objects, and in so doing to continue the exhaustion of nature and environment. In a framework of purely quantitative progress, sustainability is impossible, because it implies stopping the system, and this is not acceptable. How to conceive this limit? There must be a halt somewhere, somehow.

Qualitative progress may be this stop signal, this new red light, but in a way that is acceptable, and accepted by the key actors in the system: enlightened business people. If society is not anymore focused on quantity, but on quality, a sustainable society in the future is possible. This shift towards qualitative progress is thus giving humanity the new indispensable concept for imagining a sustainable future.

In philosophical terms, this means also that people may be leaving the materialistic framework, in which everyone was raised, and that people may be heading towards a post materialistic society. What then will be the new aims of society, if they were not anymore linked to material progress? Society may make the choice of focusing on human qualitative

development. This may seem strange to many, but it may become more self-evident by 2015. Nobody knows the future, but it is important to prepare for it.

Ethics, meaning and transparency

In the industrial logic, objects have no ethical connotation. For instance, a block of steel can be produced in a German factory, where all workers are protected by strict social laws, are very well treated, and earn a very good living. Or it can be produced in an Indian sweatshop. No difference can be seen however: it is the same block of steel.

In the knowledge society, objects are increasingly linked to information, to knowledge and to meaning. People are interested to get information from the World Wide Web on how *Nike* shoes are produced, by whom and in what circumstances. The same applies to food such as chicken; people want now to know how the chickens were raised.

Probing deeper it is clear that a *Microsoft* program is not the same as Linux program. The first, despite its qualities, is sending a subliminal message of closeness and exclusivity. This program cannot be rearranged creatively, and eventually enriched, by customers. It is expensive and compels people to buy the new versions, which are not always fully compatible with older hardware material, which is then rendered obsolete, etc. Linux programs however, are open-source, and they are thus open to adaptation and improvement by customers. They are much more human-friendly, and thus more in tune with a positive future. This example shows how much meaning is invading business life and public debate, in general.

Another excellent example is that of Coca-Cola who were confronted in 1999 with a number of minor crises. One of them happened in Belgium. Some children became slightly ill after drinking Coca-Cola at school. The Coca-Cola management in Belgian, and at European and world levels, managed this crisis as a problem with a product, an object. They treated Coca-Cola cans like pure objects with a defect. They withdrew millions of cans from the European market, and sold them to Africa, where they do not seem to have produced any harm. This *object led* management was a good and cheap way out of the problem.

However, when the media informed the public of this behaviour by the media, there was a negative reaction and the share price of Coca-Cola lost, in a very short time, 50% of its value! What had happened was that, in the eyes of the consumers, a can of Coke, which is 10% brown liquid and 90% brand, lost some of its immaterial value. Indeed this carefully constructed brand is about equality and integration between the races, a world of harmony and justice, hope for a better world, for the young generation, etc. These are ethical values. Such a brand cannot be managed like a material object. Management must reflect the values of the brand itself. This is what the upper management had not understood. They simply had not taken the immaterial dimension into consideration. And this damaged the General Manager's career and he was forced to resign.

This example shows how deeply society is already in this new way of doing business and in the new logic. It is around, but everyone is like the Coca-Cola General Manager, still desperately trying to solve problems with old tools.

From command and control to reconnection and caring

In industrial and capitalist society, command and control were important. They were so evident that these methods were not even discussed. And the tools of production, capital and industrial technology had to be commanded and controlled to be efficient. In this machine-centred society, humans were invited or forced to adapt to the machine: machines were commanding their rhythm.

In the knowledge society this modern, rational and patriarchal type of management is rapidly becoming obsolete. Why is this so? The answer is because suddenly people have realised that it is not possible to control knowledge, and it is certainly not possible to control human creativity, at least if it is accepted not to transform human nature.

This is another huge transformation. It is not only a shift in values, but it is the deepest transformation, in the way power is used, for 5,000 years when patriarchal societies emerged. Since this time power has been exerted in a vertical, command and control way. And suddenly, this way of exerting power becomes obsolete, because it is not able to foster human creativity: a strange circumstance. Events seem to move faster than peoples' conscious understanding. They are thus obliged to reinvent power. And it is normal that in such a period of transition, women are found to be far better than men at human resources management. Women have not completely forgotten the way power was exerted in the pre-patriarchal society, the matriarchal one. Men instead are more identified with the patriarchal power structures. Their challenge is more important and difficult.

In a certain sense, the knowledge society is like a turbo drive; an accelerator of this shift from a patriarchal society towards a new kind of women-men partnership society. And what is the new landscape of power? One key element is that power will become more enabling, and life and creativity enhancing. This is for men a new world, or at least for their yang dimension.

And there is another very important element. Patriarchal power, because of its command orientation, considered itself above nature. It was thus cut off from nature, from feelings, from life itself. It was like exerting power in a void [9], over nature, not inside nature. This power position has permeated the whole of the modern world, which is a model of domination. And now to exert power in a life enhancing way, people must reconnect with nature, with feelings. This is a completely different way to relate to reality. Once again it is understandable that women are before men in this transformation.

The good news is that, if this shift is going on further, it is paving the way to a new vision of the world, which leads to sustainability. This new structure of power is leading people towards a positive and sustainable future in a much easier way.

However the more this shift is occurring in the shadow, the more that existing power structures will feel threatened. They will really have the feeling that their foundations are crumbling. And people must thus be ready for desperate, violent, even extremely violent counter reactions, aimed at keeping this mastery and this control. People must be ready to live in the coming years in a contrasted landscape, with significant change and with very reactionary responses to these transformations.

The transformation has started, and it is unlikely to be stopped. However nobody knows the future!

The negative scenario

A transformation of values is clearly happening. This is something that is occurring deep within society. However any value is like an axis and the main axes of society are moving into the knowledge society. But on each axis, it is possible to move towards plus or towards minus. Every value can be lived and applied in a positive or in a negative sense.

It is thus evident that a negative scenario is possible. It is even probable that humanity will first try the negative scenario, because it is the direction where the *business as usual* policy is leading. And it is also more similar to peoples' everyday world, which is not rosy. It is indeed very probable that people in power will do everything they can to maintain command and control over the political and economic circumstances of the world¹. Never in history, has there been an example of a dominating class giving the power spontaneously to a dominated class. This soft scenario is highly improbable.

This paper has not tried to present an idyllic paradise, as a probable scenario. In practice, a refusal of the change may lead to more harm than the understanding and progressive acceptance of the transformation. What is important in such a period is to prepare people for tomorrow's debate. What are the new questions? What are the new dangers? How to envisage a post-capitalist society? How will it function? How to rethink economy, power, inclusiveness, trade, secrecy, scarcity, human capital, qualitative progress, ethics in business and public management, reconnection, etc.? How to avoid the danger of subtle manipulation of the highest values and of human nature? How to prepare for those new dangers?

Those are important questions that civil society needs to be explicitly aware of. Public opinion has probably already a passive knowledge of these changes, sometimes more than politicians. People intuitively feel the changes. It is urgent to foster an interesting debate on the collective and individual futures. The aim of this chapter is to help the public to think openly what they already implicitly know. And speaking openly what it feels inside, civil society will be able to participate in a constructive debate on the society of tomorrow, its dangers and tremendous opportunities.

CONCLUSIONS

Almost all values of the modern rational capitalist system are in rapid transformation: in silence. It is more usual to underline one or two aspect that are slowly being transformed. This chapter has however highlighted that all key values are disappearing or have already gone. All the foundations of industrial capitalism are rapidly disintegrating, but meanwhile *business as usual* prevails. Is this interpretation wrong? Have events been completely misunderstood? Is this exaggeration? Why such silence and such an absence of reflection and of action? Only time will reveal the answers to these questions.

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¹See for example the "transhumanist movement" (google). They are going in a direction of fostering the adaptation of the human brain to the machines "which will become more intelligent than man".

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THE GROWING IMPORTANCE OF INTANGIBLE ASSETS IN THE STOCK MARKETS.

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In a previous article² we have analyzed briefly how the internal logic of the knowledge economy differs from the industrial capitalist economy. We have acknowledged that this economy is really "post capitalist" and post industrial. We have also seen that most economic actors are still in an industrial mentality and try to manage a post industrial economy with industrial tools. This is perfectly understandable because there is not enough information and valuable debate on this shift between the industrial economy and the post industrial knowledge economy.

And this is perhaps the reason why the intelligent and prestigious "Lisbon strategy" of the EU is not working so well. This EU Lisbon strategy has been set up in March 2000 at the EU (Heads of State) Council meeting in Lisbon. It has decided to aim at making the EU the most competitive economic actor in the Knowledge society before 2010, but in a socially inclusive and sustainable way.

Now, in analysing how this Lisbon strategy is working, one observes that the strategies are probably too "industrial" to be really successful. Once again it is perfectly understandable, because the EU and its prominent economists, have not enough explained to the citizens and the business actors the post industrial economic transformation we are in.

But it is sad to see a waste of money and energy, in the execution of such a good project.

Double standard

Let us listen one of the most advanced visionaries of the US business in the XXIst century, Susan Mehtens³: *« American business, today wears two different faces. One is the face of the large multi-national, publicly traded corporations. They manifest an intense, single-minded focus on the bottom line, and are prepared to sacrifice almost everything to the quest for constant quarterly profits, to satisfy the Wall Street stock analysts. These companies practice an ethics of expedience (what works is right) and encourage extremely addictive behaviours among their personnel, most notably in the form of work*

² In this same magazine in the September October 2006 Number page 107-110.

³ Susan MEHTENS : *« Learning designs and the Third Wave »* in *Perspectives on Business and Global change*, a publication of the World Business Academy, Volume 13, number 4, December 1999, p. 59, Sales : Berret and Koehler Publishers, Email bkpub@bkpub.com

Mrs Mehtens is know in USA through her excellent book on tomorrow's business, with MAYNARD Herman Bryant Jr: *The Fourth wave: Business in the XXIst century* Berret & Koelher, San Francisco 1996.

alcoholism...Not surprisingly we are seeing more and more people leaving this dysfunctional environment .

The other face of the US business is much more viable in terms of the future. It is the world of the small, privately held company... It is not subject to the dictates of the stock analysts of Wall Street... Many of those small companies are owned or operated by women, or are informed by feminine values. It is these companies – small, nimble, fortunate by virtue of their marginal status – that will find smooth sailing on the waves of the future⁴ ».

This double standard seems to be an accurate vision of the situation of the business today, in US, in the EU and elsewhere. On one side you have many enterprises in a classical traditional (industrial) logic. They are under market and short-term revenues pressure and are not treating humans in a very positive way. They seem to go backwards. And on the other side, you have those often women-owned small enterprises who care a maximum for the human dimension. They “will find a smooth sailing on the waves of the future”. This second vision corresponds to the witness of Rinaldo Brutoco, president of the World Business Academy. The management of Men’s wear, in which he is involved, is of the second type, and doing very well.

Those "new" enterprises have understood the new logic. In the knowledge society, and in this paradigm shift towards transmodernity, respect for humans is not only important, not only ethical; it is essential for the very survival of the enterprise. For a simple reason: knowledge becomes every day more important. And only creative humans can create new knowledge in inventing new knowledge through creative exchange of the knowledge they have. This creativity is like a flower that will blossom only if it is treated well, very well. This means much more than a decent salary. It means that the enterprise must have an excellent human capital management, but also a positive social and environmental impact on society. It means also that creativity will stop if there is any fear of sanction in case of mistake. Creativity supposes the possibility to make mistakes!

Lack of theory.

However those enterprises of the second type, who are very promising, lack a theory. They are in fact switching to a post industrial paradigm. But they are like in an intellectual void. Here is what Verna Allee, a worldwide consultant in

⁴ Susan MEHRTENS : « *Learning designs and the Third Wave* » in *Perspectives on Business and Global change*, a publication of the World Business Academy, Volume 13, number 4, December 1999, p. 59, Sales : Berret and Koehler Publishers, Email bkpub@bkpub.com

Mrs Mehrtens is known in USA through her excellent book on tomorrow’s business, with MAYNARD Herman Bryant Jr: *The Fourth wave: Business in the XXIst century* Berret & Koehler, San Francisco 1996.

knowledge networks management is stating⁵: “Today we do believe that people are our core asset, that the way we use our knowledge and intelligence is the key strategic advantage of the company, that ethical principles do create value, that a company’s culture is key to success. Yet we are bound by the golden handcuffs of business, financial and economic models and frameworks that continually pull us in very different directions. ...Virtually all of our business and economic models, as well as our day-to-day management tools, are leftovers from the industrial age. Time and again I watch managers and executives try to move forward into new ways of working and managing only to be frustrated by tools and frameworks that are inadequate for the new economy.”

She warns the reader that the knowledge or intangibles economy is forcing us to a radical change: “It is rewriting the rules of business and forcing a radical rethinking of corporate value and business models. This change is the most significant shift since the industrial revolution.”

Intangible assets : three dimensions.

Now there is a good news. We have got one piece of the new vision: the so called "intangible assets".

In 1986, a swedish scientist called Karl Erik Sveiby, wrote the first book worldwide on "intangible assets" in Swedish language. This book had a little succes in Sweden but it became famous when it has been translated in english and spread in US and in the whole world. It has laid down the first stone of the post industrial knowledge economy. For many people already active in the knowledge economy, it was the beginning of the new theory they were looking for.

Sveiby has since the beginning proposed to distinguish three types of intangible assets:

1. the human competence of the personnel that he called *human capital*. The people's implicit knowledge and how this implicit knowledge is made explicit⁶ and shared inside the company.the internal structures of the company, which cold be called the *structural capital*: its internal tructures and management, its ICT technology and the way it is used and improved by the personnel, its patents, its databases, etc

⁵Verna ALLEE : « *New tools for the new economy* » in *Perspectives on Business and Global change*, a publication of the World Business Academy, Volume 13, number 4, December 1999, p. 59. Sales : Berret and Koehler Publishers, email: bkpub@bkpub.com. See also her excellent book: *The future of Knowledge: Increasing Prosperity through Value networks*" Butterwoth Heinemann, Elsevier Science, USA, 2003. Verna is also working in Europe as an expert for some EU research projects.

⁶ This concept of implicit knowledge will be developped much more by Ikujiro NONAKA & Hirotaka TAKEUCHI "*The knowledge creating company*" Oxford University Press, 1995.

2. the external structures and relations of the company, which could be called the *external capital*: its alliances, in which networks it is actively involved, networks of suppliers, of consumers and of citizens. Let us not forget also the trust that the people have in the company. (Are the people trusting more "Tupolev" or "Airbus", for example). And finally the reputation, the "Brand" of the company. We will see in this article that brand and reputation become everyday more and more important.

Now authors like Verna Allee, underline that the model is not static. There is like a *knowledge flow* between those three categories of intangible assets. She gives in her book this interesting quotation: "*a company increases and utilizes its intangible assets by creating, sharing and leveraging knowledge to create economic value and enhance economic performance*"⁷.

Knowledge is created by sharing. And one could say that knowledge is like love, the more you share the more you have. This is quite shocking for "classical" ears of an "industrial" economist. But the value creation process, in the knowledge economy is quite different from the value creation process we are accustomed to in the industrial production. Indeed industry produces objects, and is adding value to an object: from a block of steel I make a Renault. I have added value to this block of steel.

But in the knowledge economy, there is no object. Just knowledge. And the value creation process consists in adding knowledge to knowledge. My personnel is paid to add value to knowledge.

Let us take an example. My friend created a small company for setting up websites and providing webmasters. This small company won the bid to run the website of the European Commission in Brussels and Luxemburg. The contract stipulates that every official text issued by the EU Commission has to be on the web into 48 Hours translated in all official languages. The personnel *create value* in translating the given knowledge. They add knowledge to knowledge. No objects. By the way the management is completely different. Indeed the CEO is incapable to *control and command*. He is not fluent in all EU languages. So he has used networks to make sure that quality is the best. How? Let us take the example of the greek language. He organizes receptions putting in network all the greek language people in Brussels: Greek Commissioner and greeks in the Commission, Greek MEP's (Members of European Parliament), Greek in the Council of Ministers, Greek Ambassador, newspeople (radio, television, written press), Trade Unions, Consumers, intellectuals, etc. They all have a stake in having the best possible greek texts to work on. And the CEO, after a glass of champagne asks them to let the team know whatever error or problem could occur. Control is outsourced to an external network. Is this not a completely new type of management?

⁷ Verna ALLEE: *The future of knowledge...* Page 158.

Ethics (values and purpose) is back in the picture

Finally Verna Alle shows that a company's values and purpose are the primary organizing principle determining who its customers are; and what type of people are attracted to work there; and what type of structures and systems are required. As Verna explains well, the leading force in this new game are the company's "values and purpose", while in the industrial world the main leading force is linked to the amount of profit made. We are touching here a very important difference.

And this means also that most of the intangible assets, because they are value and purpose based, are qualitative and not quantitative anymore.

Finally ethics and values are thus coming back full speed in the picture, while most of the "industrial and scientific" approach was considered "value free" and out of the realm of ethics, because they were considered as "objective".

We are indeed in another world.

Intangibles are Future oriented: hence their importance for stock markets.

Let us now add another dimension to this intangible assets concept. They are "*future oriented*". In another definition given by Baruch Lev in a book⁸ on intangibles prepared by the Brooking Institution, in Washington, this new future dimension is underlined: "*An intangible asset is a claim to future benefit that does not have a physical or financial embodiment. A patent, a brand, and a unique organizational structure...I use the terms intangibles, knowledge assets, and intellectual capital interchangeably.*"

This definition gives us a very important new element: future benefit. And suddenly we discover that the "industrial" measurements of a company, which are based on tangible assets, like financial and other material assets, are oriented towards the past. We are so accustomed to this approach that we do not even acknowledge that those tangible assets are giving us information of the company's performance from yesterday until today. You can measure if the the company has done well or not, according to the assets it has accumulated until today. But this accumulation of tangible assets does not give any information on how the company will perform in the future.

Meanwhile, and this is the new element, intangible assets are concentrating just into those other elements, which are crucial for the company's

⁸ Baruch LEV: "*Intangibles: Management, measurement, and reporting*". Brooking Institution Press, Washington D.C. 2001. Pp. 150. Quote is from pages 6 - 7.

future. One understands here immediately why intangible assets are so important today for the stock markets analysts and the Banking and finance community.

Accounting is dead: the problem is urgent for the banking community.

According to Thomas Stewart, editor of the “Harvard Business Review” and known author on intellectual capital⁹, we are in a deep silent crisis, because we are still unable to measure correctly those intangible assets. This is a real threat to our accounting system worldwide: “*Accounting, long dead, is not yet buried, and the situation stinks. Okay, that overstates the case, but not a lot. In the past several years, the inadequacies of industrial-age accounting have been proved again and again. Both financial accounting, which appears in annual reports, and management accounting, the data that lands on your desk, go wrong in specific ways, and with demonstrable consequences....*”(268)

And what is wrong? The industrial-age accounting system seems incapable to take into account intellectual capital and intangible assets: “*Accounting’s failure to disclose intellectual capital is not just a theoretical problem. It costs investors money – perhaps you dear reader, among them... We are not talking fraud, except in a few cases – we are talking irrelevance, with the result that investors are kept in the dark and managers are operating by guess and by gosh.*” (272).

Ans so there is, according to Stewart, a real urgency to be able to measure intangible assets.

How to measure intangible assets: two paths?

And, Baruch Lev observes that: “*Intangibles are frequently embedded in physical assets (for example the technology and knowledge contained in an airplane) and in labour (the tacit knowledge of employees), leading to considerable interactions between tangible and intangible assets in the creation of value. These interactions pose serious challenges to the measurement and valuation of intangibles. When such interactions are intense, the valuation of intangibles on a stand-alone basis becomes impossible.*”

In other words, the classical economic quantitative measurement methods are not working. What to do? How to find a way out and measure the intangible assets? Two ways are envisaged by economists today. Either we are trying to quantify the qualitative intangible assets. And this is what the majority of economists are doing. This is like trying to recuperate those new post industrial

⁹ Thomas A. STEWART : *The wealth of knowledge : Intellectual capital and the twenty first century organization* Nicholas Bradley, London, 2002. page 268-278. See also his first book : “*Intellectual Capital*” of 1997.

concepts into the classical "industrial" frame of thinking. It is truly understandable, although it is perhaps not the way to the future. Let us give here some examples: KPMG has even invented a mathematical formula¹⁰. Others like Leif Edvinson and Stewart himself, are proposing to rate the intellectual capital. Others like the Saratoga Institute are proposing a "Human capital index"¹¹.

The other alternative is to say: *"OK those intangibles are qualitative. This is almost impossible for classical economy to cope with. But we accept the situation and we try to invent an new economic approach which is more qualitative"*. Here we accept that we are in another values system. But the difficulty is that shifting to a immaterial qualitative approach will suppose a real paradigm shift in economic methods, and basic economic axioms. And there are not many publications going in this direction.¹²

Intangible assets become everyday more important.

Economists are discussing but the majority agree that the EU and US economies at least around 40% in the knowledge economy¹³.

And so the proportional importance of intangible assets in the evaluation of a stock must be around 40% at least, and in many cases much higher.

The more we are entering into the knowledge economy worldwide the more the intangible assets will become important. It is like a huge bulldozer advancing upon the industrial society and becoming dominant in a very short period.

Now we are in a strange situation where a bit less than 40% of our economic indicators are "intangibles" and immaterial and we still do not know very well how to cope with them, how to measure them, how to give them the due importance in the stock markets.

Here is a graphic, that has been prepared for a research project financed by the European Commission, in 2003¹⁴.

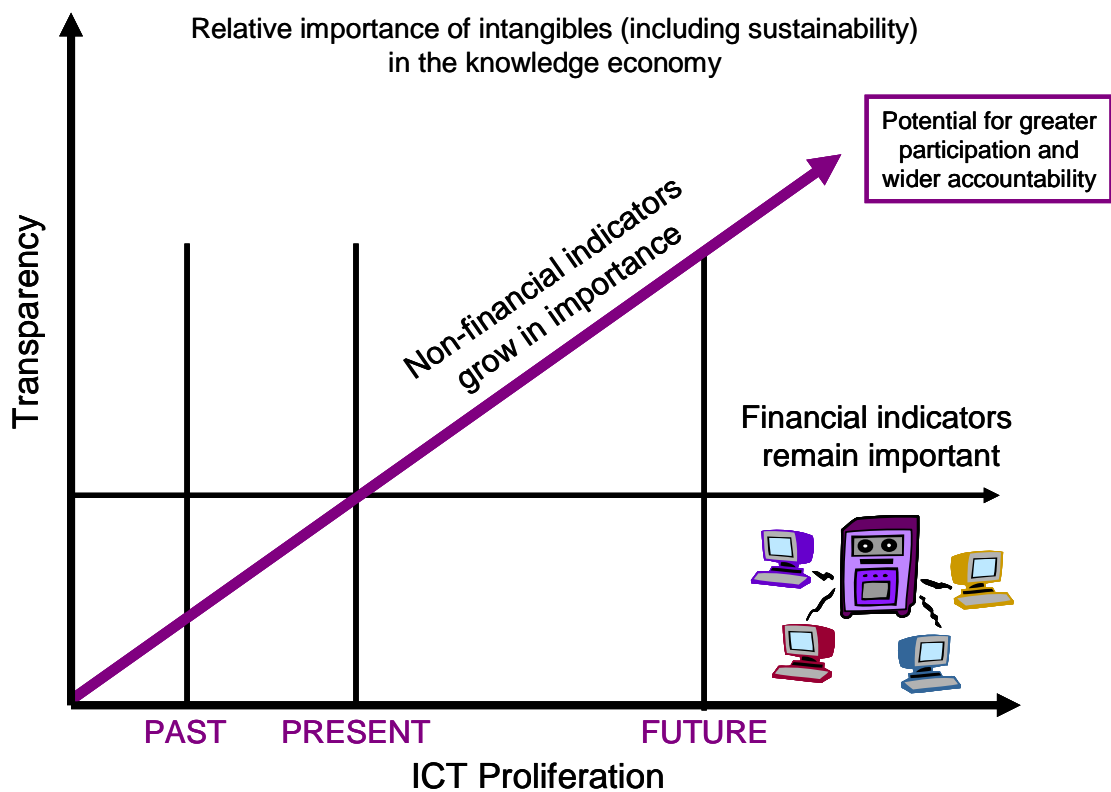
¹⁰ See Thomas STEWART: *The wealth of knowledge* page 304.

¹¹ See <http://www.saratogainstitute.com>, they call this index the *"Watson-Hyatt capital index"*

¹² One of the advanced in this new field of research is Verna ALLEE. See www.vernaallee.com

¹³ A recent report by the Work Foundation in UK quoting Eurostat is explaining that: "In 2005, **just over 40%** of the European workforce was employed by the knowledge-based industries. The Nordics and the UK (48 %) has the biggest shares of employment in the knowledge economy. Sweden has 54% followed by Denmark (49,1%) and Finland(47,3%). Page 6. See "The Knowledge economy in Europe" prepared for the Council of Ministers of the European Union of spring 2007. http://www.theworkfoundation.com/Assets/PDFs/KE_Europe.pdf

¹⁴ See: <http://www.neskey.com>



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This figure shows that intangibles were negligible 10 years ago (Past). Today they have as much importance than tangible assets (Present) and in 10 years time (Future), they could become twice more important than financial (tangible) assets. We are thus in a rapid and important change and we *must prepare for it*.

But we will end this article with two good news. First, the more we are entering this knowledge economy, the more the content of the intangibles is evolving. The relative weight of sustainability and of social inclusion is growing in importance everyday.

The second is that stock market analysts are like forerunning the community of the economists. They use *their intuition to quantify* the intangibles, into the actual values of most enterprises worldwide.

Sustainability and social inclusion increase their shares in intangibles.

The more we enter in this world economic transformation, the more on one side we begin to feel more and more aggressive reactions against this "new management", "those networks", this immaterialization, etc. Some of the industrial managers feel threatened by the changes going on. They more or less subconsciously feel that their power will diminish and die...and they begin to react negatively.

But on the other side, I am puzzled to observe that from year to year, as a dean of a Business School, I see that our students are becoming more and more sensitive and interested to orient their companies towards full sustainability and social inclusion.

Discussing also with some stock market analysts, it becomes more evident everyday that the content of the intangibles are becoming more and more influenced by sustainability and social inclusion. The young generation is more and more eager to run companies which are "part of the solution". They do not want anymore be working in companies that are "part of the problem".

The shift is really quick, and the intangible assets are like the driving belt of this paradigmatic change. They push through sustainability and social inclusion in the business' agenda, through the stock markets.

Stock market analysts are measuring intangibles...everyday.

Yes, stock market analysts are in silence forerunning. They are since years and in silence measuring intangible assets. And speaking with them is very instructive. They are of a precious help in the transitional period.

We hope to be able to go further in this direction with some interviews of stock market analysts, in our next article.

Marc Luyckx Ghisi,

January 2007.