

Carsten Corneliussen



**homo
sapiens
*digitalis***

The next species of man is a new and improved version 2.0

A book about the advances of mankind
in a perspective of technology

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Synopsis

Homo sapiens digitalis

A book about the advances of mankind
in a perspective of technology

The following pages should be viewed as a summary of the book, which in further detail will contemplate some fundamental problems facing mankind during the transition to digital that will be explained in a transverse analysis. The book *Homo sapiens digitalis* is thus a framework for understanding some important existential and global questions – and though the context from time to time are viewed in a local [Danish-Scandinavian-European] perspective, it does relate to all of mankind and the prospect of future survival.

The text is a translation of the Danish version and contains some extra explanations where it has been necessary to clarify a specific local context.

The book will be published in Danish in the autumn of 2004 – and later on translated into English.

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Globalisation is a reality – money-wise
Man's goal has become well-paid expansion
Inequality between rich and poor increases
The dominating life form is the Corporation
Individuals compete more than ever

The dominance and financial control by western civilisation has accelerated into global consumerism and the question is whether our model of trade and living is the right one? The question may also very well be whether our present strategy of economic growth will become the end-result of mankind's evolutionary development – i.e. end in a niche?

In the big picture of our ecosystem development, i.e. from the origin of life on the planet, and until now, mankind does not actually take up a lot of time. From the multi-celled life form to dinosaurs, billions of years has gone by, and from dinosaurs to man, 65 million years has passed. In its present variety – *Homo sapiens sapiens* – man has only existed some 40,000 years, and differentiates a mere 2 % in genetic DNA from chimpanzees, which in turn dates back some 5 million years, where the first humanlike creatures developed.

Man's first awareness [the perception of self] is obviously not that easy to pinpoint in time precisely, but a qualified guess is some 100–120,000 years ago. We do know with more accuracy that 10,000 years ago we started agricultures and left the hunter-gathering phase. This was also the approximate time for the rise of the first civilisations, and the beginning of the era where time itself became important. We invented writing, and are of course talking about the Sumerians and the Egyptian dynasties developing more than 5,000 years ago, and we know the same thing happened in China and India. The dominant European tribes are the Celts, whom in contrast to the later Greek and Roman empires, are somewhat more primitive in their social

arrangement (but by no means lesser in their creativity and spirituality). At the time they probably resembled the pre-Mongolian tribes in Central Asia more than the Mediterranean people. Today we regard the rise of the western civilisation and the western Christian culture to begin after the fall of the Roman Empire, i.e. about the year 400 into modern day calendar. The Medieval times date from this time and lasts to the beginning of Renaissance in the middle of our preceding millennium, which in turn is the beginning of the present western civilisation that dominates today. It should, however, be noted that other civilisations¹ exist in parallel to ours.

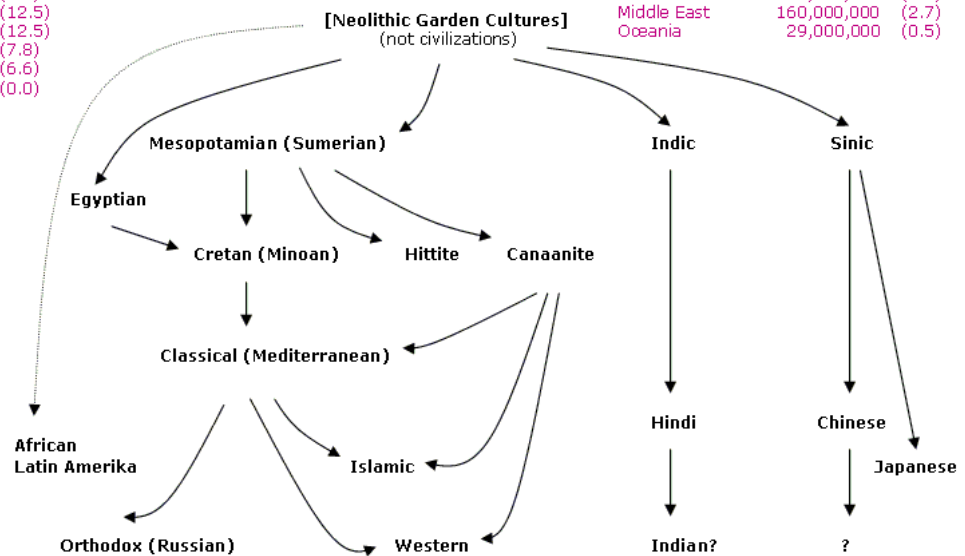
Dominating relations to religion (beliefs/faiths) in %:

	2000	1900
Western Christianity	29.9	(26.9)
Orthodox Christianity	2.4	(7.5)
Muslim	19.2	(12.4)
Not religious	17.1	(0.2)
Hindu	13.7	(12.5)
Buddhist	5.7	(12.5)
China folk religion	2.5	(7.8)
Tribal	1.6	(6.6)
Atheist	4.2	(0.0)

Spoken languages in % of world population:

Arabic	3.5
Bengali	3.2
English	7.6
Hindi	6.4
Mandarin	15.2
Russian	4.9
Spanish	6.1
Cantonese	1.1
Wu	1.1
Min	0.8
Hakka	0.6
Portuguese	3.0
German	2.0
French	2.1
etc.	

	Population	%
Asia	3,271,000,000	(55.9)
Africa	750,000,000	(12.8)
Europe	508,000,000	(8.7)
Latin America	496,000,000	(8.5)
North America	297,000,000	(5.1)
Middle East	160,000,000	(2.7)
Oceania	29,000,000	(0.5)



¹ This illustration is compiled from: *The Evolution of Civilizations: An Introduction to Historical Analysis*, Carroll Quigley (1979). The figures are derived from: *World Almanac and Book of Facts*, Professor Sidney S. Culbert, Department of Psychology, University of Washington, (1959, 1993) and *World Christian Encyclopedia: A Comparative Study of Churches and Religions in the Modern World A.D. 1900-2000*, David B. Barrett, Oxford University. (Numbers do not add up to 100 %).

Obviously one can argue the validity for a common African or South American civilisation if you define civilisation as a common language and common religion. However, looking at the present social, political and financial balance of power in today's societies it seems fair to make this assumption.

If we initially look at the western civilisation, it is evident that this is defined by Christianity and the European languages (of which English has become predominant) since the West include and [in reality] today is dominated by the United States of America and the other English speaking countries such as Canada, Australia and New Zealand, etc.

The West is also the dominating economy and as such the western civilisation is in reality leading globalisation. However, not a globalisation as a wish for common values or cultural commons – but rather it is expressing a global economy driven by the need of the West for market expansion to sell goods and services, and a continuous growing demand for more energy and cheap labour to satisfy consumption. Therefore it would be much more precise to describe globalisation as *consumerism* since the world of today is indeed obsessed by the mantra of constant economic growth. The widespread common denominator for globalisation is in fact *the Corporation* and not really culture or common values defining mankind as united species (though our different civilisations do indeed have much more common values in relation to life and existence in general).

The western way of life is, based on our interpretation of democracy, by no means the truth or the only way to govern, and as it is, it has indeed been overtaken by *economic leadership* in shape of competitiveness (in which it would be worth to remember that competition means eliminating the competitor – and that this, not long ago, meant elimination in a very real and physical way). This kind of competition also means that the basic notion of a “people's democracy” has long since been transformed into a rigid and fi-

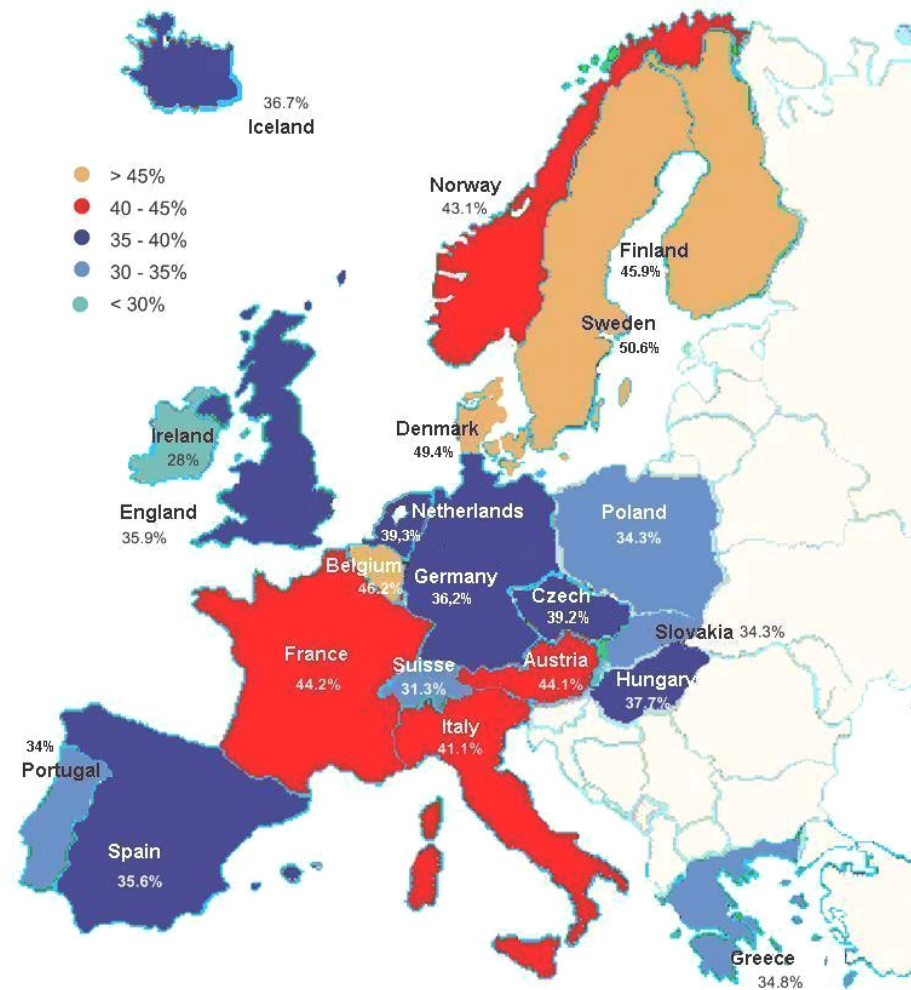
financial administrative system which is entirely dependent on global trade and intricate economic relations between all nation-states and corporations and citizens-employees working within these boundaries. But because democracy [to a bigger degree] safeguard against personal assaults of brute force, this is the preferred way of life and the organisational structure in the civilised world. Has the concept of “free market economy”, in only a couple of hundred years, and in parallel to an accelerated technological development, become the single most important goal for the western civilisation to lead and satisfy the globalisation of mankind? If so, the double standards, the exploitation and the greed towards the competitor in order to sustain [eternal] economic growth, then signal that we are caught in a niche from which it is impossible to see a way out for all of mankind. There is no alternative to *economic democracy* and there are no ways of starting all over again. In the perspective of evolutionary development, financial growth has become the sole factor for survival.

Whether such economic growth can go on forever has become an important question? We are witnessing an exponential growth in population in non-western civilisations, and it does seem that the markets for selling our goods and merchandising are forever looking like a perpetual motion machine. But it is this *machine* that is the problem. To keep it running we use much more natural resources than we have at our disposal. Energy to production and to maintain the enormity of our societies demands new research into new technology (such as for instance nanotechnology – as we in the past researched for instance nuclear power). At the same time we see new research into biotechnology and genetic manipulations of nature, and new inventions of methodologies and therapy for prolonging our own lifespan. Within the next couple of generations we will have managed to uncover the very building blocks of nature and will be able to master technologies to copy ourselves and to create new beings with the same fundamentals that

make us human beings – specifically intelligence and awareness. In this perspective it is hard to believe that we will develop any different attitudes towards organising our society other than economic. In fact, it does seem incredible naïve to think that mankind's best, and the survival of all human species, will in reality be our evolutionary goal?

Our self awareness makes us able to establish goals and to plan and prepare into the future to do whatever we like – if we make a decision to set aside the money and the resources to be able to afford it. With new tools there are really no limits, and should we decide to invent and maintain life prolonging technologies to continue the survival of the species, we will do just that. A problem is, however, that within our present concern of economics we cannot use the same financial model. By living just a few years longer any national budgetary planning will not be working because of imbalance between revenue and cost (read: taxes). This will impact first on the so-called welfare states, and if these nation-states have not innovated and educated sufficiently into new technology, and at the same time discarded pre-industrial tasks to other nation-states, they do indeed face a serious problem that they can only solve by slowing down and chose what is important. In other words: The welfare state becomes a myth and the nation-states are not able to legitimise [more] taxes. Probably the citizens of such countries has already grouped together trying to protect their financial interests – contrary to those citizens without any personal financial attributes that already depend heavily on the nation's welfare system – and neither group will sit idle by when the system need to change. The group of people with financial investments in e.g. their own homes will find out that they will loose this basis just as quickly as the ones that have no personal economic reserves, once the system break down.

Looking at the foundation for taxes the following illustration² indicates with all transparency that the European region is on the verge of a maximum burden.



² The illustration is constructed on OECD numbers (2002-2003) showing tax in % of GDP. Add to this VAT ranging between 15-25 % and other nation-specific taxes on certain individual items. In comparison, the tax level in USA was in the same period 28.9 %, and in Japan 27.3 %. (The average for EU (15) is 40.5 %). Since 1970 working hours has declined 23 % in France and 17 % in Germany, while rising 20 % in US and Canada. Average working hours in Germany is 1,446 per year and 1,453 hours in France, compared to 1,792 for US workers. Further details on tax and work issues will be explained in the book *Homo Sapiens Digitalis*.

In a position like this, are there in fact any real political powers left? It seems that most politicians are not even aware of another perspective – and should they be – they will, because of the economic eternity growth syndrome, try to be in command of the development and probably make tactics for coordinating this globally with an allusion to the importance of global economy. But can they – control it, that is?

Well, one way could be not to discuss the future in a perspective of new technological advances. They can decide not to have the necessary funding, thus cutting down basic research financially. Doing this will restrict and limit competition, but also leave it up to others to take initiative. And others will do that. As a matter of fact other parties has already engaged in a head start and positioned know how and knowledge in a scientific situation, i.e. the international scholarship society, which is out of reach by national politicians, but unfortunately also in the hands of self organising bureaucracies not controlling the economy. The possibilities for politicians to influence this situation will only take place on a macro level, and even if there is an interdependency of different nation-states funding, the actual political power will not exist. This leaves it free for the corporations to press forward and to fund and specify new science.

Political power has become symbolic. The politicians has become professionals [though not really compatible with business executives] – and the citizen's participation, interaction and influence on the system structure has been reduced to the principle of performing the representative modus: To be allowed to vote for selected candidates, who – with no other qualification than being personally interested in political power – will take on the task of managing a gigantic household budget (assisted by a huge number of bureaucratic expert civil servants trained solely in the routines of secretarial administration).

It is only by definition and as a theoretical principle that any change will take place in the vastness of complexity that our modern society has become – basically, *the system* has long since taken over control. Hence the role as politician is no longer ideological. In the western civilisations proclaimed democracies, the only difference between the conventional right and left wing party's politics has become nuances of accounting principles. The only things left from the pasts ideological battles is tradition and symbolic images. And it is traditions and symbolic values that sustain the continuity of culture (not only in the western world but also in other civilisations). Well supported by the media, they preserve portraying different values and cultures, which we find exciting as shows but are in reality rituals.

However, the past fifty years of television has completely blurred individual and social characteristics, and transformed these into a global arrangement of values. In particular sports have driven this transformation. From a sociological and psychological point of view more people are interested and engaged in sports than in politics. The collective marking of sports is thus a global value – and even though we speak of values such as “battles” supporters on either side will make a parallel to traditional cultural values and differences, but distinguished in local values – not global. And there is really no paradox in this local-global disentanglement. Nationality and affiliation to a specific geographical region or place is much more significant and influential than the nation-state or sense of global civilisation. Most people are factually cost-conscious tied to specific geography and to family, friends, colleagues, company workplace, etc. And no individual person is really an ideological racist. But the pattern of family structure is no longer the same and there is no longer the same yearning towards moving elsewhere unless it is specifically better compensated financially.

The *media industry* and *electronics* has replaced much of the need for direct and personal experience and substituted this with film, radio, television, computer games and other electronic playing. In a few years, also the way we work will be replaced by distance working and home workplaces.

This will accentuate the wish for local participation. Not really defined as politics, but rather to have personal influence on the community's spending and taxpaying. Regional corporations will assume greater responsibility for the local area, and the nation-state will instead concentrate strategically on the corporate accounts. The nation-state will increasingly consist of professional business administrators taking over from the old fashioned politicians. Exit the ideological politician – and entering *the corporation* as the dominant life form.

Could this happen any time soon? Will citizens in actuality accept this reshuffling of roles and association? The answer is most likely yes! The citizen is no longer as easy identifiable with national culture values, but more likely identified with economic worth, which will turn out to be what both the citizen and the corporation need. But what about the elderly, the weaker groups, and the ones that no longer hold any financial attraction to the corporation? And this is a good question – what about them? These groups have already today been handed over to private enterprises. The nation-state will eventually abandon all but the corporate active groups and be forced to further cut back on help and support from the public sphere. It is too expensive and will be outsourced to private organisations (subsidised for a while yet) because of savings in non-public obligations.

Consequences for the European welfare states should by now be quite visible and it will mean introduction of [further] individual user payment (in addition to maintaining high taxes). For instance was it Reagan's politics that forced Clinton to give up the concept of a welfare state in US, and really, by contrast to most European countries, there is in actuality little dif-

ference in systemic terms in handling the different concepts. This issue is probably the last real ideological encounter for the European politicians, since it is evident that the welfare state system will not survive in the future.

In lieu of the present monetary model there are only two probable solutions: One is more taxes and the other is less public services. Likely we will see both applied, and obviously the weaker groups (older, unemployed and unskilled) will be hit the hardest and fastest, and obviously no political mantra will find cause with the wealthier groups. And though private charity is on the rise, this is really a first indication that also the nation-state system is about to fail.

The alternative is *self-government* on a local scale, which has already proved its usefulness and endurance in several European countries, and is widely supported by citizens in very different local communities. It could look like we were moving backwards to feudal regimes, but local “city kings” (popular strong and businesslike mayors) already demonstrated that they it will not pay to act as such. Local councils and institutional organs require much more backing and participation than conventional politics. An increasing *individualisation* will call for real influence and value for money on a *one-to-one* basis, and therefore the new *consumer-citizen* will not stand for miniatures of old-fashioned block politics.

One could clearly get the impression that these new consumer-citizens has turned into selfish and preoccupied individuals with only their own interests at mind. And that would be relatively correct. Trained and adapted to 20-30 years of educational principles in a paradoxical consensus learning style, such a local community will quickly parley itself into paralysis when trying to plan and organise in a self-styled manner. They will probably try out *direct democracy* by use of new electronics (chat forums, text messaging, e-mails, etc.) – and for a while this will look like the ultimate ideal of democracy – but quickly they will end up in regular voting’s on principles

and budgets, and it will soon become like the old system and gradually enthusiasm and participation will decline.

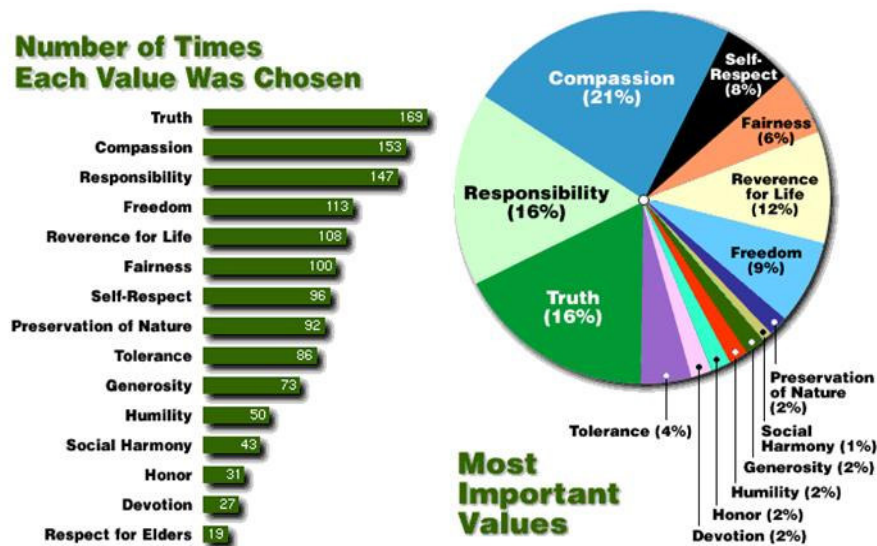
So what will happen afterwards? Is it likely that groups of non-equals and probably highly different individuals can organise their way out of this dilemma? Probably not – and they will end up hiring a *management team* and appoint leadership to prove decision-making. The *Corporation* model will become a suitable approach to govern. The local community and the individual citizen group will (like shareholders) hire a professional administration team to conduct things like planning, meeting, etc. Reports of progress will be records based on questionnaires, interviews, etc. But what happens if someone does not want to participate? What sanctions are appropriate? Which retribution will be acceptable – and by whom should sentences be approved? These questions are much more explicit in a corporation mindset than in a public mindset. Will the local community introduce scorn and shame (again, and more directly, one may add) since the media has already introduced this formula via the extent of populist news and so-called reality shows defining what is right and what is wrong?

Is this really a likely scenario? As a matter of fact it is much more than scenarios – for instance is it very authentic in the so-called "Danish model" which has been demonstrated for several decades now – in politics as well as in the media, in educational institutions, in community provision, etc. We have allowed a distinct and unquestionable modification of political correctness; and we have approved educationalists and journalists respectively to deliver a constant stream of "education" to kids and adults. Of particular interest to non-Europeans we have just recently established a Ministry for Family and Consumption.

A reason for this slow seeping of political correctness into society, and in particular into the electronic media, is a fundamental shift in mentality of previous professional zealotry in journalism, which has clearly been sub-

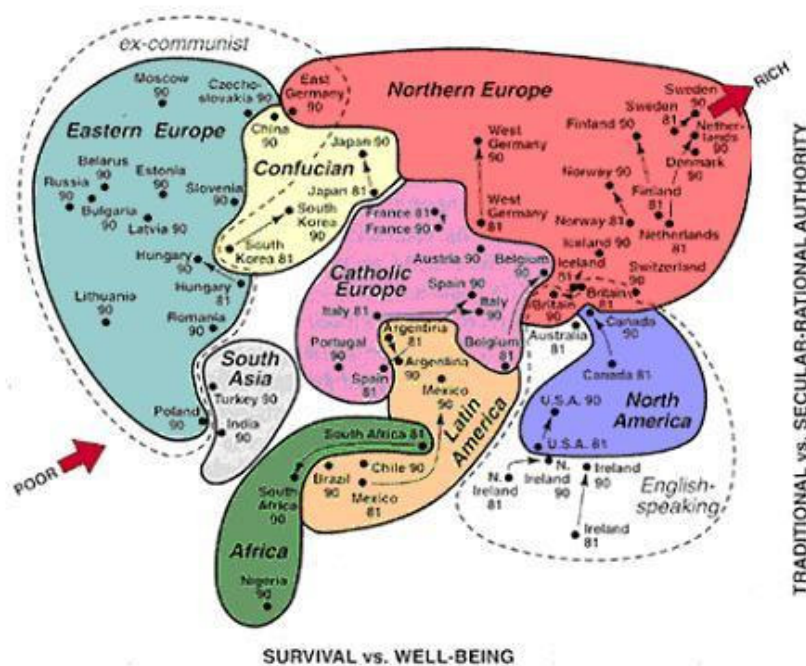
stituted with *just-a-job* attitude. This is increasingly recognisable all over the world – and contrary to the often thought idea that this is because of commercialism of the media – it is in fact a mental perception at a character level due to the association to the corporation and not, as formerly, to specific nation-state culture values. There are no surveys indicating what really qualify news as news, and there are no indications on how individuals, in the business of news, decide what news is. There is, of course, quite a number of explanations on why this or that particular item should be regarded as news based on a *normative* reflection – but in reality it is considered from ones *own* point of view.

Other surveys³ do nevertheless indicate people's perception of value of right and wrong – and what is important and less important. The results do not, however, indicate that people actually do what they say or mean – or how they behave in various contexts.



³ Feel free to try yourself. Here are the instructions: Read the list of these 15 different values expressions. Pick the five (5) most important values that make sense to you personally in everyday life (i.e. home, work, hobbies, etc.) Then pick the one single most important value (of the five).

But why is this not a real depiction of reality? Are we as humans in truth idealists, optimists, or naïve in our worldviews of carefree happiness for ourselves and for others? Are we really forgiving towards others with different values than ours? Are we willing to accept the differences as long as we have it made for ourselves? Actually, I have had the opportunity to use different tests on a number of groups and have gotten back results basically mirrored only in self values. When such individual psychometric tests are compared to a macro model representing national values perception and national identity, the following illustration⁴ will reveal some interesting fact, which confirm that culture is indeed common religion and language – and that democracy’s welfare system is indeed expressed in “self”.



⁴ The illustration is Ronald Inglehart’s that is based on data from *World Values Surveys* (the largest ever undertaken re. attitudes, values and beliefs in the world). Actually there have been three surveys: 1981-82, 1990-91 and 1995-98 in 65 countries across all six continents covering more than 75 % of all populations. The issue of values and culture will be discussed further in the book *Homo Sapiens Digitalis*.

The western civilisation seems split between the English speaking countries and the rest of Europe. In particular the northern European countries and the Nordic region have totally different values perception. So, what future is there for social and human equality on the planet? Put together the western countries seem to have locked itself into a position exercising its powers to keep up economic growth using the rest of the world as their markets. Will it hold or fold in the future? Will one of the other civilisations then take over on the same financial stipulations? Perhaps, but in reality it would be the same wine in other bottles.

My apprehension is that we are at the beginning of the end of western civilisation – and there are no recognized alternatives to our financial system. It is also disturbing that we are witnessing a rapid decline values perceptions – a move that some psychologists and sociologists consider to be evolutionary reposition into a advanced stage of social structures – without them understanding that economic growth has in reality become the only goal left for humankind's evolution, and that not sharing the benefits between all will widen the gap between rich and poor further. And the argument that both rich and poor rise simultaneously is simply not correct in the global context. It is indeed worrying that economists believe they can plan all future development, and that politicians submissively believe only the economists' linear projections. A true globalisation based on cultural and common values does not look likely anytime soon – if ever. The differences between rich and poor nations are too big. Consumerism continues to drive globalisation and is based on the corporations' talent to think up more new technology to sustain consumerism, and the result is that new technology to fill the gap between the “haves” and the “have not” does not get the appropriate attention and will therefore not likely be deployed.

My research on the Internet has not revealed any single publication trying to portray human development in a perspective of technology. Obviously

there is quite a bit about both human development and technology – but no one seems to have wanted to take the two together and look at it from a viewpoint of psychology and sociology, contemplating what role new digital technology and the next technology will have on society and the way we live, work and organise ourselves. There is of course any number of positive projections of new digital gadgets and new ways of communications in entertainment, etc. And quite a number of thesis’ both inspiring and creative on science fiction-like futures is posted. But almost any topic from philosophy, religion, psychology, sociology – even cybernetics and socio cybernetics [e.g. logistics, city planning, etc.] – are isolated disciplines. This goes for new science dealing with astronomy, possible parallel universes, mathematics and computer simulation, cellular automation, artificial intelligence, brain scanning, biotechnology and biochemistry, nanotechnology that manipulate atoms and molecules into new components. Any numbers of authors that today make up the “new intellectuals” are available, but no single author or institution has tried to encompass it [all] into a publication for the average individual reader to contemplate. On the other hand there seem to be a considerable number of publications promoting certain *right* and *wrong* ideas, and a lot of scenarios based on very partial convictions.

These and many more scientific publications and disciplines are all available on the Internet as subject courses or science journals in libraries at universities or in laboratories of various corporations. Some has already been published as books – some for free because they are compensated by companies or government institutions. The amount of knowledge is enormous and trying to read all does not seem possible for most – and perhaps is not interesting or attractive for but a few. However, the relevancy becomes crucial once you insist that all things are interconnected. Put it this way: Things may well appear as unique and isolated actions but also, one way or the other, does it affect the whole. It is this kind of wonder that drive some peo-

ple to become researchers, and it is to them we have to pay tribute because information and knowledge is distributed instantly via a medium such as the Internet. Access to this kind of information the instant it is published give rise to exponential growth in the collective wisdom of the world – and inspiration and necessity is joined perfectly.

However, it does also give rise to reflections on education and the requirement of knowledge in a larger perspective. If you look at the Internet as the world's library (accessible 24/7 and with no restriction on pay or time limits for use), in principle, we will all be proficient in knowing anything about everything. A terminology borrowed from computer science is a database, and computer scientists will know that databases are all about *meta-data* (data on data). In practise we are talking about searching for specific items or concepts. As the Internet is not owned or controlled by any single individual or organisation, metadata becomes the single most important challenge for anyone using the network. What we want is a seamless access and linking between all data. That was the objective for building the Internet – and it actually does work very well.

In the future this will be successful from any terminal, i.e. whether it is a PC, PDA or e.g. a cell phone (or via any new digital gadget), we will interact with the network by use of voice commands and replied to in spoken language. This new network has already been dubbed *The Semantic Web*.

Will this, then, make us all much smarter? For instance to a degree that we will no longer need educational institutions or general training because we instantly will be able to update our personal qualifications by learning what is necessary? One could hope so – and perhaps wish it would come true before long – but unfortunately it will probably not happen any time soon in these present beginnings of the digital era. For starters, one has to be able to read and write. Following, it takes a certain quantity of intellect to understand what it is you are served by searching the Internet. The “theory

of everything” explained by emblematical mathematics look like secret code and does not make much sense if you are not capable in these kinds of languages. Of course translations are offered either by the author or by science journalists that linguistically will explain the essence, but this will always be subject to interpretation. A translation of complex formulas and theories is often presented as analogies, i.e. “the same as...” syndrome, which may or may not explain the matter, but also the explanation has to ensue something being *the same as...* The chance of generalization is then particular big, and probably the reason why all-purpose journalism does not write about science in circumstances of the subject, but simply about the person, the political or economic implication. Few journalists have a gift for technical writing and are often sought after by authors and the publishing industry. On the other hand, it is becoming a characteristic that most scientists today are indeed talented writers, which make their material understandable to most people.

Homo Sapiens Digitalis is a book that introduces the scope of more disciplines, i.e. technology, psychology and sociology – or simply put: *Socio-tech*. It has taken me some time to bring about myself to do it. I have not considered myself a writer or being amply engaged in either politics or the public [educational] debates to present my opinions on society’s development. More frequently I have been much more interested in understanding the entirety myself than trying to explain some single subject to others. Also, I find that too many people have opinions on just about anything, so to me, the debates look a lot more like strutting egos. I am missing the serious correlation to the *big questions*: What is the meaning of Life; how the universe works; the *raison d’être* of leadership – e.g. how does self realisation and choice of profession work, etc? As I see it, there is a pattern to most of the ambiguity in the media debates – mainly because most debate contributions are too often based on outdated and dogmatic information, which totally ignore the massive stream of new knowledge distributed on the Internet.

Knowledge that interlink and relate to other scientific discipline, and spout whole new comprehension than earlier perceived assumptions. The educators of our societies have stiffened in a classic and dogmatic methodology, and most of our public institutions and the businesses in the industry are still looking for formal certificates obtained exclusively in the predictable education system (that in most functions are based on the foundation of the past).

It is definitely interesting that the [10] most suggested books as preferred reading for students in the academic world is: *The Bible*, Homer's *Ulysses* and *Iliad*, Plato's *The Republic*, Alexis De Torqueville's *Democracy in America*, and various works of Shakespeare – as the foremost – followed by Adam Smith's *Wealth of the Nations*, Machiavelli's *The Prince*, and the *Koran* – and further down the list the works of Charles Dickens and his like. This rating is based on a survey in 2002 and 2003 carried out by western universities and compiled querying about books, authors, quotations, etc. The only scientist in top of the list is the physicist Stephen Hawking's *A Brief History of Time* – primarily because of the number of quotes. None of the new intellectual scientists in any other discipline (or e.g. in sociology or psychology) is on the list.

Fortunately there are examples of companies recruiting by the principle of operational competency. I am lucky enough to be one that work in more companies on the basis of being continuously updated in several disciplines. Consequently I have put down a few books over the past ten years. For the most part to document and share information and knowledge that was not available in the established education system, and that is also the main reason why I think it is time again to share some of this. I have thought a great deal of what and how, and actually, there are a few examples on my website of various reports and books on the subject of *digital* that are downloaded every day. To me this is a pleasant indication of a need, and I appreciate that

my contributions hold some value. (Unfortunately for English speaking & reading individuals they are in Danish, which is why I decided that this synopsis should be in English as well, and later on, when I find the time, I will translate the other stuff).

Most people will call our present social construction the *information* or the *knowledge society* – but in fact it is much better characterised as the *network society*, structured on the communications technology that has matured from the telegraph to the telephone, from radio and television, and to the Internet and the wireless networks starting to emerge. By no means are we nearing the final structure of digital networks – in fact – we have just begun building the next structure that will develop into a global all encompassing ubiquitous network, which will change the face of democracy and probably end our monopoly as the only intelligent species on the planet.

Big words, and pretentious too, since predicting new horizons for mankind have been done many times. And many before me have tried to predict the future – or rather they have linearly projected the present technology into a future and in a roundabout way described the present model of society in a future setting (keeping all other circumstances equal). Some see a *good* society and some see a *bad* society. It all rather depends on how you perceive technology when judging the possible outcome. But it is definitely not a linear projection. New technology should be viewed as predictable development cycles or totally new innovation paradigms, in which the latter is a disruption that will change all in the context of a meta-perspective. Such recent examples are for instance the Internet for *communications*, and so will future bio and nano technologies be for *life science*.

My ambition for this book is a psychological, socio-political, economic and technological unbiased description of a number of interconnected observable facts and changes, contrary to the considerable amount of lobby contributions from various parties and organisations that are solely portray-

ing self interest's arguments. My expertise is analysis, pattern recognition – and the absence of any political or cultural commitment, which make it possible not to frame any opinion before all the facts are realised – and only then make up my mind whether it is worthwhile parading an opinion.

Homo Sapiens Digitalis is an analysis designing a framework to gain access to more knowledge about digital technology and the influence the digitising process inevitable will have on changes in society. However, the book does not pretend to be a complete description of all possible changes, but an introduction to the overall issues and topics related to *thinking about change*, and has for the ease of use been divided into the following sections:

Me, you, us – and the rest: The psychological and sociological effect of digitisation on local and global society. The improvement of caveman to a modern psychological and political being that over time, and by use of technology, has arranged himself in many different social structures.

The digital CommuniChaos: Digitising communications infrastructures will have profound consequences on society. The technology that represents media and platforms will be explained: Broadcast, telephony and wireless, the Internet transformation, issues of public service sphere, and changes in the entertainment industry related to copyright and cultural commons dogmas based on financial and political reasons.

GNR – genetics, nano, and robotics: What is the sphere of activity and conditions for the individual in a future fully digitised society? The newest and the next wave of technology following the computer chip will be explained. The appearance and production of non-biological intelligent existences; genetic therapy and manipulation preserving man's continued survival, and the ability to eventually control nature itself and create man in version 2.0 will be explained.

The book will time and again explain issues in a local [Danish, Nordic and European] perspective, but will nonetheless make out a framework for a global perspective of mankind's continued existence and survival.

In a very condensed outline the summary of the book is that we long since have learned to handle fire and use tools and weapons. We have invented the wheel and are building houses of stone. We have organised agriculture and are building stonewalls around our cities to protect ourselves against attacks from enemies and other civilisations. Since history leads straight to present time, we will deal with this very quickly. Man's transition from the overall dominating religion regime, to the Renaissance where science took over thousands of years of fatalistic belief in divinity, leads to the scientific worldview that now dominates the western culture and civilisation. Interestingly enough there is a rise in various pseudo-religions in modern western society. And globally a quick status on religion will reveal increasing interest in particular Muslim values. Science in the Renaissance expressed mechanics (where philosophy dominated ancient time) and was at the time the ultimate battle won over the church's dogmatism. The foundation for modern achievement in technology was laid here. Some (including me) also claim that this goes for our modern perception of social structure, cultural commons, politics and economics – and that these defined as *the corporation* has taken over from the church. History show that any civilisation last about a thousand years, and what we call *society* is just a moment in history, and today we should perhaps look at the result as a niche incident in the big picture of evolution.

The book also presents the history of psychology and a status on post modern psychological thinking man that concerns himself with political thinking and a no-return dependency of technology (i.e. starting with last century's utilization of electricity followed by mass communications such as

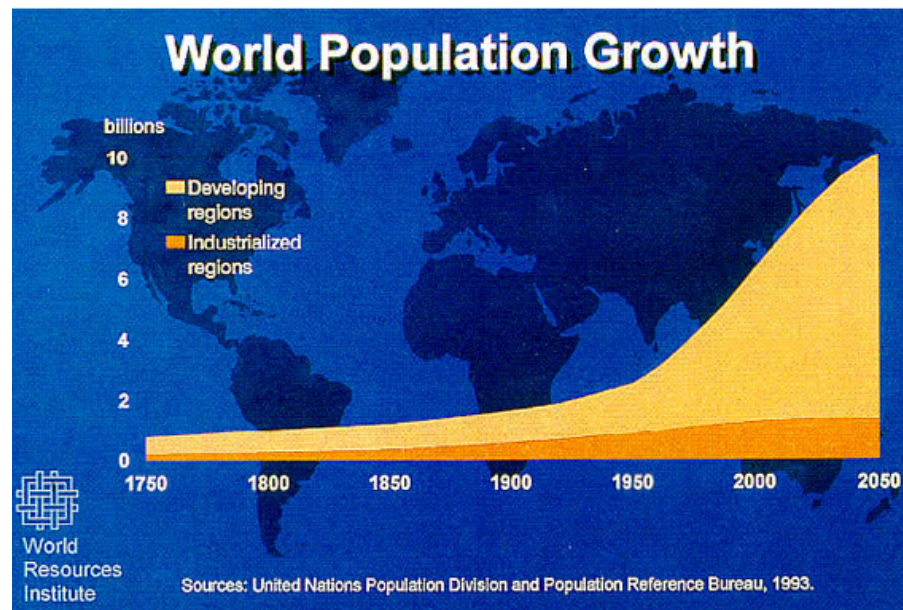
telephony, radio and television, and with a new anxiety for too rapid changes in the environment because of digital technology (read: stress, competition).

Looked at historically, it is *radio spectrum* that is the real key to understanding the present media industry. And it is the future planning and licensing of radio spectrum that will define the future communications networks. Communication and competition has always been the underlying fundamental for the way we organise the entertainment business, and the media industry is much more than free market economy and freedom of speech. For instance is regulating radio spectrum in order to control public service and national identity also a primary goal.

The 19th and 20th centuries were the transition period of society from a predominantly agriculture society into industrialisation, which was the beginning to our present informational or networked society. Also this period consolidates the financial principle of free markets and start consumerism as a way of life. These factors are also the foundation for digitisation and the emergence of *broadband* and *wireless* technology, and are therefore central to the book. The period begins in the 1950's with the development of the transistor, which is the starting point for the concept of miniaturisation that leads to the semiconductor (i.e., the computer chip) igniting electronic data processing. This is the beginning of IT and led to the Internet, demonstrating that technology once again impact on the way we organise ourselves. It is indeed also a question whether this is the beginning of the end of our present social structure. My bet is that it is.

It is worthwhile to remember that only a few centuries ago all humanity was approximately 1 billion people. And before that – from rise of the civilisations to the Renaissance and early industrialisation – we have been only 100-200 million people, where half of this population lived in Europe and the Mediterranean region.

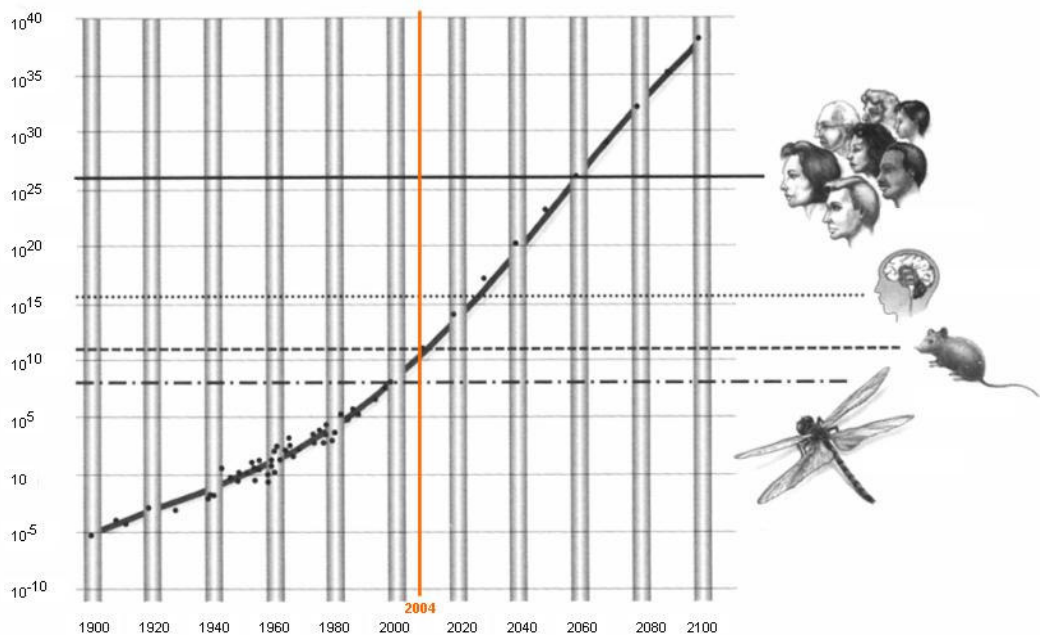
From 1750 we have grown to more than 6 billion people and the best estimate is that we from now on will grow 1 billion by every eleven years, which mean that we by 2050 will be about 9 billion people on the planet.



Our life span in mid-1800 century (which was the time we started to register these statistics) were 60 years. The average life span in most western countries is now 80 and rapidly rising towards 90. (Actually Japan is leading followed closely by Norway). Most of our children and their children will easily live to about 100 years of age – and longer with genetic therapy. Living age in non-industrialised regions is still considerably less than 60 years of age (for instance is the average living age in Sierra Leone barely 35 years), and it is in these regions population will explode.

The western civilisation will continue to consist of roughly 1 billion people, and is actually demonstrating a slowing down because of social and cultural changes in life style, while at the same time individual life span is rising because of technological enhancements. (This is indeed an interesting paradox which I will elaborate on in more detail in the book).

Perhaps does it not take much aptitude to predict the near future? The mantra is growth and consumerism. All things indicate new and faster production cycles and new methodologies for automation. Since the beginning of industrialisation, and seriously accelerating from the 1950s, demand for human manual working skills has been reduced. A second wave began in the 1980s, when computers started to replace humans in *office automation*, and in the next couple of decades we will begin the replication of man himself. Development and deployment of technology is self evident⁵. We will see *artificial intelligence* and *digital people*, and lifespan for man will be enhanced considerably using biotechnology and genetic therapy, which will give rise to a new and improved man in version 2.0.



⁵ This illustration is adapted from Ray Kurzweil's "*The Law of Accelerating Returns*" (2001), which is an excellent analysis of computer technology's history, and as shown here it is in fact a double exponential growth. The next 100 years will be equal to 20,000 years of development because of the exponential acceleration. The principle of *exponential* will be described in further details in *Homo Sapiens Digitalis*.

It took approximately 100 years and five technological paradigms [from mechanical appliances, electrical relays, radio tubes, and to the transistor] to develop the computer chip. It now takes one to two years to double the computational power in the average home computer. Given this exponential speed, we will in a few decades have reached a computational power that far surpasses what the human brain is capable of. Obviously a computer does not function the same way the brain does, but a breakthrough [in finding out how the brain work] is imminent because digital technology is also the foundation for the next wave of technology. Using computers we are already able to simulate part of human behaviour in robotics, as we also possess the mechanical and creative capability to make enhancement and even copies of biological life today. This concept is known as *bionics* that will later become *androids* (robots = digital people). It seems likely that we by 2030-2050 will be able to manufacture non-biological intelligent beings with a conscious awareness matching our own. These life forms will be so much smarter that they consequently will be able to rewrite their own *source code* and create even better intelligence.

The concept of *singularity* will be explained in the book, as will why the consequences of yet another technological paradigm will change our situation in a way (if there is any comparison) that will look a lot more like the time we invented writing. Today we can appreciate the enormity of this event, but at the time nobody really thought more of it than the practical solution to e.g. a receipt for bought merchandise. We know the concept of singularity in another presence – in black holes – i.e. we know the laws of physics do not apply, but on the other hand we do not know what then apply. A singularity with *better-than-human* intelligence will have a profound impact that in reality go far beyond our capabilities for thinking and can therefore not really be compared to something else (if we could, we would have become smarter ourselves).

Well, this sentence may as well close the circle that starts the first part of the book, which also contemplate Darwin's evolutionary theory, and continue in the second part with a Schumpeter "evolution" of digital technology, and closes in the third and last part with examples of the next technological wave, which is popular referred to as *GNR* – *genetics, nano, robotics* – and could look like an extension of the evolutionary principle, but should perhaps be consider as the beginning [of a singularity?].

But man's self-understanding and the issue of social structure and organisation, the political-economic and rapid growing complexity does not go away and will not solve our present systemic problems because we are capable of handling increasingly sophisticated technology. In fact, we are faced with technology taking over and defining society's way of life. We also have to face that globalisation (resting on an economic principle – and not a wish of a socio-psychological common society) can manifest itself in many possible solutions – and it may well end an era (not only for the western civilisation, but perhaps for all humanity). We have exploited the planets ecosystem to a degree that may well be irrevocably with too many individuals and too much exploitation and pollution. In addition, looked at in the perspective of unconscious and uncontrollable financial growth, there is indeed good reasons for choosing a right model for the future.

Digital technology has a build-in conflict which has not been present in previous technological paradigms. Despite the growing global worldview of *both-and* thinking, digital technology is causal to maintain *either-or* thinking in most peoples mind. The *digital divide* is an image of the differences between rich and poor nations – and the *digital dilemma* is that most of the knowledge of digital technology is in the hands of a chosen few nations, and within these, in the hands of a few companies. These companies attract and provide work for people of a particular disposition with a distinctive talent of intellect and a very individualistic behaviour. These companies and indi-

viduals are not necessarily inclined to participate in working for a political global agenda. They may be interested in participating (on economic and political conditions) and to act within the global consumerism context, but they will not be willing to share exclusive knowledge with other companies or the nation-state. They have a lead and they will stay in the lead because knowledge is still equal to power in the financial structure. This is a classic look-alike, and it is the classical look that blind most people to believe that new technology is just an extension of previous technological switchovers. In reality this is far from the truth, the actual difference lie in these people's ability and power to make a determined difference.

Please note that it is no longer a question of political goodwill or public financing of new technology – but rather a question of the politicians unconscious unwillingness to make technology available for all mankind, mainly because the possible consequences can not be controlled financially.

Those individuals that have evolved beyond the present social political correctness (as standard psychological beings of normative existential maturity) are about to reach a stage where they are able to decide and do what they *want to become* (used as a distinct psychological terminology) and they hold the power to do so [for themselves]. The rest of the world will be left in a vacuum, and if they do not evolve further and become smarter, they will stay there.

Homo Sapiens Digitalis will describe the possible technological developments that will affect the future structure of society, and will introduce a number of scenarios that may look like science fiction, which is really no coincidence, because this is exactly how today's anthropologists and sociologists get their inspiration for predicting future frameworks of society. As referred to earlier on, these scenarios will include a lot of people, some of which will live a long time, and include not only biological people, but also non-biological existence, where some will probably look human and others

will come out totally different – but they will all have an awareness of their own, and they will partake in the future on their own sphere of interest.

It is therefore imperative that we arrive at a discourse – the same perception and the same model– and start to view complexity as a whole. Obviously, the problem is that there are so many models and so little harmony of which one is the right model. The book will address most of these models and hold them against the concept of universality.

One particular dilemma, however – perhaps mankind’s biggest – is the tendency to recognize present time solely on encounters of the past to form an opinion, and equally naïve is the opposite, i.e. to contemplate the future solely on present time conditions.

A Theory of Everything must be much more than science hunting for a universal model for physics and mathematics; it must also include a place for man if we are to continue a meaningful perception of our intelligence and our awareness as conscious beings.

The myth of “one root”, i.e. stating any cause and effect is found in one argument only, must be replaced with the understanding that the *root* of complexity is the structure itself. Alternatively we will have to accept that we as humans are but a niche development?

In my opinion we have painted ourselves into a corner and not all of us will be able to escape from there. Few people have recognised this dilemma, and not only have they given up trying to explain it to others, they have also given up hope, because the solution can not be found in another economic structure. We need a totally different structure.

There is no time to accelerate all people into being brighter or smarter using the traditional system of education and training. The individual of today’s civilisation is simply not well suited for a united effort for the survival of all mankind. However, probably a few individuals will stand out and plead to begin all over again. These few will be innovative technocrats, crea-

tive and new intellectuals that will lead humanity back on the evolutionary path using the best technology they can think of; a technology that will result in a conception of new intelligence [better than our own].

Obviously, change will not come in the form of a global revolution from the underprivileged and the discouraged. Change will probably not come from politician and economists either, because these will likely not be in charge in the future. More likely change will come as the result of battles between the corporations. Our choice of a free market democracy is in a serious crisis. Perhaps the action of a few technocrats and philosophers may be able to bring about yet another appeal of reason [as Thomas Paine did once before]. But it is not a parliamentary consensus we need; it is a whole new model.

We simply need to become smarter than that, and personally I would prefer a difference of opinion based on the wholeness, which will then demand a cross disciplinary understanding and knowledge about both technology and the history of man's development. People that chose to (or are forced to) stay behind in the so-called democratic free market's perpetual machinery, will by definition have succeeded to create a survival mechanism for mankind, but they will not be able to see how it will progress. The morale in this is that we have messed up our social interaction to become a question of economic growth, and there is no way out, besides continued growth. Unfortunately we cannot fix our present predicament, so – one way or the other – we will have to start over again.

What today is called knowledge society is exactly that. A society building on knowledge – but if we continue to ignore all indications, or deliberately do not want to share it with others, then the present organisation structure, the double standards and hypocrisy is a wrong model.

I do not believe we are crazy enough to fight with an all destroying effect, but I do think that a few nations and individuals will isolate themselves

from the rest. The rest of the planet will end in a new dark medieval age. Unfortunately I think this will happen a lot sooner than even the worst case scenarios. I am not as worried as many modern day *Luddites* who think we should stop advancements in technology. I do not fear genetic manufacturing, nano productions and robots or the singularity's transhumanistic artificial intelligences – on the contrary – I think this is our only salvation, even if it placed on the ruins of our present civilisations.

Fortunately there is no evidence that my worry will come true, and my motive is therefore not to “be right”. But it is my intention to point out and explain some of the traps we have fallen into and how to avoid some obvious ones – and hopefully to call attention to some of the more obvious paradoxes that we in our naivety chose to ignore. However, I am no doomsdays judge – and my intention is not to reveal solid solutions – basically because I do not think there are any solutions to our predicament. When it ends, it ends.

Should anyone at this point wish to discuss the meaning of Life based on principles of ethical religious and morality viewpoints – or the so-called financial and political reality – please feel free to do so. It is not, however, what I intended with the book.

Homo Sapiens Digitalis is a suggestion to become smarter; to see the whole and the complexity in order to distribute knowledge to all in the hope that we will become smarter as humankind. It is not my intention to initiate any political or so-called democratic debates. I am sure it will be obvious in the book that I see post modern political democracy as a yet necessary, but in reality outdated administrative functionality. It is my hope that different institutions of education will read my book (though it is not written in a format suitable for traditional education) – and hopefully a lot of others will also read the book and start thinking about the future and formulate scenarios on how it should be constructed.

The common denominator of *just-a-job* attitude has become a way of dodging any responsibility in the conviction that “something” and “someone” is “in charge” – though most people should know better; there is no helmsman and no direction. It has once again become like Noah’s Ark – in the hand of God. But unless we learn to build new machinery we will drift about. We have reached a degree of self-organisation (where self-planning should indeed be a right for the best educated) – but in actuality it is now the systems structure that dictate decisions.

Personally, I like the idea of change and find that change is the real dynamic for development. Watching a society and the people conform to the lowest denominator has always been a sure sign of a civilisation coming to an end.

I hope some visionaries are still out there – and if – then this is a welcome to the digital future.

Carsten Corneliussen

August 2004

*”Technology is not kind. It does not wait. It does not say please.
It slams into existing systems. And often destroys them.
While creating a new system”*

Joseph Schumpeter