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In Search of Quality of Life and Wisdom in the ICT society

Key note presentation at "ISIS Summit Vienna – The Information Society at the Crossroads", 3-7 June 2015 Vienna Austria Gunilla Bradley

INTRODUCTION

Thank you for encouraging me to join this great event. I spent a lot of time to understand the focus of Summit Vienna – but found out that it is a highly decentralized conference with streams and tracks – I would like to join most of the streams and tracks – they are all interacting and I suppose that is the main purpose with the Summit to bring them together. So the coffee breaks are very important. So I will use a lot of visuals to speed up.

Wonderful to be back in Austria – I served as guest professor at Salzburg University - a vital time where I came to know many persons who are active at this conference. A great time for me – giving a doctoral course - with many bright students. The host was Professor Wolfgang Hofkirchner.

I will present you with some "snap shots" from our research over the years, mainly from the latest period. The research programs I initiated and led (starting in 1973) dealt with four main historical periods of computerization and ICT, from the main frame period with the use of batch processing systems to the on line period and use of display terminals, over to micro-computerization with the appearance of microchips, then to the net period when the communication technologies played a dominant role at the convergence of technologies. This covered companies in: post, insurance, electronic industry, air craft industry, banking, 10 high tech industries in Silicon Valley and some projects on community level, my own community and the village where I grew up – three years of voluntary work - kind of pay back.

For the five latest years I have served as chair for a series of conferences on "ICT Society and Human Beings" under IADIS umbrella. Latest academic affiliation is KTH – School of ICT – where I think you could find much of the frontiers of science high tech research and that campus is located right in the middle of Swedish IT and Telecom industry.

- How many remember the main frame periods of computerization with huge computer machines, where you used the batch type of software systems?
- How many have visited Royal Institute of Technology in Stockholm and Kista Campus?

- How many have landed at Arlanda airport in Stockholm?

This is how it looks like on the walls in Arlanda airport - huge photos. Earlier there were pictures of the king and queen and the ABBA group. "Welcome to the network society". Here is next picture you meet:" Mobile communication was born in Stockholm an now it is transforming the world" some bragging here.

"We need a critical analysis" was the title of an interview with me in 1997 in the mail daily newspaper "Dagens Nyheter". I can tell that it was *a hard ride* to do research on "ICT, Organisational change and Human Beings". Power and Computers are close related. Computers were initially identified as a *competitive tool* – strategic for a small country which is dependent on international trade and export industry. Critique was not always that popular.

The structure of my talk is as follows:

- Short about main changes in work life and private life. (When I started my research on computerization the focus was on work life very strong labor market organization in Sweden in 1972)
- Robots, Stress, Communication between People, Teenagers
- Theory
- What is the Good ICT society?
- From Theory and Visions to Actions

WORK LIFE and PRIVATE LIFE

Work Life: Network organizations - Private life: Home as a communication center

In this invisible power point the headline to the left.

In work life there are continuous and accelerating changes in the Net Era and then a bullet list. From a little child´s perspective working life is playing with a laptop, I-pad, and I-phone or in some cases PC´s. I actually asked. What are your father and mother doing when they are at work – sitting at the computer? What are they doing? Writing and go to meetings).

The headline to the right is PRIVAT LIFE - <u>Home as a communication center and then a bullet list.</u> Some years ago we studied the use of ICT in homes and home environments in the USA, South East Asia (Singapore, Malaysia) and Japan. The home could be regarded as a *communication sphere* - an extended family centre (on-line family); a care centre; a multimedia centre; a centre for democratic dialogue; a learning centre; and/or an entertainment centre; a market place. The business and market is coming into our homes! The home is a *growing market* for all kinds of electronic gadgets, desirable or not.

I will reflect on 1. Robots 2. Stress 3. Teenagers 4. Communication between people.

- *Brain cells implantation in the robots + Big Data?*
- *Use of robots in health care and military?*
- *Risk that we will have "smarter" robots than humans but emotionally "Idiots" (Einstein)*
- *Responsible Science and Citizens!*

 "Robotization" is going on in more and more fields. The basis was early laid for a global labor market. At present there is a new discussion on a re-industrialization – due to an increase of salaries in the countries where the corresponding jobs were outsources for a couple of years. The robotization worldwide in industry is also contributing to this trend. Robots that are human like is a hot area in computer science and medicine. The ethical problems are huge when it comes to the human like robots and the planned use in the health care, elderly care and child care, replacing nurses for certain tasks. I met this robot in Denmark at the ETHICOMP conference. This robot was a direct copy of the speaker. Hard to know who would give the talk when you saw them together. There is need for a deep reflection as to the use of robots related to the increasing unemployment rate – a difficult

equation. *I am so pleased to see that many presenters are focusing robots. May be we as responsible researchers could make some statements?*

STRESS

About Stress - "With ICT our tempo is increasing"

New opportunities to work and learn independently of location have changed our *perception of space*. What is expected from us and what we demand form ourselves is increasing all the time – the "level of aspiration" is increasing. People adapt to the machine and its tempo and become unconsciously affected by the *speed* of the machine with indirect effect on the *perception of time.* The words 'slowly' and 'quickly' have acquired new meanings. The same is true of the words 'near' and 'far away'. The only thing we cannot buy is time. ICT applications promote short term rewards/feedback, seems to be attractive. Where did "longingness" go?

"Overstimulation" and "understimulation" are both promoting stress. These two opposites could be balanced by use of ICT. Stress can be characterized by *too much or too little* of various aspects. *Balance of these aspects is desirable. A society of moderation!*

There are reasons to talk about an internet stress, due to:
- Information overload
- Contact overload
- Requirements on availability
- No organizational "filters"
- Hard to separate essentials from noise
- Perception of less time and closer in space
- Increased level of expectations on yourself and others
- 'Multitasking' – a new expression!
- What is next?

We have an increased *dependency* on computers and networks, and an increased expectation that these technologies will function well. Stress phenomena in the Internet world are *information overload, contact overload, demands for availability, lack of organizational filters, difficulty of separating 'noise' from essentials, increasing level of expectations* and an *altered perception of time and space* in general. There is a boom in Sweden of books and

courses in "Mindfulness" – as a tool to handle stress. Maybe experiences might be quite different in other countries with other religious and cultural background. International comparative research would be great in this field. We have at Vienna summit a great opportunity to share – how is stress handled in various cultures, preventive as well as "hear and now".

The We to Me Generation.
Teenager's life styles were explored in the *Nordic countries* about the year of 2000 and the results were summarized as this: Teenager's life styles in the Nordic countries the year 2000

- – Individualism: From we to me
- – Identities: Multiples of me (avatars)
- – Technology: Keeping the herd together
- – The Future Now

Recent move:
- – Bringing together to Act
- – Coming together to Share
- – Be your own Life manager (app generation)

Individualism, Identify, technology, the future now - you could talk about a new "from we to me" etc. This can also be traced in the so called "Cultural Map" (will return to).
Recent move is bringing together to get into action, coming together to share, be your own life manager (apps).

As to *teenagers in the US*, there is kind of new trend. Gautam Malkani has analyzed some recent books. One first issue is that the perennial power struggle between adolescents and their parents has moved online – and become a commercial product. You need to buy special hard and software to escape from parents´ control. The books that are referred to are: It's Complicated: The Social Lives of Networked Teens, by *Dinah Boyd* and The App Generation, *Gardner and Davis.* Instead of trying to evade online surveillance from governments and corporations, they are more concerned with avoiding their parents

(I tend to visit *Oman and the Middle East each year* to shorten the Nordic winter. I observe another version for teenagers and especially young women – how a total closed culture is

moving into the mobile world. I visited Dhofar University in February and could imagine the enormous change that might happen, if no one stops it. But I also noted the trial to find one´s own way into "the new paradise"? Trying to keep the best part of one's own culture.)

COMMUNICATION BETWEEN PEOPLE

There are many challenges for communication between humans in the ICT society. One is "*Listening*" which is the basis for all other communication. "Meaning" is continuously created by listening. Listening is the most important communicative quality and ability, often ignored. Listening means receiving and constructing meaning from verbal and non-verbal messages. We can think (listen) normally four times faster than we talk. Listening creates trust and when trust exists, more information sharing and more variety occur. By sharing information we win more insights and hopefully wisdom. Another challenge is "*values*". They play a key role for communication - ICT is values-in-action.

Psychologists who study *empathy* are finding that it takes time for the brain to comprehend the psychological and moral dimensions of a situation. The more distracted we become and the more emphasis we place on SPEED at the expense of depth, the less likely and able we are to *care.*

Prof Kiyoshi Murata from Japan is warning for the advent of a new type of symptom, similar to *schizophrenia* and refers to research in psychiatry. Unconsidered social media use contributes to *dysfunction of the mental process of the generation of the Self.* A feeling of strangeness appears that the process of identify formation has been *taken over by others*. I ask myself if we all are suffering from kind of schizophrenia – being in RL and VR.

Murata points out preventive actions like proper educational programs, the rights to transparency, and co-ownership of digital objects.

There are *huge changes* due to the use of ICT. There are many *adverse effects* and also *paradoxes.*

On Paternal Leave. Do we talk with the kids today?

At a sculpture museum

This summer I was at an outdoor museum – Beautiful – Others were somewhere else! Do we enjoy?

Out on intimate date?(below)

HOW DO I PERCEIVE THE WORLD?

THE CONVERGENCE MODEL

The convergence model *synthesizes the framework* in my research on Social and Psychological Life environment and computerization that has *its roots back in the 1970s* and research during various phases of the *history* of computerization. The illustration of the model that I will present focuses on SPEED. The title is *"The convergence model – An Accelerated process"*.

WHAT IS CONVERGENCE*?*

Convergence here means a move towards a common content. There become another colour and shading. But the *process of interaction* differs *between authoritarian and democratic societies*.
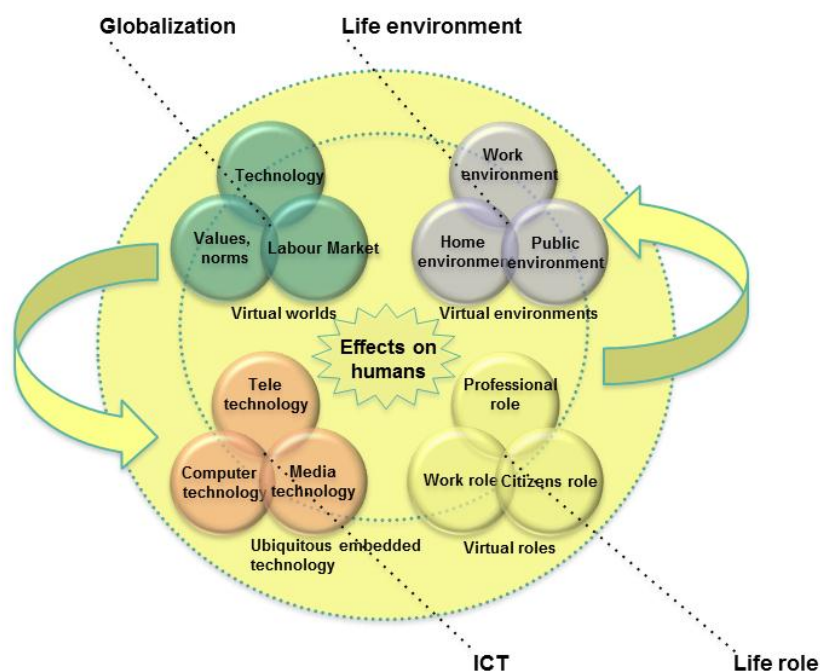
Convergence occurs in the Network Society where there are *new communication patterns e g* Direct communication between people, Immediate distribution/exchange of information, Borderless – Global.

In the network organizations Power is relocated, a multidimensional virtual culture is developing and human competence has become the currency

THE CONVERGENCE MODEL -MAIN PARTS

I will present the MAIN PARTS of the convergence model. So let us focus on each group of circles, each cluster of circles in the model .Let us start HERE!
POINT! *CHECK VARIOUS MODELS IN THE PC FOLDER"BOK 2011-2012" UNDER "CONVERGENCE" (melting cook)*

Convergence Model on ICT and Psychosocial Life Environment
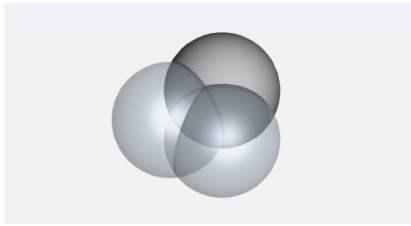

1. GLOBALISATION IS CONVERGENCE between Technology, Norms/values (economy) and the Labour market.
   There are some anti-movements. Values related to the economic system are strong driving forces. Values related to culture and religion operate independently, supportively or oppositional...................
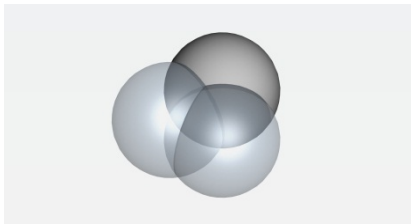

2. ICT (INFORMATION AND COMMUNICATION TECHNOLOGY IS CONVERGENCE between Computer technology, Telecommunication technology and Media technology. *(ICT CLUSTER).*
   Ongoing commoning of technology as open source, file sharing, co-production

3. CONVERGENCE between Work environment, Home environment and Public environment are converging to BECOME a LIFE ENVIRONMENT (a cluster), where the work and public environments move into our homes and vice versa.
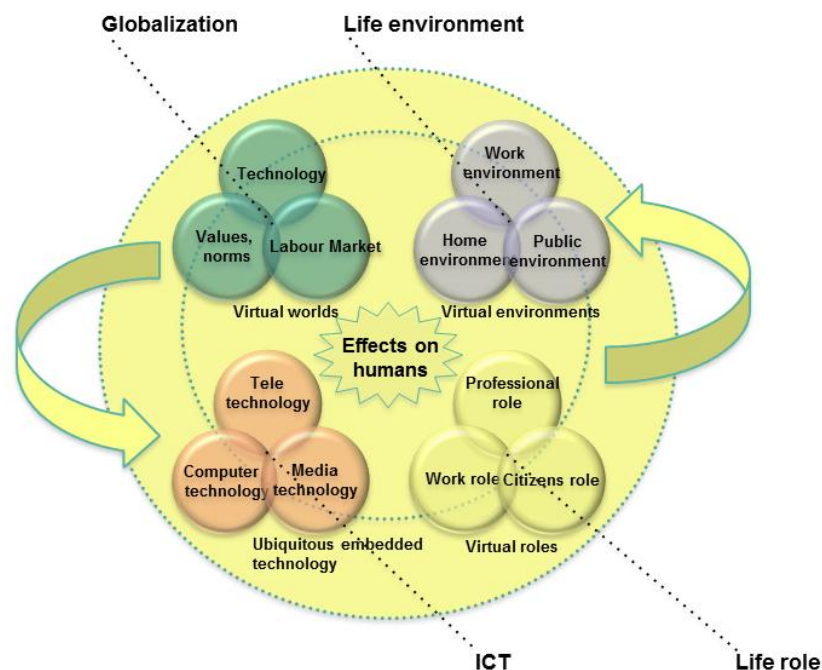

4. CONVERGENCE between the Professional role, the Private role, and the Citizen's role converge to BECOME A LIFE ROLE (a cluster)

BUT there is a new world out there! - The VIRTUAL REALITY regarding all the four clusters. We talk about *Virtual Technology* (ubiquitous, clouds etc.) *Virtual Worlds, Virtual Environments AND Virtual Roles* DRAW CIRCLES WITH THE POINTER!

VIRTUAL HUMAN ROLES are emerging. The main tools are the *internet and web technologies, mobile phones, and new software applications known as social media* (Facebook, Twitter, etc.) that are transforming work, private, and citizen roles. More and more time is spent on the net. *In a more extreme form, virtual realities are expressed by another person/personality* that people take on, for example*, avatars in various online games*. Virtual reality is also reshaping the power *balance between authority and the grassroots and strengthening civil society.* In my TED talk I illustrated this with a doll and a box (see reference list).

We just jump out of and into boxes *in all our roles – sometimes half* of us are present. *Presence* in real life has become a luxury…… the best gift to "the other"!

In the middle of the figure above we find "Effects on Humans" – a sun flower or a circle with double directed arrows. *The individual* is affected by ICT, Life Environment, Life Role, and Globalization but can also influence these areas included the new virtual reality   Effects on the *individual* become *complex*. The way humans *handle* their situation can be either *active OR passive*. Examples of active reactions are *involvement, creative behaviour, and protest*. Examples of passive reactions are *alienation, withdrawal and certain psycho-physiological symptoms*

EFFECTS ON HUMAN BEINGS

The aspects that we found that are sensitive to the use of ICT

- Identity and self-perception (*web community identity*)
- Social competence
- Integrity
- Trust (security, privacy - the terms vary)
- Dependency (Addictiveness)
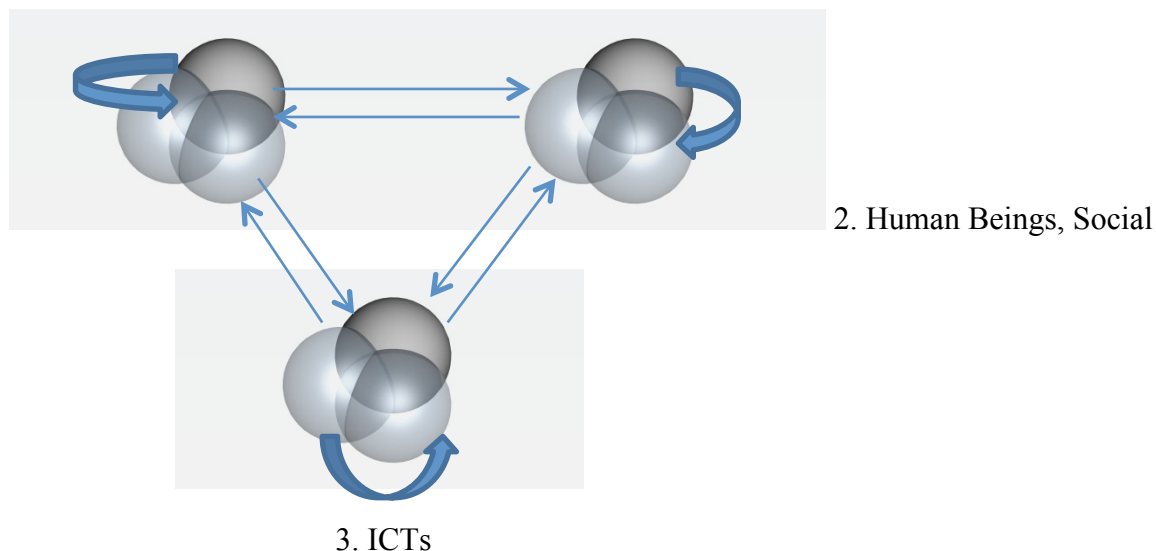- Empowerment
- Empathy
- Stress

DYNAMICS OF THE MODEL IN SHORT

The *thin double-directed arrows* in the outer part of the big circle represent interaction between *the clusters* of circles and *the broad arrows* represent the *main direction* for the movement in the circle model. The main direction is emphasized by an increasing change in the society due to globalization and to the *accelerated speed* within R&D in ICT. *The interaction between the clusters entitled "ICT" and "Globalization" gives a powerful push to the speed of the "wheel". Accelerated speed of economic transactions by robotization puts the world economy in a high risk for collapse.*
¨

Transferring the reasoning to *actions, we* can in our professional role, private role and/or citizen's role influence our life environment on various levels of analyses, but *an awareness of the speed of change, its causes and the complexity* is required.

1. Nature

2. Human Beings, Social

3. ICTs

SOCIETAL SELF-PRODUCTION
To "*make the complexity simpler*" I would like to refer to the phenomena of "***Societal Self-Production".*** "Human Beings" contribute to the production and reproduction of themselves, including the emergence of the "Social" but also the

"Nature" and the artifact "ICT" is more and more reproducing itself. Everything seems to be interacting with everything.

In this ambivalent position towards *the dialectic reproduction of "physical" and "cultural spheres"* we need an **ETHICAL COMPASS**. This takes us over to:
WHAT IS THE GOOD ICT Society?

WHAT IS THE GOOD ICT Society?

My visions of the Good ICT Society concern the *flower* in the middle of the model – "Effects on Human Beings".

Information access for all

Wellbeing and *quality of life* for all

Deepening and broadening of *democracy*

Integration* and respect for *diversity

***Enrichment* in the social contact between people**

Greater *autonomy* for the individual

Prevention of various kinds of overload and stress

E-cooperation and *peace*

Sustainability

Internationally *the first official statements* of goals for the ICT society were formulated at the first **World Information Technology Forum (WITFOR)** in Lithuania in 2003. The so called *Vilnius Declaration* brought forward goals as *bridging* the digital divide between rich and poor in the world; urban and rural societies; men and women; different generations. Another main concern was *reducing poverty* through the use of ICT. Ensuring the *freedom of expression* was a hot topic and still is. This was the first time that researchers met with and had a dialogue with politicians on the ministry level both from developed and developing countries. I guess there were some seed planted at that time with insights that ICT could be used to broaden and deepen democracy.

WITFOR was followed up by **World Summit of the Information Society (WSIS)** mainly held in the developing countries where NGO´s and civic society were involved. Then there came an *awareness process around the world* of the *potentials connected to ICT*. Examples are the Arabic Spring, Occupy Wall Street etc.

Thoughts about the good society is not new – there are many examples in politics, religion, and cultural spheres.

The Good Society (Lorenzetti Sienna 1340)

FROM THEORY, VISIONS TO ACTIONS

I will show a flow of pictures that I made for a Millennium conference in 2000 in San Diego. There was indeed an enthusiasm at the time. Some of you might have seen them before.

1. Future applications are like thrilling seeds'
2. They pop up all the time – *we call them apps* more and more
3. Some will grow to beautiful flowers – the ones who contribute to fulfill human needs

4. We will have a field of flowers

In my presentations over the years I used to play some music like "Romance" by the Swedish composer Lars Erik Larsson. Sometimes changed to Abba like "Thank you for the Music" or "Dancing with the Queen" – for a little while of reflection.

At that time **14 years ago** and for some years after that I thought that the *market forces* would regulate the journey, that the *consumer power* would be so strong that we could have a wonderful future with this marvelous technology, increased self-determination and influence, reduced poverty, freedom of speech etc. I was at the Telecommunication department at KTH*; "Interactivity"* was the leading word, the Internet center was next door. School of ICT was formed and next center for wireless computing. My close professor colleagues were actually Mr. Internet, Mr. Nanotechnology and professor Chip.
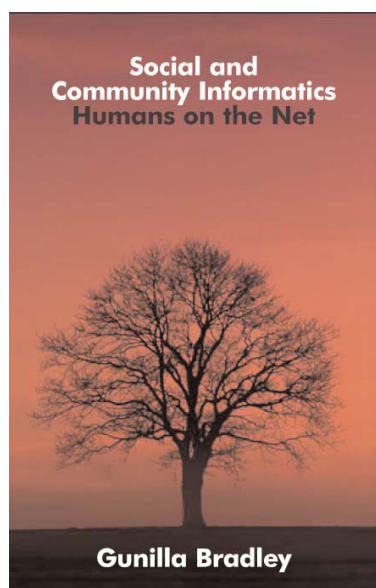

Some flowers have withered

The Net has been occupied by TERROR ORGANISATIONS; there are various VARIOUS MISUSE and ADVERSE EFFECTS. There is bullying, *hate, sexual abuse, cheat, mutual distrust* due to competing sources of information etc. *Anonymity and Speed* are drivers. In addition there are *cyber-attacks* ….and risks for a *global cyber war ………the end of humankind.* Whole societies and civilizations are so *vulnerable* and their *infrastructures* can suddenly be wiped out.

ICTs have grown *out of control* for human beings – advanced applications require *wisdom*. There is so much talk about Technology Development, but nothing about *Humane Development. Humane Development* must be in parallel with Technology Development. It involves not only IQ but also emotional (EQ) and social competences (SQ) – applied wisdom.

ICT is about "*Power"* on various levels or *"Politics"* if you want. In theory we are all "empowered". Each one of us can have an impact. Technology has taking a *leap into our hands and pockets.* Have we become more powerful or not?
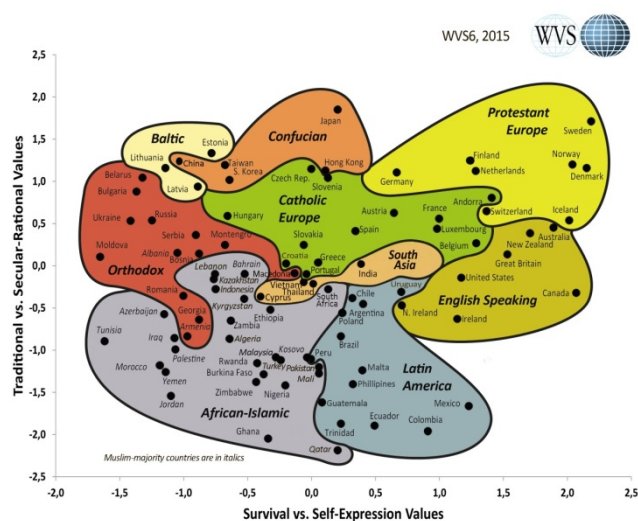
There is an increasing risk of enforcing *centralization, surveillance and various misuse of power.* The visions and goals for the Good ICT society for Human Beings need a *stronger recognition and actions on all levels of society – including the global level.*

I sometimes feel I have returned to "SQUARE ONE" – where I started 40 years ago. At that time a tree of action was needed and applied – the so called Swedish model was in action to prevent misuse of the EDB and to guarantee user participation in the design and development of software systems. In this book I have a special chapter on Actions and illustrated by a TREE.

Book cover "Social and Community Informatics – Humans on the Net"

Time changes - a Tree of Action is needed again with a very strong branch of the tree on the International level. But also a strong branch and sub branches on the *individual level*.

The International Value Map

The International Value map helps us to understand the cultural complexity and diversity. On the one vertical axis is Traditional versus Secular-Rational. On the horizontal axis is Survival versus Self-expression Values.

Before my trip I played the role as IT minister. I do advocate enforcing Actions, And was happy to read in the conference program in the web that one purpose with Summit Vienna is to achieve "betterments" –"Improvements" – actions in my mind. Let me just present some thoughts.

Actions toward a good and sustainable ICT society

ICT can and should be used to *narrow the gap* between subcultures; it could *show similarities*, emphasize the *synergy i*n the various cultural blocks, and bring us all into a thrilling, fruitful dialogue. We need quite a different *approach.* **The goal must be *"unity and diversity".*** In practice it is important to discuss and develop perspectives on the citizen role? What competences do we need, how should responsible citizens act in the ICT society, what life styles are important? We are all moving to become global citizens. ***"The Golden***

*Rule***"** could serve as a simplified guiding principle. *Maybe we need an app with the Golden Rule. The old Crede says"Treat other People as you would Want them to treat You".*

"The *Distribution issue* "(distribution of power and resources) is still a key question and could easily be solved through ICT. *Distribution of resources* both *human and material. Accumulation of capital and other resources* is speeded up by ICT. *Distribution of resources could* also be facilitated by ICT. *Why not a turn around by bitcoin?*

Let me just read the Headlines in the boxes and some examples– every headline could be a conference!

 Every one of us can reflect on what actions we would prioritize in our country, community, work place, and home environment. And what do we want to convey to *national and international bodies to act upon.*

For many years I kept saying and writing "*ICT should be used for Deepening of Humane and Societal Qualities*". There is *an inherent opportunity* for the Good and Sustainable Society. What is it all about? Our *responsibility for the next*

generation and the planet...