

CAW - Computer Aided Welfare State: Revival by Technology?

POVZETEK: During the past decades the traditional Welfare State in Western Europe has become more and more under pressure by a variety of stress factors: Apparent are its increasingly high costs and the relative low effectiveness, accompanied by a deterioration of the image of public administrations. In many Reform Countries the former public health care and social security systems are facing even more difficulties: Lack of financial resources and new neo-liberal ideas undermine their functionality. Alternative concepts are needed: large scale institutions are unable to deal appropriately with rapid social change and the individuals are not in a position to cope with the negative aspects of human existence on their own. In addition to the large scale institutions like centralized social security and health care institutions, new group based institutions assisted by electronic communication tools and adequate training opportunities are proposed for various fields of society: "Peer Group Care" in addition to the traditional social welfare system, "Study Circles" to complement traditional schools, "Workers' Health Assurance Groups" to improve the occupational ill-health status, and "Intrapreneurial Groups" against alienation at the workplace are examples to illustrate how the Welfare State could be transformed and not be replaced.

KLJUČNE BESEDE: welfare state, social change, state transformation, electronic communication

1. Introduction

In this paper I try to do the following: first I assess the situation of the modern welfare state in an empirical perspective, second, I give some reflections on its crisis, and finally I present a few thoughts on how the contemporary welfare state could be complemented by new types of institutions in the medium/long term. The ideas discussed in this paper represent my personal opinions only, and do not necessarily express any official position of the European Union.

The modern welfare state is one of the most important achievements of the 20th century. Let me quote a witness above suspicion, Michel Camdessus, the former director of the International Monetary Fund. He stated:

"The twentieth century has seen countless achievements and changes. As historians look back on this period, two developments are likely to stand out as being among the most definitive of our time. One, deepening as the century

progressed, was the acceptance by many, indeed most, nation states of an obligation toward their citizens to provide a certain minimum level of well-being. In industrial economies, especially in Europe, this has led to the emergence of the welfare state. The other development has been rather more recent, especially in the last two decades of this (the 20th ...author's note) century. It is globalization.”¹

Although the European welfare state is given such eminent importance we cannot be sure for the future that this achievement will survive the coming decades. But before we discuss in detail its function and the pro's and con's, we should try to establish a common understanding about the scope and scale of this well known institution in Europe.

What do we mean by the term “welfare state”? I know that there is an immense number of books available on this issue. But let me for simplicity just quote one textbook of sociology²: ‘The “welfare state” refers to the increased responsibility assumed by the nation-state for guaranteeing the survival and well-being of populations. Typically, the welfare states include provisions for:

- retirement and old age
- sickness / accident compensation and health insurance and delivery
- education
- full employment and unemployment compensation’

In addition to those four main areas we find also many related institutions like welfare offices, youth welfare, mobile provision of food for impaired persons etc. But nevertheless, in decreasing order, retirement, health care and education represent by far the largest costs³. The following table shows an estimate of the shares of costs by sector of the welfare state and their future trends in the EU.

Policy issue of the welfare state	expenditure share of GDP	Timing and observations
Pensions and old age	5 to 13%	Could grow by 3 to 4% in 30 years. However in the next decade not yet significant (+/- 1%).
Health Care	7-11%	Is likely to continue growing. The motor of change will be the ageing society. It could add as much as 10% to the health bill. Developments in the life science could further increase life expectations.
Education	5-8%	Growth likely. However it might not be in the traditional educational system.
Unemployment support	3-5%	Urgent expenditure now. Different in each country. Might shrink as unemployment is reduced.
Active employment policy	0.4 to 3.2%	It will be necessary to increase this type of support if countries want to reduce the permanent unemployment (the employment trap)
Total Range	20.4 - 40.2%	

We can see that on average the contemporary welfare state uses 20 – 40 percent of GDP. In most European countries this category of expenditure represents the greatest share of public spending.

2. The crisis of the welfare state

Now we can hear more and more criticism about this concept. Many politicians and social scientists speak about the crisis of the welfare state. What factors support such assessment?

Demographic factors

- declining fertility rates
- longer life expectancy
- demographic pyramids convert to rectangles

Economic factors

- Reduced economic growth rates
- Increased income levels
- Chronic High Unemployment - decreasing solidarity

Political factors and public discourse

- Decline of political movements defending the traditional welfare state
- Decline of traditional grand narratives

Societal and institutional factors

- Mosaic society
- household structure (singles increase)
- over-bureaucratization

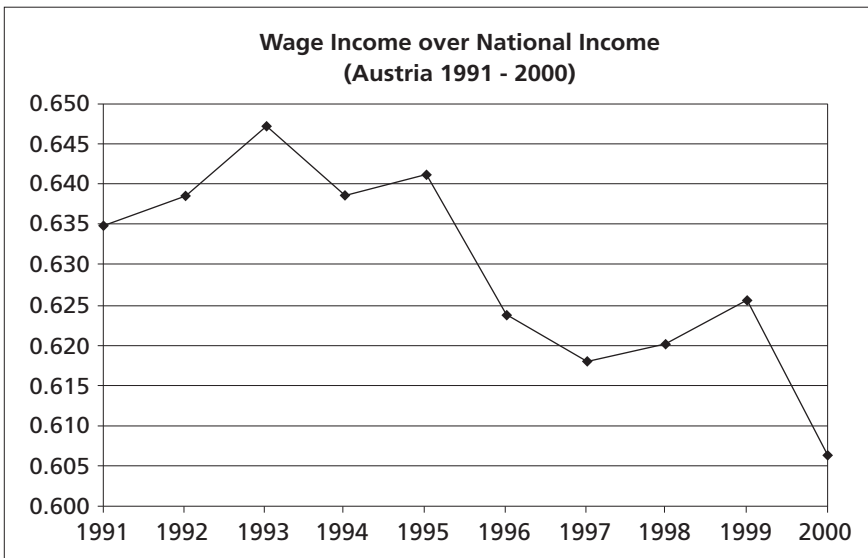
The demographic situation moves the welfare state into financial difficulties for a twofold reason: on the average the reproduction rate is declining – in the enlargement countries more than in the EU15. Many countries have adopted pay-as-you-go systems for funding pensions. They depend on the contributions by the active blue and white collar workers. With these systems, societies are charging future generations with much higher liabilities - and taxes to finance them - or reduced benefits. The problem becomes bigger, the more the number of employees is relatively shrinking. On the other hand the number of retired people is increasing by the very aging of the labour force. The consequence: the burden per head of population to provide for retired people is increasing. Also longevity creates new problems: Medical treatment of the elderly is very costly compared with the younger age groups. In addition to that we experience a further increase of the costs for technical devices and medical services than the average inflation rate.

If at the same time the economic growth rates are no longer as big as in the recent past, the cost increase leads to enormous problems as to how the welfare state can be financed. But even if there are still growing wages, which in principle could be associated with higher individual contributions to the social security system, to keep the individual contribution to the costs within a reasonable range in many countries upper limits are set to the contributions. Incomes beyond this threshold do not lead to a higher financial

input to the social security system. To channel a fraction of the wage increase into the social security system, some countries have increased the threshold and/or the share which remains to be paid by the patient individually, and simultaneously they could reduce the contribution by the public.

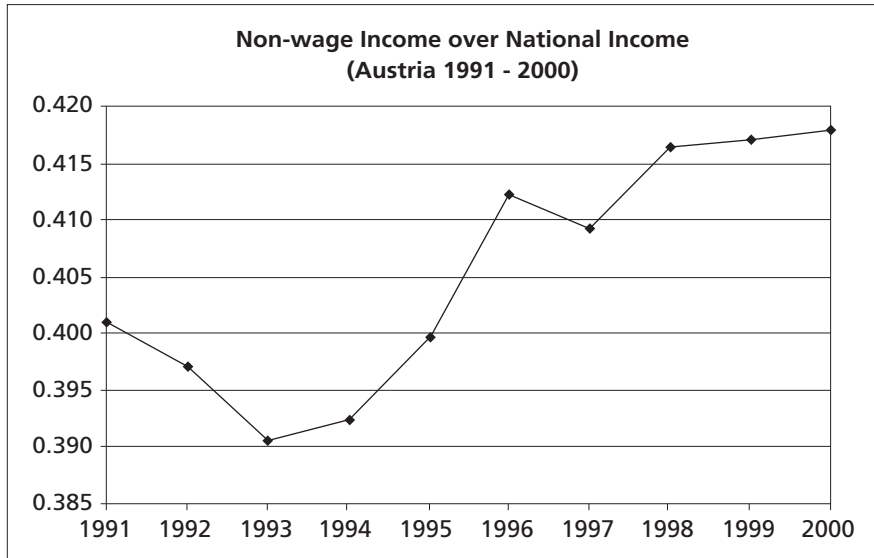
Many economic systems in Europe experience another ambiguous trend: while the salaries of the employees of the higher social strata are constantly increasing, the unemployment rate is also increasing. We see a polarization of incomes in the economies. The higher unemployment rates do not have the effect of an increased solidarity and therefore the inclination to continue or even increase spending for the welfare states is undermined.

The breakdown of the traditional myths of the left wing labour movement and the fainting narratives of the trade unions, are both eroding the power of one cornerstone of the triad of the social partners (state, workers, and enterprises). Although the left wing parties represent only a necessary, but not always a sufficient condition for increased engagement in the welfare state, their shrinking influence reduces the bargaining power of the workers. At the same moment a take over of conservatives in government enables a new alliance of government and enterprise representatives to restructure the controlling bodies of the social security system (as before already done in the UK under Thatcher, in June 2001 the Austrian Social Insurance Holding Organization, before exclusively controlled by workers' representatives, was reorganised by the black-blue Austrian government having established in the management board now equal representation of enterprises and workers).



The Austrian example is also interesting with respect to the share of the National Income which is allocated to the employees: There is a tendency towards a smaller fraction of wages, while the share of non-wage incomes and tax revenues is growing

(see figures below). One should note that this tendency did not start with the new black-blue coalition of conservatives and the Freedom Party (in power since February 2000), but was already in place during the former coalition of conservatives and social democrats.



Just now (October 2001) in Austria a referendum is starting to move the existence of the welfare state on the level of the Austrian constitution, so that it will become more difficult to dismantle it.

3. From Bureaucracy...

Beyond the need for financial resources the Welfare State is a bureaucratic institution. We can see that since Max Weber's assessment of the bureaucratic administration as "the most efficient form of exerting power" a completely different picture is drawn today. Max Weber praised bureaucracy in contrast to the feudal structures still in place in his times, which were governed by privileges, and not by knowledge and professionalism. He requested meritocracy as the key perspective for social change, and bureaucracy was the institution, where it could be implemented. Weber was convinced that the pacemaker for the emerging bureaucracies were the then "new technologies" like "public roads or water-ways, railway, telegraph and telephone"⁴. Interestingly enough he stressed the observation that the means of production were not the property of the bureaucrats, but were offered to them by the bureaucratic institution. We will come back to this observation later on.

Unfortunately, we have seen also negative sides of bureaucracies in the past. A lack of transparency (Franz Kafka reflected this in his novels), by abusing the term "public secrets", unpredictability, voluntarism of the civil servants, abuse of ones position, slow

or no reaction to new developments, inhuman, self-defensive, costly...to mention just a few of the negative features. Within the past decades "bureaucrat" has become a byword with a very negative connotation.

But before we become too critical towards bureaucratic institutions let us have a look at the reasons for the development of bureaucracies: In the agrarian societies of the 19th century the family structure was based on the extended family, not only based on kinship, but also integrating people necessary for the production processes in farming land or raising livestock. Most of the needs of its members were organised and met by the extended family itself. Markets existed only in their infancy. By industrialisation, mechanisation (tractors, mowers, threshing machines) and making increased use of chemistry (fertilizers) in agriculture, productivity increased dramatically, driving farmers and their families into the cities. The core family (consisting of the parents and 1-3 children) became then the standard type of family in the small towns and in the megacities of the 20th century. What was the effect? The new small family could no longer offer the traditional mutual support, which was available to the members of the extended family. New infrastructures and social institutions had to replace the former interactive help. The welfare state was the answer to these new needs. The labour movements and the trade unions requested it powerfully and were finally successful. The training on the job was replaced by schools, industrial pharmaceuticals replaced home made recipes, the homes for the elderly provided accommodation for the grandmothers and grandfathers instead of the cottage beside the farmer's house, and unemployment benefits had to be paid in case a member of the family could not find work again. This process is still going on: Now the family size has shrunk even more: In many European countries the single household has become the dominant family size. The dependency of the individual on societal infrastructures has grown. And now we are in this phase, can we say good bye to the welfare state?

As we have learned from historical facts, since that period of time the needs of the individual are not met by other individuals, but by large scale social institutions with strong bureaucratic features. The creation of the welfare state took away the direct responsibility of the people for each other. It is structured similar to a professional army which is dealing with warfare and has split the population into warriors and civilians. The welfare state has more and more acted as a specialized and professional intermediary to deal with problems of unemployment, education, illness, and elderly care. It has split once more the population into two groups, on the one hand into professionals performing the services needed and on the other into a majority of people relieved from the burden of caring for others.

While this development was correctly seen in the past century as a tremendous progress in the improvement of quality of life, new factors emerged where new arrangements could come into being. The increase of average income now allows the individual to cope more easily with smaller personal risks (although this should not be seen as a solution for extreme cases), the reduction of the working week leaves more time for other activities outside the factories and offices, and the increased longevity adds healthy years to the curricula of the retired.

4. ...towards a stronger involvement of people

In my understanding this could mean that the possibilities for a reshuffling of responsibilities, institutions and resources are historically emerging. A new institutional design could be considered. Interestingly enough, already in the 1960s, the German economist Wilhelm Röpke, has dealt with this issue. Probably from a somewhat ideological position of liberalism, he wrote:

“The past’s extreme individualism is not least to blame for the reversal which has brought about the opposite extreme, the modern welfare state. It is surely the mark of a sound society that the center of gravity of decision and responsibility lies midway between the two extremes of individual and state, within genuine and small communities, of which the most indispensable, primary, and natural is the family. And surely it is our task to encourage the development of the great variety of small and medium communities and thereby of group assistance within circles which still have room for voluntary action, a sense of responsibility, and human contact and which avoid the cold impersonality of mass social services.”⁵

In particular in the health care system with its high-tech medicine, people experience the feeling of coldness. Although the facilities are very costly, people are missing the “human touch”, and in a few cases the system does not only make them wait a long time before they could find treatment or surgery, but sometimes it kills them by new diseases, which originated in the hospitals, or by extremely stressed nurses or doctors.

To get assistance, the bureaucratic processes require individuals to fill in forms that have to be moved through the system in complex and tedious standardized procedures, and the decisions were taken anonymously by bureaucrats on a legal basis. To cope with the millions of cases in a more efficient way, information and communication technologies were applied. Very early in the diffusion process of information technology, social security and health care systems (together with the tax revenue system) became the largest users of computers and electronic networking.

What could be done? Is there any alternative to meet the needs of the people, but in a more humane, politically sound and cost-effective way?

5. Computer assisted drop of transaction costs

Let us take up the issue of costs-effectiveness first. One of the most important drivers of societal development is technological change. And here we can find already one factor which should be exploited as far as possible. We can focus on ICTs (Information- and Communication Technologies). We can see the first steps, where these new technologies are able to influence the efficiency AND the organisation of the sectors of the welfare state. I will just quote Jeremy Rifkin⁶:

“It’s not just low-level jobs that are disappearing. A growing number of companies are deconstructing their organizational hierarchies and eliminating more and more middle management. They use computers to do the coordinating that people - often working in separate departments and locations within the company - used to do. Harvard business professor Gary Lovemann points out that while better jobs are being created for a fortunate few at the top levels of management, the men and women in ‘garden-variety middle-

management jobs' are 'getting crucified' by corporate re-engineering and the introduction of sophisticated new information and communication technologies. Eastman Kodak, for example, has reduced its management levels from thirteen to four."

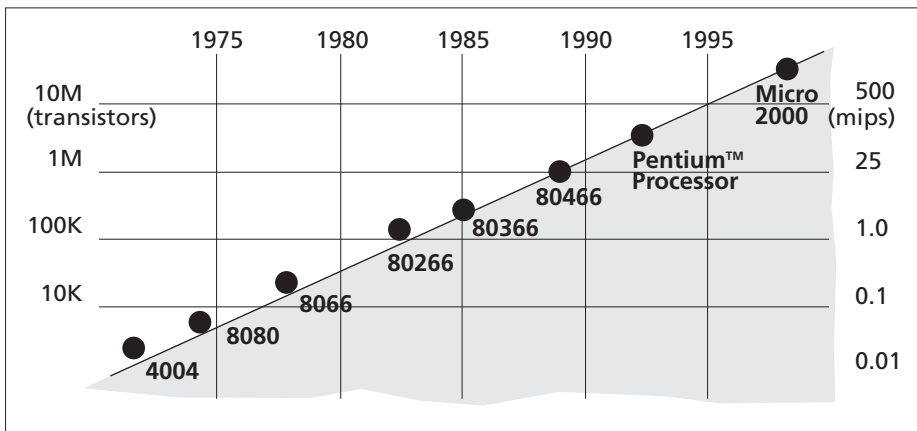
What is the techno-economic background feature for this change? The answer is related to the so called transaction costs. The term "Transaction costs" was coined in the 1960s. The economists related to this term (like Coase 1960, Alchian and Demsetz 1972, and later on Williamson 1985 and North 1990) come from institutional economics and formulated these types of costs against the positions of the neoclassic mainstream economists with their assumptions of perfect competition and complete information. They stated that not only the price of a commodity or of a service is important for the emergence of an economic transaction, but also the costs to get information, to make the necessary arrangements for it, are relevant. Real economic subjects are charged with the costs for getting all necessary information before they sign a contract. Negotiations are needed and carry new costs, communication and later on co-operation in this process are not given for free. Not only might transaction costs show up in money terms or in terms of labour time, they could also relate to a changed quality of the product or the service. Consumer preferences could be taken into account in an improved way, consumer satisfaction could increase, and therefore transaction costs could become as important for the transaction as the price itself.

Bureaucracies can be seen as service providers, where information, communication and organisation play an essential role⁷. By changes of the transaction costs related to these kinds of activities there might be also a feedback to the way the services are produced. Just to mention some examples based on electronic networking

- Activities of communication, (e.g. the preparation, transmission, reception, interpretation of messages between two or more parties)
- Activities of coordination, (e.g. related to the processes of finding an agreement, planning, and decision making processes)
- Activities of information, (e.g. processes of browsing, searching, retrieving, interpreting, verifying)

could be done easier, faster, cheaper and with improved quality. The fact that e-mail is cheaper than FAX, telephone, or snail-mail may be relevant from the traditional point of view of economists, but more important is in the long run the establishment of new institutions with improved quality and of new opportunities in information retrieval and cooperation. One wide spread example should illustrate this argument: Electronic mail allows us to reach communication partners in an asynchronous way, we do not wait for the personal presence at the other end of the line. The timing of sending or reading mails can be determined by people on their own without the need for synchronizing their time schedules. Another example is video conferences. Here the synchronicity of audio and visual communication allows people to reduce travel costs, which represent another kind of traditionally high transaction costs (everybody who has participated in video conferences on the other hand can report about some evident problems also). Or let us speak about "knowbots" intelligent agents who harvest information on the Internet all over the world in a customized way nearly without costs.

The next decades will show us also the continuation of Moore's Law up to a minimum of 2020, stating that the capacity of microchips (the number of transistors or electronic switches on one chip) will double within 18 to 24 months, prices held constant (see figure below⁸). This means a tenfold increase of the capacity within the next 11 years. Between 1971 and 1997 the number of transistors per chip grew by a factor of 3200 (1971 2300 transistors on the chip 4004, 1997 7.5 million transistors on the Pentium II). Extrapolating this development means a reduction of the size of an electronic element by a factor of more than 3000 by 2224. The effect will be that computers will become ubiquitous - literally speaking. (Nevertheless in literature you can also find Machrone's Law, empirically true for many years, which is that the machine you want always costs \$5,000 ;-)



Nevertheless I should remind you that also in the realm of new communication media there is no free lunch. Their application also creates new kinds of costs, and one has to balance the increases and the savings before one really uses these technologies: a society cannot get for free the universal access to its electronic networks, there are training costs involved for the computer literate and, last but not least, the increase of labour productivity could eventually lead to higher rates of unemployment, which will create new kinds of costs, political costs at this time.

One of the most interesting results found by the proponents of the "transaction cost" approach was the explanation for the emergence of certain organisational structures, meaning that by a change of the structure and amount of transaction costs new actors could come into existence, and others could disappear, like the end to the putting-out system and the birth of the factory system in Great Britain.

6. Targeted Intelligence Networks

This feature of new technologies of changing not only quantities, but essentially also qualities inspired the members of the Institute for Design and Assessment of Technology at Vienna University of Technology (TU Wien) to look for alternative ways of providing services related to the Welfare State⁹.

The idea is quite simple: Neither large scale institutions nor the individuals on their own are in a position to cope adequately with the negative aspects of human existence. Therefore we propose the establishment of new group based institutions assisted by contemporary communication tools and adequate training opportunities. When I worked for the European Commission we convened an international workshop to discuss the emergence of these new groups. To give the baby a name we called them “Targeted Intelligence Networks” (TINs). Their common feature is the voluntary cooperation of a few number of people in groups towards a certain goal. But I am realistic enough that it will not be sufficient just to trust in the post-modern fashion of self-organisation and to wait for its implementation. My position is rather that a framework has to be created within which these new forms can emerge. This framework is not only composed by encouraging words and media campaigns, but also by financial, infrastructural, material and educational resources to empower people to take over their new tasks voluntarily. This implies also certain ways of compensation and remuneration for their efforts and their contribution to society.

Maybe it is the right time to make a methodological remark. While the usual work of social scientists is to analyse past developments, here we are mostly dealing with the future. But how could we link the proposals for the future with the empirical patterns we found already in the past? Our methodological answer was that we have to be able to find examples, cases and case studies in the field of investigation, other wise our proposals would just be utopian (meaning in ancient Greek: “without any place, nowhere”) Therefore at Vienna University of Technology we started by screening various sectors of society for already existing alternatives. Interestingly enough we could identify seeds of new developments in each of the four essential areas of the welfare state: in the areas of elderly care, of education, of health care and in employment.

“Peer Group Care” in addition to the traditional social welfare system for the elderly, poor, disabled and other outsiders; “Study Circles” to complement traditional schools; “Workers’ Health Assurance Groups” to improve the occupational ill-health status, and “Intrapreneurial Groups” against alienation in the workplace are examples to illustrate how the Welfare State could be transformed, but not be replaced.

7. Peer Group Care

In the contemporary society we already can observe certain group centred activities. They are partly organised by religious communities or by other non-governmental organisations taking care of the elderly, drug addicts, homeless, unemployed or members of specific minorities, but also by the state. Our proposal for a TIN in this area could be a group of volunteers who become active in their neighbourhood, quartier, district etc. to engage themselves in their leisure time. We called the new institution “Peer Group Care”. Their interaction could be assisted by giving them access (maybe for free) to the Internet. Adequate training has to be provided by state institutions depending on the group they are specialized in their work. Very important is their ability to deal with crisis situations. For this reason they have to be linked to emergency services, being allowed to send

people to public or private hospitals if necessary. What could be their compensation? In case they are engaged in Peer Group Care, they are no longer obliged to pay their premium or any other usually obligatory contribution to the social insurance. Nevertheless they continue to be subject to the services social security could provide them.

8. Study Circles

In education we identified an example in place for several decades in Scandinavian countries. So called “Study Circles” are a rather popular institution. Their origin comes from the protestant bible study circles of the 19th century. Contrary to the Roman-Catholic tradition where the bible was not open for private interpretation and only the officials of the Church had the right to give the correct meaning to the texts, in Protestant circles the believers were invited to add their personal opinion on the texts. The secularized version of this protestant movement was adopted by the governments. Up to now a group of people who wants to deal with a special subject of investigation can apply for some (limited) resources at any institution of the public, local, regional governments, ministries, chambers of commerce, trade unions etc. I have been informed that more than half of the citizens of Scandinavian countries have experienced a study circle at least once in their life.

The use of the Internet to assist these groups has already started in those countries¹⁰. To add value to the effort put into the work with Study Circles it would be necessary that the institutions of the education system accept the results officially and give them credit. In particular in education and training, where the half life of knowledge is decreasing, new fields of expertise are acquired easier outside the official institutions than inside. The borders of schools would be blurred by these new institutions, adding more flexibility to the education system.

9. Workers’ Health Assurance Groups

In the area of occupational health we identified an interesting approach in Italy. Most of the Italian Trade Unions started an initiative to improve the ill-health situation in the factories, in particular for manual workers¹¹. They applied two new ideas, the concept of the “Homogenous Group” and the “non delega” principle. The homogenous group meant people working on the same assembly line with more or less identical working environment, and also knowing each other on a face-to-face basis. They could form not only a interactively working community, but also a politically conscious group acting for the improvement of their working conditions. By applying the “non delega” principle the workers opposed the often used practice of having professional physicists as mediators between the workers and their environment. The Homogenous Group itself took care of adequate conditions in the working place, assisted by guidelines and also technical devices to measure the environmental situation. The work in Homogenous Groups was rather creative. They developed new concepts of measuring and describing illnesses, no longer by Latin names, but by the length of the time period necessary for recovery from the illness.

In the 1970s these concepts started to be implemented also by Swiss and Austrian Trade Unions, but they died out with the economic crisis of the mid seventies. Today there are even more opportunities by giving such groups support via the Internet, linking them to each other and also to professional resources on issues of occupational health.

10. Intrapreneurial Groups

The last example we identified of being of interest for assisting the welfare state was a concept which was developed more or less at the same time in the United States and in the former Soviet Union under Mikhail Gorbachov, but, of course, under completely different side conditions. While in the United States “Interpreneurial Groups” were seen as smaller production and accounting units, in some cases working at their own risk, but with less overhead, the “brigades” in the Soviet Union were seen as more or less self-determined subunits of state owned firms, bound to the enterprise by contract¹². We would propose an extension of these concepts. Within an enterprise, Intrapreneurial Groups could deliver products or services to their “own” enterprise or to other firms. The means of production could be leased or become their property also. The hierarchy levels could be reduced, the alienation from management or other decisions would be brought down to reasonable levels. The number of persons involved in decision processes would grow enormously. People would be put more and more in a position to deal with their own problems in a self-organised way. They would directly feel the results of their own activities, which might also increase the level of productivity of labour. Hiring people could be quickly done on a less bureaucratic level. The Intrapreneurial Groups could recruit their future colleagues directly out of their own neighbourhoods. They could identify their needs for support maybe in a faster and more targeted way than if they have to wait for the decisions of the top management. More flexible adaptation to new needs and to changes in the market could be the result.

Of course, new technologies will accompany such groups, as it is already the case in the traditional enterprise.

11. Concluding remarks

The four examples above show that it is not impossible to implement TINs. On the other hand I am not that naïve to assume the immediate implementation of the concepts proposed. It will depend on the level of income available (maybe in combination with a basic income or a negative income tax), and on the amount of leisure time left over after the necessities of work. It will also be the result of the psychological status of the majority of people. If contemporary society is able to give them the feeling that they live in the best of all possible worlds, and their environment is able to keep them happy and prosperous, no such concepts will become necessary. But with increased experience of crisis symptoms, of increased feelings of anxiety and stress, a discussion of alternatives could become more probable. TINs could play here a role, because another intended effect on the members of TINs is the more direct experience of the dark side of life, of the destructive tendencies of societal change. One could expect that they will react

more adequately to any deterioration within the framework of the own work. For that they will probably base their votes on their own experience more than on the images produced by mass media.

The traditional welfare state had the ability to channel society's resources to the individuals and households via large scale national or quasi-state institutions. It relieved the citizens from their burden to care directly and personally for their relatives or neighbours, and by that it was the adequate response to the challenges of the last century. But history brought up a new situation where features of alienation, emotional coldness and irresponsibility indicate the need to modify the design of the welfare state. By adding elements of socialization to the former nationalized institutions or finally replacing them by smaller institutions directly controlled by its citizens ("Vergesellschaftung statt Verstaatlichung"), a new direction of development could be opened up, which might make it easier to meet the traditional and new necessities at once. Any modern welfare state has to meet old and new requests at the same moment: traditionally it has to compensate for different risks and offer equal starting positions in life, it has also to strengthen equal treatment of the various groups of population, now mixed up by globalisation. Being a member of a particular gender group, of a particular social class, social strata or ethnic origin, religious belief, age or degree of impairment should not be any reason for discrimination or exclusion from society. And the emotional climate of society itself could be influenced towards more solidarity. My proposal - whatever modifications or amendments you would like to make - should contribute to the discussion on improvements in the quality of life, in particular for the minority and vulnerable groups of the European societies. In the long run these reforms will pay for themselves, if human beings can enjoy their life and develop themselves in freedom and peace.

Notes

1. Worldwide Crisis in the Welfare State: What next in the Context of Globalization? Address by Michel Camdessus, Managing Director of the International Monetary Fund, at a seminar organized by Observatoire Chrétien des Réalités Économiques, Paris, France, October 15, 1998; see <http://www.imf.org/external/np/speeches/1998/101598.htm>
2. lecture by Stephen Appold, see <http://courses.nus.edu.sg/course/socsja/SC2202/Institutions/Welfare1c.html>
3. see The IPTS Futures Project, <http://futures.jrc.es/reports/SocietalBillDEC99GF.pdf>
G. Fahrenkrog, L. Delgado: The Societal Bill: Financing Social Protection and a Sustainable Environment
4. Weber, M., *Wirtschaft und Gesellschaft*, J. B. Mohr, Tübingen 1972, 5. Auflage, Nachdruck 1990. p.561 and 129
5. *A Humane Economy: The Social Framework of the Free Market* by Wilhelm Röpke (1899-1966), translated and with an introduction by Marianne Cowan. Copyright © 1962 by Henry Regnery Company. All Rights Reserved. Reprinted by special permission of Regnery Publishing, Inc., Washington, D.C., see: [HtmlResAnchor http://www.house.gov/jec/classics/ropke.htm](http://www.house.gov/jec/classics/ropke.htm)

6. Rifkin, J., Work - A blueprint for social harmony in a world without jobs, in: Utne-Reader, May-June 1995: 53-63.
7. Fleissner, P. (1995). Max Webers Bürokratietheorie im Lichte elektronischer Kommunikationsmedien (Max Weber's Theory on Bureaucracy in the Light of the Media of Electronic Communication). In F. Huber-Wäschle, H. Schauer und P. Widmayer (Eds.) GISI 95 Herausforderungen eines globalen Informationsverbundes für die Informatik (pp. 127-135). Berlin etc.: Springer. See a German full text version:
http://igw.tuwien.ac.at/igw/menschen/fleissner/papers/max_weber/Max_Weber.html
8. source: <http://www.intel.com/intel/museum/25anniv/hof/moore.htm>
9. This was part of the response to a global request under the title: "Men's work – tomorrow" by FUTUROSCOPE, a kind of Disneyland for the Future, located in Poitiers, France, for new ideas for Europe. In an international competition the study we did was selected as one of the two winners of the award (see the full study at <http://members.chello.at/gre/fleissner/documents/work/work.pdf>).
10. see the working paper by Lars Karlsson, Study Circles, IPTS Seville, Spain 2000.
11. See e.g. Wintersberger, H.: "Arbeitsmedizin in Italien - und in der BRD?" in: Opitz, N. (Hrsg.): Unsere tägliche Gesundheit. Krankheit und Industriegesellschaft, Berlin 1981; Dörr, Gerlinde, and R. Klautke, Gesundheitsinteresse und Industriearbeit, Aspekte der italienischen Arbeitermedizin, Wissenschaftszentrum Berlin 1981; Wintersberger, H. (1988). Arbeitermedizin in Italien. Eine Kulturrevolution im Spannungsfeld von Arbeit und Gesundheit. Berlin: Sigma.
12. See Saslowskaja, T., Die Gorbachow-Strategie, Orac, Wien 1989, p. 117

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Po mnenju uredništva je članek uvrščen v kategorijo: vabljeno predavanje na znanstvenem srečanju (Letno srečanje slovenskih sociologov, "Sociološki vidiki novih tehnologij", Portorož, 25. do 27. oktober, 2001)