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Hen or Egg? The relationship between IC-technologies and social exclusion

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Abstract

If we take a look at developments on the labour market, we find that the rate of employment stands in a close relationship to the introduction of new technologies and their social and cultural consequences. The immediate effects of new technologies on new forms of work-structures are, in fact, difficult to determine empirically. In order to avoid a strong technological bias in the scientific perspective, it seems important to consider carefully the normative objectives and goals, which are connected with the introduction of IC-technologies. But nevertheless it is difficult to define clearly the causes and the effects of new technologies as well as the technical changes and its social consequences.

The intention of the article is to present the concept of social exclusion within the SOWING-project. Of course this concept is embedded in the scientific debate of the Information Society, which has a strong technological focus and represents the discussion of the Western, highly industrialized societies. But nevertheless the empirical findings of the SOWING project come to the general conclusion, that the rise of new forms of social exclusion cannot be considered as the result of the introduction of ICT, but as the result of the normative idea of a more effective and global organized economy. The social consequences of this development depend strongly on the establishment of a democratic procedure, which integrates the concerning social groups.

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1 Poverty, Social Exclusion and Unemployment

In the social-scientific and socio-political debate, there is no reliable and universally-accepted definition of poverty, because this subject lies within the common ground of diverging normative interests. Definitions of poverty combine, as a rule, traditional as well as modernized views of its causes, circumstances, and central problems. In principle, however, such definitions have to be generally acceptable – that is to say, compatible with the general public's ideas of solidarity – because they implicitly include a postulate for financial support of the needy (Bieback/Milz 1995).

In a very large number of Third World-nations, the definition of poverty strongly emphasizes the situation of extreme material need. The term in this sense includes, therefore, complete or almost total destitution, homelessness, a situation which doesn't even assure survival on the minimum level of physical subsistence, and often hunger, malnutrition, a high rate of infant mortality, and the complete lack of medical care and of educational opportunities.

In the western industrial nations, the term was broadened to include socio-cultural aspects, because crises of acute material need as described above are seldom relevant for these countries. The decisive factor for the operationalization of poverty is, of course, still the receipt of social welfare assistance, or of continuous aid to subsistence, or the poverty line. The meaningfulness of such primarily economically-defined bases of assessment is, however, quite limited, and is, on the whole, not very satisfactory. For this reason, newer attempts make use of situation analyses of the person's general circumstances, which put the cultural and social behavior patterning, the influences and effects of poverty-caused life worlds in the foreground. With this method, it is possible to describe situations which, due to

their lack of material and immaterial resources, result in relatively unstable circumstances. In modern social structures, poverty can be made comprehensible only by taking these circumstances into consideration.

Particularly in the Anglo-Saxon discussion of situation analysis, the term “social exclusion” has established itself, which – in a first approximation – can be defined as follows: “as the process through which individuals or groups are partially or wholly excluded from participation in their society. Such exclusion can result from limited access to employment, benefits or social services” (NISW¹ Briefing 1999).

As a rule, social exclusion takes place on two levels:

- a) on the material level, by the exclusion from social resources, such as gainful employment, welfare benefits, educational opportunities – in other words, from the entire palette of resources, which found and secure the chances for personal development for the present and for following generations;
- b) on the immaterial level, material exclusion often leads to social exclusion, which, in consequence, can result in physical and mental illness².

Methodological and empirical controversies notwithstanding, there is a broad consensus on the thesis that unemployment, especially when it persists for a longer period or is repeatedly experienced, is one of the most important causes of pauperization and, in consequence, of social exclusion.

If one takes a closer look at the connection between social exclusion, unemployment, and poverty, three points become obvious:

- a) Unemployment quite often results in social exclusion, but a job is not necessarily a guarantee for social integration. Only work which is paid at an acceptable rate makes the development of long-term perspectives possible.

1 NISW stands for „National Institute for Social Work“, which focuses its interest on the evolution of labor. The Institute is situated in London.

2 In scientific literature, some authors also differentiate according to „objective“ and „subjective“ problems. Objective problems would concern things like income, living space, education, social relationships, and health, whereas subjective problems have to do with loneliness, happiness, anxiety, etc. (Habich 1996).

- b) Providing equal opportunity is not to be equated with levelling the wage and salary differentials. One of the most effective methods of fighting poverty is to insure that everyone has equal access to social resources.
- c) Social exclusion is not limited to the labor market, but affects all aspects of daily life (Royal Economic Society 1999:1).

The massive rise in unemployment in Europe in the past two decades has, in fact, not led to manifestations of extreme poverty, but with the continuing crisis on the job market, a “class of hard-core unemployed” (Altvater/Mahnkopf 1997) has arisen, in which young people, women, and unskilled or poorly qualified workers are increasingly concentrated. Until now, the more or less well-developed welfare systems in the European nations were able to act as a margin of safety, which protected a great number of the persons affected from endangerment of their naked existence³. But nonetheless, unemployment contributes in great measure to the process of social exclusion. Independent of the financial means it provides, gainful employment is the basis for personal dignity and participation in western society, as well as for further personal future prospects. Especially for young people unable to find entry into the job market, this means a high degree of social disintegration and hopelessness.

If we take a look at developments on the labor market, we find that the rate of employment stands in a close relationship to the introduction of new technologies and their social and cultural consequences. The immediate effects of new technologies on new forms of work-structures are, in fact, difficult to determine empirically. In order to avoid a strong technological bias in the scientific perspective, it seems important to consider carefully the normative objectives and goals, which are connected with the introduction of IC-technologies. But nevertheless it is difficult to define clearly the causes and the effects of new technologies as well as the technical changes and its social consequences. The theoretical framework of the SOWING-project also has to deal with this problem and it always depends on

3 Great Britain is an exception in this respect. Under the Thatcher administration, the number of households with low income doubled, and an extreme intensification of social exclusion took place (cf. Media Briefings 1999). A study just published by the London School of Economics, moreover, points out a clear relationship between unemployment or low income and poverty, which afflicts a great number of families and young people in Great Britain. State strategies of reducing social expenditures in order to force the former recipients onto the job market have worsened the problem dramatically in the past years (El Pais 21.07.1999:1).

the methodological level whether it prefers more the technological development or the social consequences.

The intention of the article is to present the concept of social exclusion within the SOWING-project. Of course this concept is embedded in the scientific debate of the Information Society, which has a strong technological focus and represents the discussion of the Western, highly industrialized societies. But nevertheless the empirical findings of the SOWING project come to the general conclusion, that the rise of new forms of social exclusion cannot be considered as the result of the introduction of ICT, but as the result of the normative idea of a more effective and global organized economy. The social consequences of this development depend strongly on the establishment of a democratic procedure, which integrates the concerning social groups.

2 The Development of Information and Communication Technologies and Social Exclusion

Due to the development of global markets and to increasing economic connectivity, international competition has intensified. The harder economic competition becomes, the shorter the “half-life” for technological innovations. The attempt to introduce new technologies as rapidly as possible results in increased costs and growing risks in research and development (Altvater/Mahnkopf 1997: 351). The result of this situation was that – under the pressure of high costs and risks – new in-company strategies were sought, in order to minimize the financial risks on the one hand, and to bring the technological innovations onto the market as quickly as possible on the other. In addition to the urgency of commercializing innovations as soon as possible, the increasing integration of industrial engineering and process technology compels the companies to master both of these quite different but complementary technologies. These developments have, on the whole, led to the fact that two different types of strategy have been generally adopted: the production-technical and the organization-structural strategies (Altvater/Mahnkopf 1997: 352).

As part of the *production-technical* strategy, a new wave of automation was implemented at the beginning of the Nineties, especially in manufacturing, and restructured the entire field of production with the aim of reducing manpower by

increasing productivity⁴. In the future, an intensification of these trends is more probable than their amelioration, because technical innovations are being planned which would permit the organization of a globally standardized type of products and production processes, so that various market segments could be produced anywhere (Rifkin 1998)⁵.

The *organization-structural* changes reach from a system of outsourcing (services and goods) and new forms of work organization (levelling hierarchies, Total Quality System) to flexible structures of organization (decentralized organization, i. e., units which cooperate only for the duration of certain projects, consistent self-organization with the purpose of permanent optimization and change) (Aulenbacher/Goldmann 1993). This strategy is remarkable inasmuch as the sets of institutional rules between employees, employers, and the state no longer apply, because new labor-structures develop as a result of socio-technical change.

The intention behind these innovations is not new. The purpose is the general acceleration of the manufacturing-process. From this increase in speed the entrepreneurs hope to gain advantages in competitiveness on the market. What is new is the fact that labor can be distributed worldwide. “The locations where goods and services are produced are easily interchangeable and are therefore only provisional” (Altwater/Mahnkopf 1997: 356). Simultaneously, the principle of acceleration in time has led increasingly to international mergers. In this manner, – with strategically-chosen allies – key technologies can flow into new generations of products and competitive advantages be increased.

A central prerequisite for the globalization of markets are the new information and communication technologies, as *the* presupposition for new business strategies. In this process, new forms of management develop, that is to say, “networks” develop between decentralized company segments, which coordinate their mutual relationships electronically. By means of these technical methods of connectivity,

4 This strategy is by no means new; it can be traced throughout the entire process of industrialization. In the automobile industry, this production-strategy has, in the past years, again led to mass dismissals. For example, in Germany alone in 1992 more than half a million jobs in production were abolished (Rifkin 1998: 21).

5 For example, at present two Japanese companies (Hitachi and Toshiba) are already working together with an American university (Berkeley) and with the Fraunhofer Institute for Production Engineering and Automation in Stuttgart on an „intelligent“ production-system for the factory of the 21st century. The aim is the development of a programmable manufacturing system for the production of hundreds of product-variants in one and the same product line (Altwater/Mahnkopf 1997: 352).

it becomes possible even for small businesses to divest themselves of functional areas, or to buy products and services on the international markets (Altvater/Mahnkopf 1997: 358ff.)⁶.

With the help of modern information and communication technologies, processes of acceleration and globalization can be set in motion, which already exert strong influence on the organization of work, and on the change of occupational structures.

The interface between information and communication technologies and the job market lies in the segments of the various companies. This means that efficient savings are no longer made at the cost of the individual operations of labor and manufacturing, but in the entire chain of production – from the development of products via manufacture to their commercialization. “Intercompany, group-wide and intergroup information and communication systems make possible the comprehensive analysis of all sub-processes, and their reorganization to a complete system (...). Above all, research and development which is oriented as closely as possible on market demands and on the necessities of manufacturing, process-oriented quality assurance, and a differentiated, elaborate system of logistics are developing into the decisive means of controlling the entire process” (Altvater/Mahnkopf 1997: 361)⁷.

According to the literature these developments have led to the following tendencies on the national labor markets:

In manufacturing, or rather, in the entire production sector, phases of intensive rationalization have taken place, and have led to mass dismissals. One assumes that this trend, on the whole, will continue. Primarily the older and the less well-qualified male and female employees are “phased out”; these people are excluded from the system of economic circulation, and have as good as no chance whatsoever of finding a new job. The number of workers employed in the secondary sector has decreased constantly and regularly in the past few decades, and

6 In the case of large multinational concerns, this is already to a great degree the normal case, where – for example, in the automobile industry – the parent company is responsible only for assembly and distribution.

7 The characteristic features of „virtual“ organizations won’t be discussed here in greater detail. What seems to be decisive, however, is that the comprehensibility of the organization and simultaneously the degree of integration diminish, or rather, also dissipate into a „virtual reality“. This applies in particular for room and real net output, but also for customers and suppliers.

now amounts to less than 20% of the gainfully employed (Bosch 1998, Altwater/Mahnkopf 1997, Rifkin 1998).

Services, on the other hand, were long thought to be the expanding sector, where job-losses could be compensated and new demand for manpower, particularly for young people and for qualified workers, would arise. But particularly in this sector the organization-structural changes mentioned above took place in the Nineties, so that – for example – the model of a lifelong full-time job, in reality, no longer can be seen as typical for a great number of the gainfully employed. In “lean management” concepts, with the aim of “slimming down” companies and businesses, “participative” and “participations-oriented” aspects are emphasized in job-specifications, but at the same time, high demands are set on the qualifications for these positions.

By means of computer-assisted systems of information-gathering, and by setting standards, modernly-equipped enterprises are able to collect and evaluate data in various networks on date of order bookings, volume of trade, customized delivery, processing time, quality assurance, (labor) cost(s) structure, and so on. The purpose of this data-processing is permanent self-monitoring and control of the economic situation (Hirsch-Kreinsen 1995).

These technical support systems make a “thinning out” of middle and lower management possible, and, with it, the dismissal of qualified employees. The abolition of formerly linear careers in business goes hand in hand with a complex transformation of role-demands, which, in turn is coupled with job-pruning, and therefore also with intensification of in-company and external competition for jobs. This situation has been predicted for the coming years, in particular for the fields of banking and for the insurance business, where potential for rationalization hasn’t yet been exhausted (Rifkin 1998). Excellent qualifications, temporal flexibility and mobility, communicative skills and social competence as indispensable prerequisites for long-term employment are tailor-made for young people with “no children, loose social relationships, stress-tolerant to the limit of their physical ability, and temporally extremely flexible” (Deutschmann et al. 1995: 489). Especially older people and those bound in firm social relationships which entail responsibilities, who are no longer able to meet the new requirements, are “de-hired”. The requirement profile of modern labor structures makes clear where the interface to the job market lies, or rather, where the least opportunities for taking part in society’s work are to be found. Elder men and women, as well as unskilled and poorly qualified workers have very slim chances of finding work.

After more than two years of unemployment, integration into the labor market is practically impossible for such candidates. But even skilled and highly qualified persons who would have to make familial compromises have great difficulties to keep themselves long-term or lifelong on the job market⁸.

For these reasons, various forms of free entrepreneurship, free-lancing, or other free and informal forms of work are preferred, in order to be able to combine the minimization of personal needs with professional ambitions.

Do these tendencies reflect the empirical findings of the SOWING project? What relationship between the introduction of the IC-technologies and social exclusion have been found?

3 The concept of “social exclusion” within the SOWING project

The SOWING project investigates the question of to what extent the introduction of modern IC technologies leads to new forms of “social exclusion”. The theoretical construction of the logic of argumentation builds up on a very broad base. It leads from the analysis of the introduction of ICT in various branches and sectors via the observation of organisational restructuring inside and outside the firms to the formulation of possible risks for specific groups of employees. The term “social exclusion” in the framework of this project does not coincide entirely with the definition which refers to exclusion from all (social and cultural) reference points to life in modern societies⁹, but here concentrates concretely on exclusion from working relationships.

This corresponds with the argumentation logic of the project, which thus also reflects the current situation of the labour market in Europe, in which increasing numbers of people are being excluded from the labour market, which subsequently very often leads to social and cultural exclusion. The extent to which the introduction of new technologies plays a role in these processes is the central topic of the project, that is to say that there is a search for a possible link between technological development and its impacts on exclusion and integration into the work domains of the firms. The results confirm the thesis that the introduction of new

8 I would prefer to omit the specific situation of women on the labor market in the present article. It will be treated separately elsewhere.

9 Mainly within the debate on poverty the term refers to a combination of living conditions which can lead to forms of social exclusion, such as lack of education, sickness, loss of dwellings, debt and long-term unemployment.

technologies does not lead to changes of job profiles and/or job losses as much as the processes of organisational restructuring inside and outside the firms.

This does not mean, that the restructuring strategies of companies will lead to an absolute decline in the number of jobs, on the contrary, projections of the future demand for managerial and professional workers suggest an significant increase. But we can identify an increase in the sense of 'risk' among employees in these occupations. With the demise of the bureaucratic business structure these groups of workers have to accept *flexible* career patterns (Brown 1995:36, Wieland/Scherrer 2000). Flexible career pattern affects the whole range of work: the work profile, the external and internal organisation of work and last but no least the institutional concept of work, every country has been developed.

In the literature there are mentioned several types of flexibility like i.e. 'functional flexibility' (Beatson 1995) or 'external flexibility' (Hart 1987). External flexibility responds to the internal flexibility, that means, that changing requirements of the market have a direct impact of the workforce. The central hypothesis according to the introduction of flexible career pattern is, that the future employment market is described as being highly segmented, which includes several forms of working conditions. They involve temporary working, part-time working, homeworking, or casual labour as well as subcontractors or self-employed workers. It is likely that the status of employment will change often, people may be employed on the basis of a short-term conventional labour contract, they may work as independent entrepreneurs on a contract or they may become unemployed for some time.

The central point is, that the work situation will become much more *insecure* (Fricke 2000, Huws 1998). The risk includes temporary, part-time or other flexible working forms outside the remit of social protection regulations, precarious, poorly paid and socially marginalised. In sum through the new forms of organisational changes conventional career perspectives and employment security does not matter any longer. There are arising new risk groups arising, such as middle management, foremen or some specialist groups, which were for a long time seen as core workers, sheltered by 'internal labour market'¹⁰. In this process the ICT plays a crucial enabling role in organising these flexible working pattern, but they do not determine this structure. Generally we may speak about 'risk factors', which

¹⁰ This data does not include risks of poverty which are common for modern societies and which can lead to specific forms of social exclusion like i. e. the numbers of children, divorce, case of illness (see Herkommer 1999).

for some social groups may create a certain degree of vulnerability of their job security. But the introduction and the increased use of ICTs rarely result into social exclusion risks.

Within the project the following questions become important: What are the preconditions for the successful integration into the labour market or on the other hand what are the risks for social exclusion for some social groups in future labour conditions? Are there specific forms of social exclusion?

These questions were examined more closely for the empirical results in the project.

4 Risk factors for Social Exclusion

We may assume that the organisational changes inside firms, the changing market conditions and the increasing competitive pressure on the markets have led to a steady change in job profiles and professional expectations with regard to employees. This observation applies to the German results as well as to the other countries¹¹, although some differentiation by branches and sectors would be necessary, since it is possible that there will be great differences with respect to the changes. This differentiation was not possible within the present research work.

Indicators for a value change in the framework of professional work refer to the aspects *skills, temporal and spatial flexibility*, which can have impact on age and gender and on *reflexively* designed forms of work structures.

According to the *skills* the empirical findings show a trend to higher demands on the employees. For example, in some companies which used to employ even unskilled laborers, there are at present practically no more openings for unqualified personnel or the number of such openings has at least been drastically reduced. The reason for this situation lies in the automation of many routine chores, which has been made possible by ICT.

The increasing importance of formal qualifications is, however, only one aspect of the changes; other demands on the various skills of the employees have also risen. For example, in the companies in the sample creativity has become more important for the employees. Other very often demanded skills are, for instance, organizational ability or multi-skilling. Also IT-competence has gained

¹¹ The following results mainly belong to the German findings, although the national reports of the partner countries have shown similar results, which have been discussed as the 'globalization of work'.

in importance. This trend comprises, on the one hand, intensification of the application of IT in companies which have long since worked with this technology, and on the other hand, its introduction into firms which hadn't used it before. The level of IT-skills required is in these cases, of course, quite different.

Except for the increased demands on formal qualification and on various skills, emphasis on continuous further training of employees is also ascertainable in the sample.

The *Spatial and Temporal Flexibility* is a crucial indicator for the changing nature of work within the frame. Flexibility is required above all for accommodation to customers' demands and orders position. This means that working hours are determined primarily by the requirements of production or of the service department. Concepts of temporal or spatial flexibility – for instance in the form of teleworking – differs from country to country. The social acceptance, the legal organisation of these concepts as well as the spreading of these models depend strongly on the political and social traditions of the countries within the sample.

The central point is that the concepts of temporal and spatial flexibility are more and more in conformity with the corporation's increased needs. Whenever quick reactions to customers' wishes and orders become possible via ICT, this speed will develop into a standard which the company has to meet, and which the employees have to realize. In the sample, there are indications that such high demands on the workers' flexibility most probably meet with resistance in the manufacturing area, while such demands are accepted as understood by the employees in the expanding area of customer service.

Flexibility of the work organisation – especially in the service area – refers to new forms of work, such as work organised in the form of projects, i.e. work lies within the area of responsibility of the employees and must be structured independently by these with respect to time, space and content. For the temporal dimension this means that deadlines have to be kept, implying the need to work in evening and at weekends, which often proves difficult for people with family commitments. The same applies to spatial flexibility, which does not only mean working independently of one's place of work, but also willingness to travel or on projects at different locations. Flexibility with respect to content means willingness for above average commitment, willingness for lifelong learning, i.e. to continuously upgrade skills and learn new things, to remain open to change and to introduce this into work in a constructive manner.

In contrast to the production area, the results indicate great acceptance of these changes on the side of the employees. In many cases the contracts regulating working conditions and the career pattern are already linked with conditions as prerequisites for job appointments. In addition, instruments for controlling and evaluation are increasingly being introduced with the aim of having motivating effect on the employees.

For young people these manners of work amount to challenging perspectives for their own biography and career planning. These forms of work meet with approval in areas of skilled work in particular, since work is complex and multifaceted and, if conditions are fulfilled, can lead to rapid and stimulating career patterns. Here it was not possible to recognise any gender-specific differences. On the contrary, young women usually feel challenged by these circumstances and do not feel discriminated. On the side of the firms it was also not possible to establish any gender-specific distinctions with respect to employment policies. Women were frequently preferred in some branches due to the “social competence”. This observation applies less to traditional firms and leading positions than to small, modern and compact firms.

These conditions can have restrictive impact on the career patterns of employees with family commitments. It was possible to observe a degree of resistance against these forms of work, mainly in firms bound by tariffs, since here there was an institution defending traditional and formalised forms of work, and the transition to new forms was at least made an issue and discussed.

The *reflexivity* of work refers to the link between gainful employment and the perspective of leading daily life and identity. The flexible requirements of the labour market are increasingly linked and united with concrete actions of daily life. Here, we are concerned with the question of how people integrate the partly highly contradictory challenges from various sectors into their lives. With respect to leading daily life, interest is in how these activities are regulated and structured with respect to their temporal, factual, spatial, social and meaning dimensions. Here, we are not concerned with a collection of everyday activities, but with their skilful coordination, organisation and integration in daily life. One’s job, household work, family work, leisure activities, self-determined work, further education and social life are developed and shaped as an integrative concept of leading life (Behringer 1998).

“Reflexive” structures are also increasingly determining the profile of gainful employment. Here too the active arrangement of the factual, temporal, social and

emotional dimensions is being increasingly adopted in areas of work. This calls for an altered skill profile and above all the reflexive ability to create individual life styles in the area between gainful employment and daily life.

The reflexivity of work is linked closely with the subject of flexibility, but also points well beyond this into the area of individual shaping of work. This subject has seldom been treated and validated scientifically, but the results of the case studies do show that the subject is gaining importance, in particular in those firms where the organisational change has made progress.

Here too the results indicate a break between the generations or the willingness of the younger generation to commit themselves to a close tie between work and life styles. It is mainly women who are attracted by this model since it provides the opportunity to break down the barrier traditionally institutionalised in Germany between gainful employment and the private sphere.

5 Consequences for Social Exclusion

In summary, the results of the SOWING project indicate that it is not possible to establish a linear connection between ICT and processes of social exclusion. Changes in the profile and conditions of work are taking place within the framework of organisational changes, which can naturally only take place in many respects due to the potentials of ICT.

As for the other regions covered by the project, it is true for Germany that new forms of the organisation of work are emerging which exist in parallel with traditional work structures and influence these according to branch or sector. Whether these changes are perceived by the employees as a threat or as an opportunity depends on the possibility of participation in these processes.

On the basis of the preceding sections, the conclusion can be drawn that older as well as unskilled employees are particularly endangered by the changes in business enterprises. The automation of many routine chores made possible by ICT reduces the demand for less well-qualified workers. At the same time, rapid technological change requires continuous re-training of the employees. This puts especially older employees under pressure, because they are, at the very least, held to be slow learners.

In all of the companies in the sample in which reorganization of the employment structure became necessary, management relied on long-term change, which obviated dismissals. The focus of restructuring was set on taking on new labor:

only young people, on principle, were hired in all areas, and only in two companies there are still not inconsiderable employment opportunities for unskilled workers. On the basis of the sample, therefore, we can draw the conclusion that the employees which had been affected by the changes in the business enterprises were and are relatively well protected from social exclusion, whereby on the one hand, the company's image, and on the other hand, the existence of institutional frameworks, which make early retirement and part-time work for older employees possible may have played an important role. In the meantime, this restructuring is – in the companies studied – already relatively far advanced, so that primarily recruitment policy is decisive. This last seems to exclude older and unskilled job seekers for the most part from the labor market.

It is interesting for the German Case that none of the companies sees a functional co-operation with the job placement division of the Labor Office. Either they have made the experience that the personnel they are looking for isn't available there, or that organizational problems arise, so that openings are published either too late, or with incorrect or incomplete information. In corporations, there are job-creating measures (Arbeitsbeschaffungsmaßnahmen: ABM) financed by the Labor Office. But these are for the participants hardly a step towards re-integration into the "first" (i. e., official) labor market: the ABM-employees are principally not hired by the corporation, and the vacancies are always filled with new applicants.

As far as the employment of women is concerned, the transformation brought about by ICT in the corporations studied has brought about almost no improvement. Only a few cases indicate that women in general can profit from the increasing importance of the services sector. There we may assume a big coincidence with the tendencies described in the literature. The extreme demands on temporal flexibility, on the other hand, make it, at the same time, more difficult to reconcile an occupation with a family, even in these companies, so that the postulated family-orientation isn't necessarily realized in daily working life.¹² The temporal flexibility required is, in other companies in the sample as well, a hindrance for women – at least, if they have children. On the whole, therefore, new employment perspectives for women are hardly to be discovered in the sample.

12 Regarding the difficulties for women employment Germany plays a poor role within the European countries. For historical, economic, cultural and political reasons there is still a gap between the possibility to work full time and family life (Lenz, Nickel, Riegraf 2000).

Concerning the older and unskilled job seekers, they are confronted with great difficulties in trying to set foot onto the “first” or official labor market. They are almost never hired, because in many companies continual change of the technical equipment and, concomitantly, of the job profiles for the employees are to be expected in the future as well. Only the highly qualified and very educable applicants are, under these circumstances, held to be acceptable. Consequently, older and unskilled job seekers run the risk of being completely and finally excluded from the official labor market. State institutions, such as the Labor Offices, are apparently hardly able to set anything against this development. Their cooperation with business enterprises is revealed in the sample as relatively unsuccessful, and the “second”, or unofficial, labor market is only in the rarest cases a bridge back into gainful employment.

The results of the study indicate job-related risks at two levels. On the one hand it was possible within the project to identify social groups which will emerge in the long run as the losers in the processes described. Criteria for exclusion manifest themselves in the aspects skills, age and gender. As a consequence of the modernisation process these criteria are by no means novel but link with a development, by which these groups are traditionally viewed as “vulnerable” on the labour market.

On the other hand, the results also indicate new models of individualisation and openness of careers, which have special impact on the individualisation of career uncertainty. Limited-term work contracts, the flexibilisation of careers, performance-oriented job profiles and careers as new organisational concepts of work indicate that the model of institutionalised professions is undergoing strong change. These changes will in the long run lead to social and cultural changes, both at work and in private life. For this reason, career planning is increasingly linked with biographical planning.

The form and extent to which these models of work have already asserted, or will in future assert, themselves in the various countries differs greatly from the socio-political conditions prevailing in these countries. The assessment of this development must for this reason take place individually, i.e. against the background of the existing working law framework.

In Germany it is currently the case that with the hollowing out of the benefits of the welfare state and of social matters, traditional political space, not only for social security, but also for education and training, is being undermined (Sauer 1999). The extent and form in which work in its extend form will once again be

integrated in a democratic, i.e. participatory, process will be decided by the future debate on work and its consequences.

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