

Foresight Studies on Work in the Knowledge Society: A 2nd International Conference at UNL

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The 2nd International Conference on "Foresight Studies on Work in the Knowledge Society" was organised by IET, the Research Centre on Enterprise and Work Innovation, at the Faculty of Sciences and Technology of "Universidade Nova de Lisboa" (FCT-UNL), and took place on January 26 and 27 of 2009 with the support of the European project WORKS-Work Organisation Re-structuring in the Knowledge Society (financed by the European Commission, and co-ordinated by HIVA Leuven) ²².

The main objective is to analyse and discuss research findings and methods on the trends of work structures in the information and knowledge society, and to debate concepts on new work organisation models and forms supported by ICT.

Key-note speakers were Monique Ramioul from HIVA (Univ. Leuven, Belgium) and presented the paper on "Global Value Chain Restructuring and changes in work in the EU: Facts and Perspectives", and also António Dornelas from CIES (ISCTE, Lisbon) which paper was about "Alternative targets: Scenarios for the current crisis".

Monique Ramioul mentioned that is generally agreed that major changes in work are taking place in the organisation of work as corporate structures are transformed in the context of economic globalisation and rapid technological change. But these changes must be understood, as well the impacts on social institutions and on workers and their families. The WORKS project brought together 17 research institutes in 13 European countries to investigate these important issues through a comprehensive four year research programme.

António Dornelas stressed in his presentation the challenges before the crisis, like the effects of the present model of globalization, the effects of the European construction model, the crisis of the labour and social regulation models and the deregulation, flexibility at the margin and the flexicurity debate. The starting crisis (2008-09) was analysed in the following of the presentation. And finally, António Dornelas made an approach to the alternative targets: scenarios for the current crisis:

- a) Unlikely "business as usual"
- b) The "Multiple Icelands nightmare"

²² A first conference was held in 2006 (cf. Moniz & Woll, 2006, <http://ideas.repec.org/a/ieujournal/v2y2006i2p153-154.html>), and this 2nd one was prepared to take place by the end of 2008.

c) The "promised land"

The next papers were covering the topics of futures of employment in the knowledge society.

Tobias Woll presentation was about a "Synopsis of global scenarios and forecasting surveys: drivers of change". Main objective of this presentation was to provide a synopsis of global scenario and forecasting surveys. First, he gave an overview on existing global scenario and forecasting surveys and their specific scenario philosophies and storylines. Second, mentioned the major driving forces that shape and characterise the different scenarios will be identified. The scenario analysis has been provided for the research project Risk Habitat Megacity (HRM) that aims at developing strategies for sustainable development in megacities and urban agglomerations. The analysis of international scenario surveys is an essential component within RHM. The scenario analysis is the basis and source for the development of own RHM-framework scenarios and for defining specific driving forces of change.

António B. Moniz presented a paper on the assessment of scenarios related to work. In it were discussed different types of scenarios and the aims for using scenarios. Normally they are being used by organisations due to the need to anticipate processes, to support policy-making and to understand the complexities of relations. Such organisations can be private companies, R&D organisations and networks of organisations, or even by some public administration institutions. Some cases will be discussed as the methods for ongoing scenario-building process (Shell International). Scenarios should anticipate possible relations among social actors as in the Triple Helix Model, and is possible to develop strategic intelligence in the innovation process that would enable the construction of scenarios. Such processes can be assessed. The focus was be made in relation to the steps chosen for the WORKS scenarios. In this case a question was made if there a model of work changes that can be used for foresight. Differences according to sectors were found, as well on other dimensions. Problems of assessment are analysed with specific application to the scenario construction methods.

The theme "Futures of work and skills: some foresight exercises in Europe and USA" was presented by Margarida R. Paulos. For this researcher the knowledge-based society brought a new way of living and working. The increasing decline of work in primary sector and traditional industries, related with the significant increase of employment in the service sector and in the knowledge work, changed the way companies and individuals establish their relations, the way work and life is organised. These changes are usual and fast and so the feeling of insecurity and unpredictability become more and more sharp. In this context, foresight exercises are necessary tools helping in the identification of the key variables and main trends of evolution. This report presents some foresight studies about work and skills in Europe and USA, in order to contribute to think about possible evolutions and trends.

Bettina Krings (ITAS-FZK) developed her presentation around the topic of "Technology Assessment as a tool of reflection in knowledge-based societies". From her perspective technology has become a constitutive part of modern societies. Therefore, nowadays nobody will deny the relevance of technological developments for the ongoing process of modernity in Western cultures. However, as the experience of the past decades shows, technological

developments have always met resistance if they were perceived as threatening in many senses, i.e. as the cause for social, ecological and economic damages. Historically, the call for technology assessment (TA) emerged at a time when certain technological developments encountered massive social resistance (Bechmann et al. 2007). In many countries TA was established institutionally to initiate a knowledge-based form of political advice as well as to analyse and to evaluate actual and potential societal impacts of technological innovations. Based on these assessments the results should contribute to political decision-making processes in view of selected criteria of rationality. The experience has shown that these assessments had no direct impact on political decision-making processes, but they led to an increase in scientific reflection as well as an intensification of societal debates within political and scientific communities. Nowadays the degree of technisation seems to be embedded into the societal development in such a way that it is not sufficient if the perspectives of TA only focus on selected technology developments. In addition, the ongoing dynamics of technological innovations and their implementation into the markets should be re-considered as constitutive part of modern societies with all the unintended side-effects these technologies have. Although many analyses in the last years have shown that the identification of these side-effects has been taken into account, on the whole this approach led to an inadequate reflection of technological impacts in recent societal developments (Krings 2006). Therefore the author advocates a TA based on a theory of modernisation, which assesses today's fields of technology comprehensively and in all their complexity, but at the same asserts its claim to put these fields of technology into a (critical) overall context.

With a presentation about "A High Level E-Maintenance Architecture to Support on-site Teams" Luis Ribeiro, José Barata and Nelson Silvério (FCT-UNL) talked about emergent architectures and paradigms targeting reconfigurable manufacturing systems increasingly rely on intelligent modules to maximize the robustness and responsiveness of modern installations. Although intelligent behaviour significantly minimizes the occurrence of faults and breakdowns it does not exclude them nor can prevent equipment's normal wear. Adequate maintenance is fundamental to extend equipments' life cycle. It is of major importance the ability of each intelligent device to take an active role in maintenance support. Further this paradigm shift towards "embedded intelligence", supported by cross platform technologies, induces relevant organizational and functional changes on local maintenance teams. On the one hand, the possibility of outsourcing maintenance activities, with the warranty of a timely response, through the use of pervasive networking technologies and, on the other hand, the optimization of local maintenance staff are some examples of how IT is changing the scenario in maintenance. The concept of e-maintenance is, in this context, emerging as a new discipline with defined socio-economic challenges. This paper proposes a high level maintenance architecture supporting maintenance teams' management and offering contextualized operational support. All the functionalities hosted by the architecture are offered to the remaining system as network services. Any intelligent module, implementing the services' interface, can report diagnostic, prognostic and maintenance recommendations that enable the core of the platform to decide on the best course of action. Next to this presentation was announced Helder Rosendo from CITEVE (Technological Centre for Textiles and

Clothing Industries) but he could not attend. His paper would be about "Scenarios for the Clothing and Textile Sectors".

Linda Nierling (ITAS-FZK) had a presentation about "Global trends in gender relations - case study evidence from different occupations" where she referred that global restructuring processes have not only strong implications for European working and living realities, but also have specific outcomes with regard to gender relations. She analysed in which way global restructuring shapes current gender relations in order to identify important trends and developments for future gender (in)equalities at the workplace. On the basis of a large qualitative study on global restructuring and impacts on different occupational groups it argues that occupational belonging in line with skill and qualification levels are crucial factors to assess the further development of gender relations at work. Whereas global restructuring in knowledge-based occupations may provide new opportunities for female employees, current restructuring is going to deteriorate female labour participation in service occupations. In contrast, manufacturing occupations can be characterised by persistent gender relations, which do not change in spite of major restructuring processes at the work place. Taking the institutional perspective into account, it seems to be crucial to integrate the occupational perspective in order to apply adequate policy regulations to prevent the reinforcement of gender related working patterns in the near future. Finally, Duco Banninck made a brief presentation on the "The future of work in the knowledge society: policy implications".

The debate was very intensive and fruitful, and was a decisive final input to the scenario construction process in the WORKS European project. The videos with the presentations and debates were produced by the eLearning Lab of FCT-Universidade Nova de Lisboa (Campus de Caparica), and are available at <http://moodle.fct.unl.pt/mod/data/view.php?id=100770> .

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