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Designing Democracy: The UTOPIA-project and the Role of Labour Movement in Technological Change, 1981—1986 [1]

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Designing Democracy: The UTOPIA-project and the Role of Labour Movement in Technological Change, 1981—1986

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Abstract

The paper describes and analyses a Scandinavian research project on trade union based development of, and training in, computer technology and work organization, especially text and image processing in the graphic industries, that was named UTOPIA and carried out between 1981 and 1986. UTOPIA gave rise to the so called Scandinavian School of System Development (*Den skandinaviska skolan*) where the users participation in system development have become a key element. The role of labour movement in technological change is highlighted and it is underlined that there are different incentives for technological change. Corporations developing technology usually pursued increased efficiency in production, while the labour movement and UTOPIA aimed at other goals such as translating social values regarding job skills, quality of work, and quality of products into new computer hardware and software for the graphic industries. It is argued that the UTOPIA-project may be seen as an attempt to establish an innovation system in computer system development where these kind of different values were pursued. The innovation system consisted of industry, research institutes, trade unions, and universities, and was characterized by strong labour interests.

Key words: History, history of computers, history of technology, industrial democracy, innovation systems, management, technological change, trade unions.

JEL Codes: J50, N00, N73, O14, O30.

1. Introduction

My study deals with a Scandinavian research project on trade union based development of, and training in, computer technology and work organization, especially text and image processing in the graphic industries, that was carried out between 1981 and 1986. The project was called UTOPIA. I aim to shed light on the role of labour movement in technological change and underline that there are different incentives for technological change. Corporations developing technology usually pursued increased efficiency in production, while the labour movement and UTOPIA aimed at other goals such as translating social values regarding job skills, quality of work, and quality of products into new computer hardware and software for the graphic industries. My argument in this paper is that the UTOPIA-project may be seen as an attempt to establish an innovation system in computer system development where these kind of different values were pursued. The innovation system consisted of industry, research institutes, trade unions, and universities, and was characterized by strong labour interests.

Seen in a broader perspective, my study also addresses and explores a number of largely intertwined complex of problems. Firstly, we have the altering notions of technological change during the post-war period (I will focus here on the labour movement and the political sphere). Secondly, there is the question and old dream of industrial democracy. Thirdly, we have the so-called "microelectronics revolution" during the 1970s that gained increased public attention during the 1980s. Fourthly, there is the Nordic/Scandinavian context and a belief in specific Nordic/Scandinavian values such as consensus, participation and democracy which need to be considered. Fifthly, one has to consider the distinctive character of the Graphic Workers Union as an unusually intellectual, radical, and technology-minded trade union. Sixthly, as an important factor we have the radicalization of the universities starting in the end of the 1960s. The crossroad where all these issues meet is UTOPIA.

In this paper I will specifically deal with the two first-mentioned complex of problems, but before that I aim to give a picture of what UTOPIA was.

2. What was UTOPIA?

UTOPIA was an acronym in Swedish for training, technology, and products from a skilled worker's perspective, "Utbildning, Teknik Och Produkt I Arbetskvalitetsperspektiv". The background and major incentive was that the "microelectronics revolution" during the mid-seventies had transformed the job made by graphic workers. Many of them lost their jobs, and especially in the United States and Great Britain the very existence of the occupation was threatened by extinction. Furthermore, it was argued that the rapid technological change reshaped the traditional balance of power between corporations and unions.

The project was carried out at the Swedish Centre for Working Life (*Arbetslivscentrum; ALC*) in Stockholm, the Royal Institute of Technology (*Kungl. Tekniska Högskolan; KTH*) in Stockholm, and Aarhus University in Aarhus. The major financial source was the Swedish Centre for Working Life. Other financial resources was the Swedish Board for Technological Development (*Styrelsen för teknisk utveckling; STU*), the Royal Institute of Technology, Aarhus University,

and the Nordic Graphic Workers' Union (*Nordisk grafisk union; NGU*). An average of 15 people participated in the work.

The project brought together two quite different social groups: on the one hand, system designers, computer scientists, and work-efficiency experts; and on the other, activists and officials from unions representing some 120,000 printers, typographers, lithographers, and other skilled workers in the newspaper and printing industries of the five Nordic countries. The Nordic Graphic Workers' Union appointed a group consisting of representatives (*referensgrupp*) from Denmark, Finland, Norway and Sweden that followed the project. At various stages the project co-operated with the Swedish state-owned publishing company and computer supplier Liber and its development project TIPS (Text and Image Processing System), the Swedish Social Democratic newspaper *Aftonbladet*, and the Danish newspaper *Information*, that was owned by its co-workers between 1970 and 1986.

UTOPIA's goal can easiest be understood by examining its arguments. Let me quote from its research programme from 1980:

> The experience gained by organized labour and the research conducted by trade unions during the 1970s into the ability to influence new technology and the organization of work at local level highlighted a number of problems. One fundamental experience gained is that the 'degrees of freedom' available to design the content and organization of work utilizes existing technology is often considerably less than that required to meet trade unions demands. Or expressed another way: Existing production technology more and more often constitutes an insurmountable barrier preventing the realization of trade union demands for the quality of work and a meaningful job.

Thus, we see that a point of departure for UTOPIA was that "technology is an expression of the sort of society we live in", it was value-laden, and that existing technology and new technology by and large reflected corporate interests instead of reflecting the interests of workers. Hence, technology delimited the demands of workers and trade unions. According to the research programme, trade unions had met technological change with "defensive actions" such as to reduce the negative effects of technology on employees by demanding reforms in legislation and concluding agreements. The research programme's concluding argument was that there was a need of an alternative technology that reflected the interests of trade unions instead of corporate interests. In contrast with the earlier "defensive strategies" the UTOPIA-project worked with a "yet untried offensive strategy" where trade unions themselves were supposed to develop alternative technologies:

> The trade union movement itself draws up the technological and training alternatives and takes the sole responsibility for their implementation and development at local level.

UTOPIA's goal was thus to help unions translate their social values regarding the job skills, quality of work, and quality of products into new computer hardware and software for the printing industry. As we see, there was a strong belief that technology largely shaped work conditions. Technology was seen as deterministic, and precisely because of that, UTOPIA argued, it was crucial for workers to develop and control alternative technologies.

A "technology laboratory" where researchers and workers worked closely together was established at the Swedish Centre for Working Life. The American Robert Howard reviewed UTOPIA for the MIT-based journal *Technology Review*, and was quite amazed of what he saw when visiting the laboratory. He reported that it could be a research department at any high-tech manufacturer, but instead the lab belonged to the government-funded Swedish Centre for Working Life in Stockholm and he described the scene where graphic workers and computer scientists sat side by side as "an intriguing experiment in technology development".

One of the more important results was the publication of requirement specifications (*kravspecifikationer*) in 1983. The requirement specifications acted as guidelines for what workers should require of new technologies or organizations when introduced and was used in collective bargaining and local negotiations.

At a conference in May 1984 at the Social Democratic Youth League's (SSU) residential study centre, Bommersvik, the UTOPIA-project presented its results together with the Nordic Graphic Worker's Union. The choice of place symbolized and manifested the strong connections with the labour movement; during the latter half of the twentieth century the Bommersvik residence have been a political and cultural centre for the Swedish labour movement.

Was Utopia a success or failure? As a project on participatory design it must be considered seminal. It gave rise to the so called Scandinavian School of System Development (*Den skandinaviska skolan*) – also named the collective resource approach (*kollektivansatsen*) – where the users participation in system development have become a key element. According to the researchers it was brought to "a successful conclusion" as a "single demonstration example". This should be understood in the sense that the UTOPIA-project demonstrated possible solutions for technical and organizational alternatives for newspapers, which gave possibilities for graphic workers improve their skills and keep their job. They hoped that it would contribute to a "new Scandinavian model" for technological development. However, the researchers pointed out that lack of trade union co-operation could put an end to the dream of Utopia. In 1990 an observer noted that graphic workers in Sweden to a considerably higher extent than in Anglo-Saxon countries had managed to keep their occupations.

3. Notions of Technological Change

The conception of technological determinism rules during the post-war period. However, I would like to distinguish it from the notion of technology as autonomous – as out-of-control – which is an important theme in Western thought during the 1950s and the 1960s.

Thus, the trade unions and the UTOPIA-project questioned the inevitability of technological change, not the technological determinism in social change *per se*. On the contrary UTOPIA presupposed, what may be called, a 'soft' technological determinism. As we have seen above, the point of departure was that technology to a very large extent shape the workers' conditions.

In the following, I aim to examine the governing Social Democrats' and the labour movement's approach to technology and technological change. Already in the *Arbetarrörelsens efterkrigsprogram* from 1944 we can sense a growing technological optimism. It was through technological progress that material and social welfare should be reached. The so-called Rigoletto

conference organized by Social Democrats in 1955 with participating scientists, technicians and politicians as well as representatives for trade and industry received public attention. It resulted in the publication *Teknik och morgondagens samhälle* (Technology and the Society of Tomorrow) and manifested a veritable technological and scientific optimism. Technology was the solution of our problems and was spelled with three A's: Atoms, Automation and Astronautics. This belief was established as a supreme ideology, an ideology above all other ideologies, an ideology that unified all the existing political ideologies. Another way to put it was to talk about the "death of ideologies" as was done in the Western world during the mid-fifties. The notion of technological change as autonomous was strong. Thinking in the inevitability of technological progress, there was no need for considering alternative directions. There was only one way to go. The overall strategy was "total adaptation" to the demands of the assaulting technology. It was understood that technology determined social change. Thus, we have both the belief that technology is autonomous and that technology is largely deterministic in its character.

Trade unions shared to a large extent this approach, and the Swedish Trade Union Confederation (*Landsorganisationen i Sverige; LO*) underlined for instance that trade unions had powerfully manifested its "rationalization friendly approach", i.e. a strategy of adaptation towards technological change.

In the aftermath of the Boom Years of the 1950s and the 1960s came the crisis of the 1970s. Technology changed from a promise to a threat. The rationalization that followed technological change did no longer produce prosperity, instead it made workers redundant and led to unemployment. Voices questioned the inevitability of technological change. It was almost as a discovery: technology is political! Instead of adapting ourselves to the inevitable technological progress; we should choose technology, thus choose our future; we should take control over technology in order to take control over work et cetera. These are themes that were paid attention to by a broad spectrum of political organizations and interest groups. A very strong labour (union) movement expanded its ambitions from wage negotiations to changing technology (and work organization). They moved – in their own words – from a defensive to an *offensive* strategy. Instead of being the passive objects of automation (technological change) the worker should be an active subject in technological change.

That it was so, becomes evident at Tage Erlander's Computer Symposium that took place in 1980 at the Social Democratic residence Bommersvik. It resulted in the publication *Datorerna och samhällsutvecklingen* (Computers and the Development of Society). This labour movement summit conference consisted of participants such as the Social Democratic party secretary Sten Andersson (later Minister of Health and Social Affairs, and Foreign Minister), the president of the Swedish Confederation of Professional Employees (*Tjänstemännens centralorganisation; TCO*) Lennart Bodström (later Foreign Minister, and Minister for Education and Science), the member of the Social Democratic party executive Kjell-Olof Feldt (later Minister for Finance), the secretary for the Swedish Trade Union Confederation Rune Molin (later Minister of Industry). Hans Gustafsson (later Minister for Housing), Anders Ferm (director for the leading Social Democratic publisher Tiden) as well as Tage Erlander and Gunnar Sträng.

The opening speaker was the well-known Finnish philosopher Georg Henrik von Wright, and he reflected over Man, Technology, and the Future. He draw the attention to the profound social consequences of modern technology and thus addressed the overall themes of the conference:

What social consequences did technological change have? Of special concern at the conference was the effects of technological change had on employment. Given the profound consequences of technology, who should have influence on technological change? Was it possible to control the progress of technology or was we forced to adapt ourselves to it? Different visions and strategies for confronting technological change were suggested. The participants from trade unions such as Rune Molin emphasized that trade unions had to take command over technological change, and another participant demanded "offensive decisions". An additional comment was that the employees needed to create their own alternatives.

Thus, from the end of the 1960s we may trace a shift in the notion of technological change from a belief of it as autonomous towards a belief of it as controllable. However, technological change was still seen as deterministic for social change, and that was also a very important incentive for the trade unions to take control over it.

4. Industrial Democracy Reborn

The well-known aphorism "democracy stops at the factory gates" (I haven't found its origin, even though Langdon Winner discusses it in his famous essay "Do Artifact Have Politics?") strikingly illustrates a problem that gained attention during the 1920s in connection with the wave of democratization that swept through Europe after the First World War. It dealt with the employees' influence in companies. After the seminal Saltsjöbaden agreement in 1938 between the Swedish Trade Union Confederation and the Swedish Employers' Confederation (*Svenska arbetsgivareföreningen; SAF*) the question gained renewed attention. The so-called Swedish Model were established during the 1930s and the 1940s and become a role model manifesting technological optimism during the Boom Years of the 1950s and the 1960s. The social conflicts that arouse in the end of the 1960s politized the industrial rationalization and the Swedish Model was questioned by the trade unions. They protested against the "over-profits" made by corporations which they claimed did not sufficiently reach the employees. As a response the powerful Social Democratic Party carried through a number of legislations through the 1970s that considerably strengthened the employees position in companies. A law concerning right of participation in decision-making, the Codetermination Act (*Medbestämmadelagen; MBL*) was for instance legislated in 1976, and in the wake of all these reforms there was a rebirth for the question of industrial democracy. Pelle Ehn, UTOPIA's project leader, now phrased the old aphorism "democracy stops at the office door and the factory gate".

This development towards a rebirth for industrial democracy had important parallels in other Scandinavian countries. Pioneering was Norway with its program for industrial democracy during the 1960s, and a number of experiments in work organization were carried out. We find similar attempts in Denmark, where a number (eleven) of similar experiments in industrial democracy were done between 1969 and 1973. The same pattern is found outside Scandinavia, West Germany for instance carried through a similar Codetermination Act in 1976.

Thus, in 1977 a research institute with the purpose to link researchers and trade unions together was founded, the Swedish Centre for Working Life. It was financed by the Work Environment Fund (*Arbetsmiljöfonden*) which was based on a wage tax paid by all employers. Its goal was to "promote democracy in working life", and thus the concept of industrial democracy was built in its regulations. Furthermore, the Centre for Working Life edited (and financed) the international

quarterly journal *Economic and Industrial Democracy* published by Sage Publications starting in 1980. The Centre for Working Life carried out three big research projects dealing with trade unions and development of technology and organization: DEMOS (1975—1980), UTOPIA (1981—1986), and FRONT. It was regulated that the research made by the Centre for Working Life should not consist of traditional reflective, analytic social science, instead it should take the form of so-called "action research" where the development to a high degree was decided by the local parties. The "researcher's contribution as well as the reporting" should be "highly dependent on the actions of local parties". Put in other words: commissioned research. The argument supported by the Centre for Working Life was thus that trade unions needed to independently develop knowledge in order to actively shape technology and work organization.

An interesting parallel to this history that rose much more debate and attention was the ideas of employee funds (*löntagarfonder*) that took form during the 1970s by trade union initiative, and were implemented between 1983 and 1992 by the Social Democratic government. They became the beginning of the end for the attempts to democratize economy and industry, and in 1994 the non-Socialist government transformed the employee funds to research foundations.

To conclude, during the 1970s and the first half of the 1980s we withnessed a period of strong trade unions and attempts to once again realize the old goals of economic and industrial democracy. Furthermore, a number of new actors and institutions with affinities to the labour movement, such as the Centre for Working Life and the Work Environment Fund, took place on stage and quickly gained strength through a number of governmental decisions. What we see is the formation of a state-supported network of strong labour interests.

The name of the project referred to Thomas More's *Utopia* from 1516 which depicted a future ideal society, "the best of all worlds", but at the same time Utopia was the land of nowhere, a "world which does not yet exist". One may wonder if the dreams of economic and industrial democracy that the UTOPIA-project pursued shared the same characteristics?

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