A STEP TOWARDS EGALITARIAN SOCIETY: TEMPERATURE EQUALIZATION PROJECT AT SWEDISH WORK PLACES*

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1. Institutional Conditions

During eight year of the energy crisis heating at the work place became a major political issue in Sweden. Unrest on the labour market worsened and trade union leaders and politicians demanded higher working temperatures for employees and a redistribution of existing heating resources. »We can no longer accept one group enjoying ideal temperature levels while our members have to shiver and shake with cold«, said the chairman of the Swedish TUC. The Prime Minister was moved to state: »The entire movement is united in the determination to bring about more equal temperatures.«

The Opposition, not to be outdone, insisted that they had always been in favour of optimum temperatures and strongly against cold. »Neither too hot nor too cold at work« became the Centrists' slogan. The ideological and political climate as regards heating equilization at work created pressure on managements. Surveys from the 1930s, which showed that workers performed better at higher temperatures, were exhumed and reprinted in the magazine »The Week's Business«. Experiments carried out in Norway had given similar results. Only the Swedish Employers' Confederation and the Conservatives took another line, and said that higher temperatures were needed by individuals not by the mass«. Equalization of temperatures within given limits must not be taken so far that the efficiency of those who run the country might be jeopardized«, stated the head of the Employers' Confederation. The parties on the labour market decided on the joint slogan, »higher temperatures and more efficiency at the work place«.

The Government looked to the state-owned companies to lead the way in the temperature equalization field. The Prime Ministar spoke with enthusiasm about the trailblazing work that lay ahead. A special commission[1]) representing the various interests in question

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1) The Heat equalization commission.

was set up inside one Ministry and a number of young enthusiasts — in consultation with both sides in industry — were chosen to carry through heating equalization projects which were to serve as signposts to society as a whole.

A new coordinating body (the forty-seventh to be exact) was set up to serve the private sector, and the State, as was its habit, placed research and development funds at its disposal. A Board for the Optimization of Temperatures (BOT) was formed, and within it a Board for the Optimization of Temperatures' Thermal Experimentaion Laboratory (BOTTLE). This created institutional conditions allowing broadly based research. The companies — both private and state-owned — which wanted to be in the forefront threw themselves into the game and became known as firms happy to act as guinea pigs. A great many university faculties suddenly found that they had research capacity to spare, and held out their hands for a share of the funds.

2. Project Activity

The researchers at company A were, sadly, not very experienced and measured temperatures with manometers. This was partly because they believed that they could prove a clear connection between air pressure and heat, and partly because no thermometers were handy. The result was a foregone conclusion. The commission was unable to make head or tail of their report and the researchers withdrew from the scene. Everybody drew a sigh of relief.

The researchers at company B were more expert as regards measuring techniques. Their instruments did actually work and their report gave an objective picture of the temperature situation. It emerged, however, that the management's own thermometers (half-dollar model) showed much better values. Furthermore, two men in the warehouse had said that they were very happy at the company. All in all, it was deemed to be indelicate to compare workers' temperatures with those of the management: »These researchers are doing their best to throw doubt on our willingness to improve the heating situation«, the managing director told a TV reporter, »their report is a severe blow to all the efforts we have made in this sphere.« The workers, teeth chattering, confirmed the reports, exhibiting goose pimples on arms and legs. The trouble-making researchers were suitably thanked and the managing director spoke movingly about how »free research must walk hand in hand with business efficiency. But the heating equalization project must under no circumstances be allowed to create unrest at places of work«.

In company C the reserachers were very aware of the role that psychological subjectivity played in objective reality and started off by sending the management on courses in measuring techniques. On their return they took an active part in temperature readings. Interest in measuring questions increased greatly inside the company. It was soon found that certain workers could still work efficiently at tem-

peratures of minus 32° if they had suitable clothes. Lively discussions were held between specialist groups on the connection between reduced temperature and reduced performance. Comfortable temperatures were reserved for the select few and the researchers were gradually reduced to apathy by endless discussions on measuring techniques.

The reserachers at company *D*, who were even more aware of the objective role of subjective psychology, developed a special technique which consisted in gradually letting the management get used to reality in stages . Each time they made measurements they released little bits of the results in advance. When the values were on the negative side, they added lengthy technical explanations as to why things happened to be so very bad in that particular case. Before releasing each new tit-bit of information the researchers went to great trouble to make sure that the management hand't had their feelings hurt or been made angry or depressed. Gradually they grew used to the idea that cold was an undisputable fact in the company. At the same time the managers found all kinds of reasons why a low working temperature might not be such a very bad thing after all (»a nip in the air keeps you fresh and healthy«, »when workers exert themselves they keep the cold at bay«).

Company E's research team was inspired by a world famous enthusiast from a neighbouring country, who had earned the esteem of employers by inventing a type of heat reflecting screen to be put up around each team of workers. This allowed the workers' body heat to be used to warm them up, especially when they exerted themselves.

Self-heating work teams had of course been tried in certain English mines as long ago as the 1940s, but due to the reluctance of English managements to spoil their workers the method never spread. It was also feared that they might lay down their tools when hidden by the screens, and play cards or plan strikes. Experiments in Norway (where workers were nicer) showed that the system could raise workers' temperatures and increase efficiency without worsening the management's temperature situation. It was easier to reconcile social and technical needs at higher temperatures. Higher profits and productivity helped to raise dividends and improve managerial apartments (improvements went as for as secret sauna bath installations). The system spread like wildfire. It was adapted to the Swedish car industry, and the conveyor belt system was so organized that semi-finished products were pushed in through a hole in one side of the aluminium screen, thus forcing workers to pass out finished products through a hole in the other at heat-building speed. The management allowed foremen to have a peephole, for control purposes. While this reduced the screens' efficiency somewhat, it did help to maintain administrative balance.

F company, our last example, was state-owned. Encouraged by promises made by politicians, the local trade unions in two of the company's factories immediately demanded increased heating on the shop floor and called for the extra radiators used by the management

and foremen to be turned off. The management was greatly alarmed when the research group's findings confirmed the unions' claim that conditions were very inequitable. Anxious to prevent a precedent that might have unpleasant consequences in private enterprise, the management tried to throw out the researchers. But the politicians, bound by freshly given election promises, were forced to intervene, issuing a sharply worded press statement. The management promptly declared that they had always been in favour of the temperature equalization project being carried through. A minor increase in temperature ocurred in the company's factories. It was followed by a raise in productivity. But it was very diffioult to decide whether this was due to an increase in working tempo or to installation of the new radiators. The management also tried to divert interest from heat equalization by encouraging the most active workers to take part in long meetings in the well-heated managerial offices. Annoyingly, this did not pacify the most militant workers, who actually insisted on even greater equalization. The battle lasted for several years. Finally, as a result of pressure on the management from the politicians, it ended in a by no means negligible equalization. Foreign deputations, press, radio, and television leapt out of joy, at the remarkable pioneering successes, which had shown that the unimaginable was feasible and that the impossible was possible.

In other state-owned companies, though, brakes were applied. At a conference the managerial class secretly bound themselves never, under any circumstances, to use the services of the Heat, Equalization Commission's inflammatory researchers, who they referred to, between themselves, as »leftist elements« and »incompetent troublemakers«.

3. Effects on the Institutional Plane

Time passed and, on the whole, there was little to show out, of the five years' research work apart from the breakthrough of the screen system. Most of the projects had failed, resulting — as the respective parties were wont to say in the conference room — in »menacing unrest and agitation on the factory floor«. In one case, which unhappily drew the attention of the press, the workers went on strike, and later stormed the board room. They switched off the radiators, made a bonfire of the splendid oak panels, switched on their own radiators (in violation of paragraph 32), and temporarily established total heat equalization. The establishment was shaken to its foundations. The Prime Minister spoke of, »villainy« and urged the Swedish workers to follow the established line of the movement, which was gradual reform.

The majority of the research groups had either withdrawn of their own accord or had been thrown out by the management because they took talk about equalization to seriously. The politicians spoke feelingly about the »process of heating equalization now going on in working life« and cited the many commissions which at that moment were looking into the legal implications of the heating equalization measures inside the framework of existing resources and distribution.

Within the state administration, meanwhile, changes were being made in the temperature scales for reasons of economy. An inter-departmental group proposed that 80°C should henceforward be called 100°P (P for Palme).[2]) The Opposition countered by suggesting, before the Heating Committee, that an adjustment to 75° be made, with due regard to industry's competitiveness. To avoid a lottery in Parliament (the two sides had the same number of seats) the Prime Minister and the Leader of the Opposition agred to decide the issue by a game of poker. After a hard night's session it was decided to compromise on 78°C as base for the 100 degree P scale and that the public should be subjected to an information campaign on the need, among other things, to knit more jumpers. The industrial bodies which had initiated the reform were charged with the task — in collaboration with the newly formed Administration for the Optimization of Temperatures — of furtively changing all thermometers at work places. The workers, who were just as chilly as before, noted with growing surprise how thermometers were showing better and better values. Special teams from managements, the Administration for the Optimization of Temperatures, and the local unions, relocated those »elements« that continued to agitate about chilly work places. The Labour Ministry took care of frost-bitten workers, and the rapid expansion of the public sector was greatly stimulated by the growing demand for physiotherapists, adaptational specialists, and instructors in warming-up exercises.

The Administration for the Optimization of Temperatures, which now had jurisdiction over all heating research in the country, was careful to ensure that only researchers using the new P scale were allowed into factories. The question of scales and of results of comparisons with earlier measurement procects was of course settled amicably by the parties concerned. Every attempt to use the old scale was branded as an »undemocratic attempt by self-appointed elitists to foster mistrust in those who have the task to run society.«

In the state-owned companies, which in the first place had been chosen to spearhead the strivings for heating equilization, the problems involved in adapting research to the new situation were rather more ticklish. In one or two cases a certain equalization of temperatures had been achieved, thanks to the workers' enthusiastic response. The heat equalization commission's work was also used in the Government Party's election propaganda. But when the Government found that managements were obstructive and were threatening to sabotage profitability they tried to draw a veil of silence over the matter. The only reminder of the once grand plans was given in the occasional newspaper article on the sacking of active trade unionists and other such difficulties that arose during the project. The commission's chairman tried to explain the politicians' caution by saying that »one doesn't push through measures that one doesn't want to find in one's own back yard.« In reality, the department's record as regards heat equalization was among the worst in the country.

[2]) In order to honour the former Prime Minister.

Earlier fears had been felt in the private sector that the commission's experimental activities might result in laws of the most horrible sort. But they were dissipated simply by appointing the commission's chairman to the post of director general of the Administration for the Optimization of Temperatures. His motto was that »We shouldn't carry equalization beyond a point that would be acceptable to us if we were in the management's place«. That the commission's researchers were no longer allowed inside companies was taken as proof that they were unsuitable and generally incompetent. But they proved to be unexpectedly stubborn, utterly refusing to use the new P scale and constantly nagging the commission about what they regarded as a betrayal of the original principles. Therefore, they were told not to concern themselves with interpretation of the directive and to rewrite, for the eighth time, the commission's panegyrical programme on heating equalization. Their refusal to take hints and find other work finally led to the total reorganization of activities.

The Interlinking Department for the Imperceptible Introduction of Optimum Temperatures (IDIOT) was formed after eight months of secret negotiation. The minister concerned, eventually got out of any political responsibility for the activities in question and so escaped the rare, but still awkward question in Parliament. An industrialist, known for his firmness in the face of absurd demands for equalization, was appointed chairman of IDIOT. The secretary was a soft-speaking former time-and-motion study expert and TU official who later became a director in the employers' negotiating body. Because of his proven flexibility as regards party lines he was counted as neutral.

IDIOT did not want to be burdened by intractable researchers and so opted for the research methods used with such great success — as regards the avoidance of conflict between parties — by the state administration. First of all it drafted a general directive (with plenty of »shoulds« and »so far as is possibles«) on temperature conditions in different working environments and on different administrative levels in accordance with established job evaluation practice. The directive was then sent out to »test companies« in which the local interests were charged with the task of interpreting it and agreeing on appropriate measures. This approach was successful beyond all expectations since the complaints received from management about unrest due to reductions in temperature completely ceased. Complaints from workers were filed under a special system at IDIOT's secretariat pending destruction.

Companies were asked to submit data on current temperatures within two years. IDIOT decided that, after having studied the results (they were classed as top secret) they could confirm a certain but vague degree of equalization. The research methods used were to some degree reminiscent of the controversial technique used as long ago as 1948 by Professor Rattle-Brown, who on three separate occasions claimed to have proved that it was possible to send a building brick to sleep with hypnotism.

But the main aim, as expressed by the Department's chairman, was to ensure that »the positive cooperation between the parties concerned, under the banner of »security, flexibility, and progressiveness«, should not be placed in jeopardy by irrelevant and wild measuring activities. We are interested in practical results, not in research for research's sake.«

New laws were passed in Parliament at regular intervals: the general heating equalization law, the law on security for local heating controllers, the law on the right to absence from work for temperature measuring studies, the law on the right to negotiations on heating matters, the law on the employees' right to access to company heating centres, etc.

The laws were described by the Prime Ministar as »this century's biggest reform in the equalization field. Never have so many reforms aimed at improving workers' temperature conditions been carried through in so short a time.« In his new book, »The Will to Heat Up«, he formulated the concept of permanent reformism, saying that heating equalization was »a continuous process which we must always keep alive«. A Minister said that »heating equalization is not a fixed and final state, it is rather a torch which leads the way forward«. It quickly became understood within the state administration that to define what heating equalization actually meant was an exceedingly difficult problem, and that any changes in that area had to be made with extreme caution; should, indeed, be unnoticeable.

The dissatisfaction still to be found at work places was defined as »dissatisfaction caused by increased expectations«. Researchers who persisted in using the old scale, calling into question the results obtained by the gradual reformists, were got rid of by means of reorganization and through threats of withheld salary increases. The »realistic« researchers — those loyal to the companies — who saw with clear eyes the reality of the situation (every successful project must have the existing power structure as its point of departure), went to a conference in London and presented to an attentive »old boy« public the »Heat Equalization Project in Sweden«. They had in fact done very little to further equalization, save for the semi-successful screen project, but were anyway hailed as courageous pioneers merely for having such a profound and loyal attitude.

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OBRAZOVANJE I LIČNI DOHOCI

Uvod

Mnogobrojna teorijska i empirijska istraživanja u oblasti obrazovanja, za poslednje dve i po decenije, ukazuju na veliki značaj i ulogu koju obrazovanje ima u društveno-ekonomskom razvoju jedne zemlje. Obrazovanje utiče na brži ekonomski rast jedne privrede, a ne manje značajan je i njegov uticaj na opšti društveni razvoj, sa svim implikacijama socijalnog, političkog i kulturnog karaktera. Mnoge zemlje danas, i razvijene i zemlje u razvoju, posvećuju značajan deo svojih resursa za razvoj ove delatnosti i to kako ljudskih tako i materijalnih. Otuda se javlja sve veći interes, individualni i društveni, za ocenu efekata[1]) obrazovanja, kako ekonomskih tako i neekonomskih. Na osnovu realnih sredstava uloženih u obrazovanje i efekata koje ona imaju, moguće je oceniti efikasnost uloženih sredstava u obrazovanje u odnosu na alternativna ulaganja u drugim delatnostima.

Prihvatajući obrazovanje kao značajnu delatnost i sa društvenog i sa ekonomskog aspekta, ekonomisti su pokušali da ocene vrednost efekata obrazovanja: neekonomskih i ekonomskih. Neekonomski efekti obrazovanja sadržani su u društvenoj funkciji obrazovanja koja implicira razvoj ljudske ličnosti u smislu humanijeg, kulturnijeg i emancipovanijeg čoveka, koji se lakše i adekvatnije ne samo prilagođava već i aktivnije deluje u jednoj demokratskoj, a posebno samoupravnoj sredini kao što je naša. Ekonomski efekti obrazovanja reflektuju se kroz povećavanje proizvodnih sposobnosti ljudi. Povećana proizvodna sposobnost, posmatrana sa društvenog aspekta, sa svoje strane utiče na stvaranje većeg volumena nacionalnog dohotka, a sa individualnog aspekta — na povećavanje ličnih dohodaka ljudi. Proizilazi da sredstva uložena u obrazovanje imaju i svoje ekonomsko, pored već istaknutog društvenog opravdanja ovih ulaganja.

Do danas se nije uspelo u kvantificiranju neekonomskih efekata. Što se tiče ocene ekonomskih efekata obrazovanja, poslednje decenije učinjeni su značajni napori i na teorijskom i na empirijskom polju. Budući da tržišni mehanizam ne daje informacije o ceni ekonomskih efekata obrazovanja, a i one koje daje su neadekvatne, pokušalo se da se na jedan posredan način oceni njihova vrednost. Naime, ispitivanjem veze između obrazova-

[1]) U anglo-saksonskoj literaturi efekti obrazovanja nazivaju se »Benefits«.