

Can Taylorism be applied in Hungary?

Csaba Makó, Agnes Simonyi

Considerable reserves of Hungarian economic performance are no doubt to be found in structural change, in better utilization of productive capacities, in better organization of work. But all these possibilities connected — by the way — with each other cannot be made good use of, if mobilization of human resources lags behind. Central and firm-level initiatives to rationalize production have to be assessed from this perspective. Their aim is to improve efficiency by skillful organization of the work process and by making workers interested in it. It is demonstrated by research, however, that rationalization and interests are not purely technical or economic concepts but have also a social connotation which must not be overlooked.

Performance requirements are set by management as are new organizational settlements, but it is workers who carry them out. Their behaviour is much influenced by their possibilities within and outside the firm. Consequently management initiatives to raise efficiency are not always backed by workers. Management's plans to make workers more interested in efficient work are not supported unequivocally. It means that rationality and efficiency of the work process cannot be judged by economic criteria alone. To overstress the economic side of worker — management conflicts is dangerous because other (non-economic) sources of conflict may be left unobserved. The intention of some worker groups to secure their present position may decide whether disturbances in the work process are removed or perpetuated.

The history of industrial relations demonstrates that behind seemingly economic phenomena of the work process social attitudes influencing behaviour of

different worker and management groups on the long run must be discerned. In social relations, as in the cooperation between social partners of the work process negative tendencies may be lasting and positive ones hard to deploy.

Technical and economic conditions — difficult though they are to establish — are not enough in themselves to secure the success of central and firm-level measures to improve the organization of production. It is the merit of Hungarian and foreign social sciences to emphasize social phenomena which condition the cooperation between social partners today and also in the foreseeable future.

What we can learn from previous experiences

In a time when most Hungarian firms think that Taylorian principles — or "scientific principles of management", as they are usually called — are the best tool for raising productivity, it is worthwhile to look around at what experiences capitalist countries with this kind of work organization do have (Butera, 1984; Doray, 1984; Fridenson, 1972; Moutet, 1979; Ruffier, 1984; Sabel, 1982; Wood, 1983), Taylorian work organizations in industrial countries were surely successful in rationalizing mass production and raising performance. But their introduction and practicing was accompanied by technical, economic and social tensions. At the beginning of our century the director of Renault thus complained about the difficulties in introducing a system of labour division which would force workers into highly specialized jobs: "...in our opinion practicing Taylorian methods in our industry is extremely difficult. It requires a total reform of the production process, changing machinery and equipment and — first of all — the system of worker education. We think that Taylorian methods can be adopted only very slowly and with considerable costs" (Hamar, 1984: p. 79).

There are several human, technological, economic and social preconditions to the efficient functioning of work organizations based on Taylorian (or "scientific") principles:

- Abundance of uneducated, cheap labour which has no special claims towards work content. Learns movements easily and does them — after a short training period — faultlessly. Has a high preference for income so as to be easy to stimulate by incentive wages.

- Technical, technological preparation, control and registering of work should be the task of specialized management and control organs. This lessens the authority of foremen, but enhances that of functional control departments and of engineers working in them. A comprehensive reform of the whole system of management and control is needed.
- Work load should be the same in all jobs in which simple movements are repeated all the time; otherwise measurement against standard requirements is impossible. Standard machinery is also a requirement because norms cannot be the same for everybody if the technical level and condition of machines is different.
- Foremen have to be prepared for the new tasks. As the importance of functional controls grows a highly qualified staff of engineers and technologists, with good practical knowledge has to be formed; thus the numbers and cost of attendants grows.
- Managers have to secure cooperation within and outside the firm so that the supply of workers with quality materials and tools would be continuous. Production standstills are harmful for a system of specialization and division of labour which is based on the equality of workload and performance requirements.

If all the above mentioned conditions are fulfilled, the work organizations based on the principles of scientific management are smoothly functioning; they produce standardized, marketable products in large quantities and at low cost. But if only one of the conditions is not fulfilled, benefits may turn into drawbacks and conflicts between the actors of the work process intensify.

Not only Hungarian manufacturing presents cases of ill-founded, partial application of Taylorian organizational principles. A typical instance is Renault's rationalization move at the beginning of the century whose failure strongly resembles much those known from Hungarian practice.

"Renault's foremen were not prepared for the new task of instructor and were unaware of the methods which enable workers to cope with rates. Work was often stopped by lack of material or other organizational problems ... Only the wage system was reformed because to transform the whole system of management and control would be too costly... Five years would be needed for the conversion of production processes, equipment, machinery and worker education" (Moutet, 1979: p.41). Or elsewhere: "The state of machinery and equipment does not allow to establish well-founded rates. This notwithstanding in

8 plants of Renault the new organizational methods were introduced overnight. There were problems not only with the technical condition of machines or with procurement of the appropriate kit of tools but also with the transportation of material from one workplace to the other. In the absence of standardization of machinery it was impossible to form jobs of equal workload and working conditions" (ibid: p.40).

Several preconditions being absent, these problems are well-known to Hungarian firms, too. The performance of some worker groups depreciates with the introduction of Taylorism, that of others appreciates⁽¹⁾ – sometimes quite independently of official valuation of jobs.

In other instances management is successful in distributing the workload evenly and so make higher norms acceptable for workers. If there are "loose" and "tight" rates, "well paid" and "poorly paid" tasks, then picking and choosing between them or discriminations in the distribution of work cannot be eliminated, which undermines the performance principle. Wide worker strata are willing to accept stricter norms if they were formerly left out from "well paid" works and see that the new norms are universal. But former workers are hit hard by the new regime which they will only accept if their wage can rise considerably.

Renault was in its time 20 years late in introducing car assembly lines compared to its European and overseas competitors. The new system failed in their case not simply because of workers' conservatism. Inappropriate preparations, the lack of necessary preconditions had their share, too. That is why not only workers but also part of management opposed this organizational experiment.

Preconditions being not fulfilled, organizations may be only quasi-Taylorian

A characteristic trait of Hungarian applications of Taylorian methods is that the actors of the work process are forced to cooperate in such a way that pre-established rules are adhered to only seemingly or not at all. As preconditions of

(1) Such experiences are mentioned in several studies made recently in the Institute of Economics of HAS and the Institute of Labour Research of the State Office of Labour and Wages. See e.g.: Fazekas, 1980; Köllő, 1981; Simonyi, 1983.

scientific management are lacking, strict adherence to rules would endanger the continuity of production.⁽²⁾

- There are only a few firms, operating under special labour market conditions, which can acquire cheap labour in any quantity. It is precisely the labour shortage that induces firms to rationalize. But in an environment where the worker quits easily if norms become stricter, and other types of work organizations — from small cooperatives and other small undertakings to household plots — offer themselves for better utilization of his workforce (and his abilities), Taylorian organizations are not likely to be successful.
- In Hungarian firms top management is left out of reorganization. It concerns only supervisors with some management activities (organization, R&D) being modernized. In the smooth servicing of a more intensive production process, its proper technical and economic arrangement rarely becomes the criterion of functional management's performance. Their responsibility for daily problems in production is small but the impact of measures taken by them might be considerable. Low wage level of engineers may also counter efforts to improve the quality of management — if it is undertaken at all.
- Most Hungarian firms cannot set up standardized machinery because machines are varied as far as their age and origin, supply of spare parts is imbalanced, maintenance and overhaul haphazard. Workers in a weak interest-asserting position are put on bad machines, those in a strong position on good ones. This is well demonstrated by a table in Zoltán Farkas' case study (Farkas, 1983: p.44; see table 1.).
- Because of the lack of workload standardization it is impossible to equalize performance requirements even for those working in close contact. Efficiency wage under such circumstances is nonsense because it depends mainly on the job being performed (if it is a "good" or a "bad" one), and not on how much one can earn on his practice, abilities and efforts. Rationalizing Hungarian firms try to equalize workload in different occupations but they are not always successful because of technological cases. Serious problems arise also from obstruction of previously favoured groups.

(2) The role of this phenomenon in worker behaviour, bargaining processes, labour market segmentation and organizational problems are increasingly appreciated by sociologic, economic and labour research. See e. g.: Berki, 1981; Köllő, 1981; Ladó, 1983.

do some of the work of supply — service departments as well. Low and medium-level supervisors have to compile elastic programs, to administer stocks and materials, to regroup workers according to changing tasks.

Workers and foremen have "...to cope with most of the problems of adaptation: to change technology, to substitute materials and overcome difficulties arising from this substitution, to reprogram work, etc. — tasks which are beyond the capabilities (and rightly so) of an organization intended for standardized mass production" (Köllö, 1981: p.857–858).

The frequent change of products and thus jobs upsets efforts to equalize workload and loosens the efficiency wage system. It is not by chance that Taylorian principles are most accepted in industries where mass production of standard manufacturing products is pursued. In Hungary these conditions are fulfilled only in a few firms of a few industries who also have problems with securing standard quality of products because of changing quality of material.

Under such circumstances the Taylorian organization is compelled to twofold adjustment. On one hand it has to pretend its adherence to rules. On the other it has to adjust to actual conditions.

Our statements are proved by surveys made in firms of four different industries (one firm from each).⁽³⁾ The results are summed up in table 2.

In three cases out of four (the precision engineering, the pharmaceutical companies and the maintenance department) in order to secure the functioning of the production process, Taylorian principles had to be rotated because of changing market demand and cooperational constraints, but they could not guarantee steady norms. Performance indices had to be changed all the time and foremen had to cope with daily tasks of production programming and arrangement. In the precision engineering firm and the maintenance department the Taylorian methods — production programs, performance requirements, work assignment, rates and settlements — had to become fictitious if the smooth functioning of the work process was to be secured. Workers and foremen, endowed with a certain amount of tools and materials, were essentially their own managers and work organizers. This "involuntary autonomy" was, however, appreciated by management only in some exceptional cases; workers

(3) The result of the surveys are summed up by the four case studies: Bogdán, 1983; Ladó, 1983; Nagy/Simonyi, 1983 and Szukos, 1983.

Table 2
The existence (+) or lack (-) of the conditions of scientific management and the type of work organization in the four units examined

Conditions	Precision engineer- ing	Mainte- nance	Pharmace- utical	Pack- aging
1. Plenty of cheap labour	-/+	-	+	+
2. Complex reorganization of management and control	-	-	-	-
3. Standardization of work — load	-	+	+	+
4. Strict correspondence between wage and performance	-	+	+	+
5. Equal state of machinery and equipment	-	-	-	+
6. Preparation of workers and managers	-	-	+	+
7. Uninterrupted flow of work	-	-	-	+
8. Mass production of standard products	-	-	-/+	+

Type of work organization seemingly Taylorian Taylorian

therefore had constantly to cheat on Taylorian performance criteria, rates and settlements. In both cases several forms of performance regulation were practiced within an organization of scientific management and workers were much divided as to their interest—asserting possibilities. Only the packaging line with its unskilled women workers was functioning according to true Taylorian

norms. Here management was able to secure conditions of mass production.⁽⁴⁾

In cases when Taylorian organization is only imitated, the importance of those groups of workers — and managers for that matter — increases for those who by overcoming difficulties can secure the smooth flow of the production process. But this has far-reaching and contradictory social repercussions. Groups indispensable for production may end up in favourable interest-asserting positions. Whether an individual worker can take advantage of such a situation, largely depends on his social background (housing, family, informal relations, etc.).⁽⁵⁾ Power relations emanating from disfunctional working of the system reproduce over and over again an organization ridden with disturbances (Ladó, 1983; Szukos, 1983).

The experience of industrial states has demonstrated that for this key-position group of workers and supervisors to operate the work process and establish cooperations within formal corporate frameworks may at one point become too costly. Workers who are members of this group then try to make good use of their professional, "organizational" knowledge and social relations as independent small entrepreneurs. They are often encouraged in this by their firm. Top management tries to get rid of some costs of management, control and supervising by decentralization. Often they can establish good relations with groups who previously attacked them with assistance of the trade union, the moment they become subcontractors, small cooperatives, craftsmen, etc. (Brusco, 1982; Hamar, 1984; Sabel, 1982).

The Taylorian work organization is not always successful even if all the necessary conditions are secured. Whether the potentials of Taylorism are exploited or not, largely depends on those directly concerned: workers, managers, the service apparatus. The behaviour of the participants of the work process depends on whether the new organization leaves enough room for asserting their

(4) Similar types of disturbances can be quoted from Soviet experience. "The troubles with material and work supply impede not only the efficient functioning of Taylorian work organizations but also the introduction of organizational reforms which ought to break with the system of scientific management, as, e.g., the team system" (Pahomov, 1982: p.96; see also Drach, 1983).

(5) Ladó, Mariá and Tóth, Ferenc give in their case study a thorough description of this favoured, "central" group; how much effort, professional, organizational, social skill is needed to maintain their position, Ladó, 1984.

interests or not. It means that Taylorism itself and not only the inadequacies of its implementation must undergo a critical analysis.

Taylorian principles — manufacturing realities

The managers of Western firms knew the technical, economic and social problems of the principles of scientific management from the outset. But the recession and increased competition aggravated those technical difficulties which had been felt at firms of industrialized countries for a long time. One of them is, e.g., that time spent on materials handling is too long. Another that the differences in the workloads of people working in different jobs could not be removed even with the most sophisticated methods; or that to establish well-founded and acceptable operation times is technically complicated and socially difficult.

In Hungary all these problems are even more felt than they are in the West. Not only could time spent on materials handling not be shortened but this activity is — for want of personnel and tools — performed by workers themselves, without being considered when defining workload.

"Initially, when norms were established, we were told that materials will be within easy reach. This was later abandoned because of production in other areas and now we have to transport materials ourselves and this cannot be accommodated within the norm", as workers explained in a big firm which is otherwise successful in organizing work (Nagy, 1983).

Not only could mechanization not be solved in a way that would assure equal workload in each job, but workers' furnishing with work, material and tools is also irregular. This fact further aggravates the inequalities in workload for workers have to provide themselves with work.

"Observing the work of mechanics what strikes one most is their constant coming—and—going. They are not sitting at their workplace working but are strolling about the whole plant. They go from one warehouse to the other in order to fetch all the necessary parts ... One can find them even in offices" — so researchers of the Institute of Labour Research on their experiences in a precision engineering firm (Ladó/Tóth, 1983).

Technical difficulties of time measurement and establishment of rates are aggravated by randomly changing conditions, by poorly maintained, technically not identical machines, by ups and downs in workload, by changing quality of

materials.

"In absence of home material the plant began use better quality Western import material and workers earned well. Far too well... Outstanding wages were then reduced by easing the progressivity of bonuses. As a result of this, bonuses could no longer run away in case of high quality material and lag behind if quality was low. But this solution lessened the link between productivity and wage" — said a supervisor in an interview (Nagy, 1983).

In work organizations based on Taylorian principles managers are constantly faced, over and above the technical problems of organization and incentives, with social tensions which are a necessary by product of those organizational forms.

- Workers in the same production process are alienated from one another which makes impossible not only their opposing management collectively but also their identification with production goals. Discord and individualism are well-known phenomena in work organizations based on compartmented work and efficiency wages.

A worker from the machine tool industry thus complained about "my machine" — "your machine" attitudes of those working in a piece-rate setting: "As long as we had group remuneration, nobody thought about if he was working on someone else's machine thus helping him, because he knew this was also production and wage for himself. Now there is individual wage settlement so if I have no piece and cannot work but I see the many pieces before my mate I do not go to help him because it is his work (and money) not mine" (Fazekas, 1983).

- Impoverished jobs consisting of only simple movements deprive skilled workers of the possibility to make use of their knowledge, and unskilled workers of the perspective of professional advancement.

A recently conducted research study demonstrated that from among dress-makers working in specialized jobs on serial production even skilled workers "forgot" needlework, how to make a dress.⁽⁶⁾

- Shrinking worker autonomy narrows interest-asserting possibilities and freedom of action within the work process.

(6) The interrelations between serial production and the skill of workers in dressmaking is treated by Dubois, 1983.

In a furniture factory old joiners do private work after official hours and on weekends only "not to forget what it means to be a joiner" — as they explained. The factory needs cutters, surface finishers, decorators, people who would fix drawers and mount doors but not joiners with comprehensive skill. Young skilled workers do not remain. As the trade union representative said: "in 1983 some 30 joiner apprentices qualified in this factory but only 11 remained. The others left in search of fine work."

Social disfunctions of the Taylorian organization gave birth to numerous forms of individual and collective opposition. The most serious ones besides absenteeism and high labour turnover are poor quality work, disciplinary problems, performance withheld. These negative experiences show that the Taylorian organization may have been rational in a time when labour was cheap and uneducated but today is not suitable to mobilize those reserves who are workers who have a preference not only for higher wages but also for professional advancement.

During the last decade when rapid product innovation and elastic response to changing demand became in industrial countries the order of the day, Taylorian principles conflicted with corporate goals. The extremely specialized, uneducated workforce and the huge, rigid technical and administrative staff is not fit for the new task. Management of large capitalist firms needs workers who are interested in their work, who are committed to company goals and can participate in trouble-shooting. To operate and control high-value equipment, to exploit new technologies skillfully, a reunification of planning and execution, of mental and manual work is needed (Butera, 1984; Dubois, 1983; Héthy, 1984; Makó, 1981; Rollier, 1982). Remember also that according to researchers of industrialized countries Taylorism was never universally accepted beyond its goals and principles.⁽⁷⁾

In practice most of the Western manufacturing firms also failed in its application and tried to adapt only their official procedure to Taylorian principles. Manufacturing practice demonstrated that cooperation created in Taylorian organizations through "external" means — technology, prescriptions — had

(7) The expansion of Taylorism principles had its impact on other spheres of society. The ideal work organization presupposes a selective higher education, elite high schools. Specialists issued by such institutions are unable to work in situations where the conditions of work are uncertain and confused.

always to be supplemented by "international", "autonomous" cooperation between workers. Several Hungarian and foreign studies (Berki, 1981; Butera, 1984; Makó/ Dubois, 1984; Wood, 1983) are to the effect that the execution of tasks was never totally independent of workers' practice and ability to never totally independent of workers' practice and ability to cooperate. F. Butera describes what kind of restructuring came about in several Italian industries as a result of such "internal" cooperation of workers, without any planned intervention or official reform of the work organization. " In precision engineering, electronic and textile industries, smaller units were formed to replace the production line. Repair is often made by mechanics, by people working on the production line; workers are frequently interchanged between jobs, but they can do whole cycles of jobs if needed. Besides, they have storing and microprogramming tasks, too ... In process industries workers who can manipulate and oversee the whole equipment are employed." (Butera, 1984: p.71-72)

The well-known problems of Hungarian economy: careless work, low working morale, indifference, and performance withdrawal can't be cured by Taylorian methods. In the long run Taylorism can reproduce or even aggravate them.⁽⁸⁾

We can use our human resources optimally only if under the influence of the existing interest- and power-relations such work organizations arise which favour creative, initiative and cooperative behaviour and oppose indifference and passivity. In these organizations not only the fulfillment of targets is appreciated and encouraged, but also the work of those create the necessary preconditions of target fulfillment. Only those work organizations can attain a prolonged increase in performance which consider the real conditions and characteristics of work: labour market situation, cooperative relations, the constraints of investment resources, the principles of the employment policy, etc. We need work organizations in which "shortages", standstills, and changing environment do not become legitimate excuses for low performance but are appreciated as tasks to be solved.

(8) On the dangers of applying Taylorism in Third World countries a French sociologist, J. Ruffier, a specialist on the problem wrote: "Not only antiquated technologies but also these organizational methods can perpetuate backwardness of developing countries as its disfunctionalities mean actual losses, inefficiencies and noncompetitiveness of their manufacturing" (Ruffier 1982).

References

- Berki, Sándor* 1981: Munkások és automatizáció (workers and automation) *Kultura és Közösség*, No. 5.
- Bogdán, János* 1983: Teljesítménynövelés és munkaszervezeti viszonyok (Increased performance and social relations within the work organization) In: Simonyi, 1983, op cit.
- Butera, F.* 1984: L'orologio e l'organismo. F. Angeli, Milano.
- Brusco, S.* 1982: The Emilian model: productive decentralization and social integration. *Cambridge Journal of Economics*, No. 6.
- Drach, M.* 1983: Zlobin entre Taylor et Stakhanow (formes nouvelles de la mise au travail en URSS). *Travail*, No. 2–3.
- Doray, B.* 1984: Le Taylorisme, une folie rationnelle? Dunod, Paris.
- Dubois, P. – Durand, C.* 1983: Les politiques patronales d'innovation Critique de l'Economie Politique, No. 2.
- Farkas, Z.* 1983: Munkások érdek – és érdekeltségi viszonyai (Worker interest and incentives) *Sociologie*, No. 1–2.
- Fazekas, K.* 1980: Teljesítményhiány és teljesítménybérezés a vállalat ti gazdálkodásban (Low performance and efficiency wages) Doctoral thesis, MKKE.
- Fridenson, P.* 1972: Histoire des usines Renault, Paris.
- Hamar, J.* 1984: Az olasz kis- és középvállalatok sikerei tanul ságokkal (Lessons from the success of small and medium Italian firms) *Külgazdaság*, 11.
- Héthy, L.* 1983: Gazdaságpolitika és érdekeltség (Economic policy and the incentive system) Kossuth Könyvkiadó.
- Héthy, L.* 1984: – Gustavsen, B.: Szerevelt vagy "humanizált" ipari munkát? (Organized or "humanised" work?) *Valóság*, No. 10.
- Köllő, J.* 1981: Taktikázás és alkudozás az impari üzemben (Bargaining and manoeuvring in a manufacturing firm) *Közgazdasági Szemle*, No. 7–8.
- Ladó, M. – Tóth, F.* 1983: : A munkaráfordítások elismertetésének mechaniz-

mus és társadalmi következményei (The mechanism and social consequences of making work efforts recognised) In: *Simonyi*, 1983, op cit.

Ladó, M. – Tóth, F. 1984: A munkaráfordítások centrumában (In the center of the work organization) Research paper. Institute of Labour Research of the State Office of Labour and Wages.

Makó, C. 1981: Lenin és a tudományos vezetés (Lenin and scientific management) *Gazdaság*, No. 4

Makó, C. – Dubois, P. 1984: A kontroll és a munkásautonómia viszonya a munkafolyamatban (Control and worker autonomy in the work process) *Ergonómia*, No. 1.

Moutet, A. 1979: *Les origines du système de Taylor en France. Le point de vue patronal (1907–1914).* Le Mouvement Social.

Nagy, K. – Simonyi, A. 1983: A szervezés határai, az ösztöztetés korlátai (The limits of organization, the constraints on stimulation) In: *Simonyi*, 1983, op cit.

Pahomov, Ju. 1982: Mehanyizm hozajsztvovanyija. Planovoje Hozajszstvo, No.10.

Rollier, M. – Vazzoler, G. 1982: *Organizzazione del lavoro e contrattazione.* Quaderni di Rassegna Sindacale, No. 94.

Ruffier, J. 1984: *Industrialiser sans tayloriser.* Sociologie du Travail, No. 4.

Sabel, Ch. 1982: *Work and Politics.* Cambridge Univ. Press, Cambridge.

Simonyi, A. (ed.) 1983: A teljesítménynövelés feltételei a munkásszervezetben (The conditions of increased performance within the work organization) Institute of Labour Research of the State Office of Labour and Wages.

Szukos, M. 1983: Egy munkaszervezési módszer bevezetése és átalakulása (The adaption and transformation of a work organization method) In: *Simonyi*, 1983, op cit.

Taylor, F.W. 1983: *Üzemvezetés. A tudomány vezetés alapjai* (Principles of scientific management) Közgazdasági és Jogi Könyvkiadó, Budapest.

Wood, S. 1983: *The degradation of work?* Hutchinson, London.