



### III. Évfolyam 4. szám - 2008. december

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## SOME THOUGHTS CONCERNING THE EFFECTS OF WORLD WAR 2 ON THE DEVELOPMENT OF MODERN MANAGEMENT THEORY

### *Abstract/Absztrakt*

*World War 2 initiated a number of well-definable changes in the life and thinking of managers as well as in the developments of management theory of the era. The modernisation of Taylorism, the beginnings of motivation studies, the dissemination of systems thinking, the beginnings of strategic management and the “leadership revolution” are but five of those effects that have reshaped the management landscape since then. Together with the social and societal changes that have taken place there and then, the effects of the 2<sup>nd</sup> World War to the United States and Europe helped the widening of democracy in social, political and economic terms as well as opened ways for the coming of participative and democratic management styles.*

*A 2. Világháború számos jól meghatározható változást hozott a vezetők életében és gondolkodásában éppúgy, mint a korszak vezetésstudományának fejlődésében. A taylorizmus modernizációja, a motivációs kutatások kezdetei, a rendszerszemléletű gondolkodás elterjedése, a stratégiai menedzsment és a “vezetési forradalom” öt olyan hatás, amely azóta is meghatározó a vezetés elméletében és gyakorlatában. A 20. század második felének európai és amerikai társadalmi-közösségi változásaival együtt ezek is segítették a demokrácia folyamatos kiteljesedését mind politikai, mind társadalmi és gazdasági téren, utat nyitva olyan vezetési szemléletek előtt, melyek lehetővé teszik a vezetést participatív részvételen alapuló demokratikus közegben is.*

**Keywords/kulcsszavak:** *management, leadership, history, World War 2, manager, leader, military, army, development, organisation behaviour, military leadership ~ menedzsment, vezetés, történelem, 2. Világháború, vezető, menedzser, katonai, hadsereg, fejlesztés, szervezelmélet, katonai vezetés*

The decades between the Wars had experienced a hitherto unseen vigour in management thinking. The *Scientific Management School* set up by F. W. TAYLOR<sup>1</sup>, four of his disciples and an uncountable number of followers had become successful not only in the USA but also in Europe. In France, where H. FAYOL<sup>2</sup>'s thoughts had not found open ears, Taylorism became a success. FAYOL's notes, published under the title of *Administration industrielle et generale* (1916) translated into English as *Industrial and General Management*<sup>3</sup>, however, found its way to the United Kingdom and to Germany (where the first translation was published in 1928), and through Germany to the German-speaking managers all over Europe. In England, FAYOL's thoughts were further developed by the consultants and advisors of the *Business Administration School* – L. URWICK<sup>4</sup>, L. GULICK<sup>5</sup> and their contemporaries, who set up the first management consultant agencies in the UK and, in fact, in Europe, heavily built on FAYOL's theses. P. DRUCKER<sup>6</sup>, the most influential 20<sup>th</sup> century Fayolian management theoretician, was one of the first consultants who planted Fayolian thinking over to the United States.

From Germany, through the higher education and professional forums, both Taylorian and Fayolian theses and practices found their way to Middle- and East-European practitioners. Their ideas were mirrored and further developed by Austrian, Czech and Hungarian engineer-managers in the 1930s. These engineers, when succeeding to save their lives and flee to the United States, brought with themselves a practical understanding of operations, procedures and people management enriched with European experience and culture.

In the States, the first industrial psychologists added a lot to the understanding of how organisations work. While H. MÜNSTERBERG<sup>7</sup>, the author of the first textbook on work psychology and his contemporaries such as L. GILBRETH<sup>8</sup>, extended our knowledge on the interrelationships of human behaviour and the management of operations. Their work greatly enriched the picture Taylor drew how management should use scientific research and methodology to optimise processes, to prepare man and machine to execute them, to make workers totally support management (i.e. to motivate them), and to make both worker and manager accept their own responsibilities. Taylorism in practice was much less people-oriented – processes were not only kept in focus, they rather seemed to overwhelm human aspects. Practical Tayloristic management concentrated on process optimisation, ergonomics, and the selection and training of workers – seemingly, Taylor's thoughts on the manager's

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1 Frederick Winslow Taylor (1856-1915), American mechanical engineer, management theorist. Author of influential articles and books, among others *Shop Management* (1903) and *The Principles of Scientific Management* (1911).

2 Henri Fayol (1841-1925), French mine engineer, CEO, scientist, management theorist.

3 After a couple of (not very successful) tries, a quality translation to English was produced by Charlotte Storrs. Due to the war, this edition was published in 1949 only.

4 Lyndall Fawnes Urwick (1891-1983), the author of *The Elements of Business Administration* (1943), one of the founders of the *Administrative Science Quarterly*.

5 Luther Halsey Gulick III (1892-1993), American public administration specialist, the other founder of the *Administrative Science Quarterly*.

6 Peter Drucker (1909-2005), Austrian-born American writer and management consultant, the author of a great number of influential books such as *The Practice of Management* (1954) and *The Effective Executive* (1966).

7 Hugo Münsterberg (1863-1916), psychologist, a founder of industrial psychology, the author of the first textbook in that discipline, *Psychology and Industrial Efficiency* (1913).

8 Lillian Moller Gilbreth (1878-1972), engineer, industrial psychologist.

responsibilities did not succeed to effect the management practice of his age. His suggestions, however, were seemingly so exciting, so astonishingly new and effective, that there was hardly any engineer in the States who did not try either to prove or to disprove them in practice. They even found their way to Russia where Taylorism became the foundation of “Socialist industrial management”.

The human side of management first conquered the attention of theoreticians and practitioners alike when the work psychologists of the Harvard Business School, under the leadership of G. E. MAYO<sup>9</sup>, started their survey in the Hawthorne plant of Western Electric between 1924 and 1932<sup>10</sup>. Their professional research methodology has then been exemplary, as well as the way they communicated their results. They not only published recent results, but openly discussed them in seminars, lectures, workshops and conferences making it a nationwide movement (sometimes called “*Human Relations Movement*”) to explain the findings. In effect, they had an enormous influence on the thinking of their contemporaries. A number of new management ideas, thoughts and concepts in the 1930s would hardly have come to life without these seminars and conferences. The young C. I. BARNARD<sup>11</sup>, for example, was sitting among other students on such occasions. His later book, *The Functions of the Executive* (1939) proved to be a solid starting point for scholars following any of the systemic and decision-making approaches and is one of the best classics of management literature even today. The first research in the field of group leadership (K. LEWIN<sup>12</sup>) also showed that the way was open for the development of management thinking and practice in a social psychological direction. The war, however, rearranged the scenery.

## 1. The Renaissance of Scientific Management

The fact that men took up military service and it was their mothers, wives and daughters who took over their places in the factories meant a new challenge for managers that could be combatted with the tools of Taylorism – processing had to be re-optimised, machines readjusted to the needs of women. Also, the change for new products due to the needs of the fighting forces (tanks instead of combines) and the ongoing modernisation of weapons, vehicles and manufacturing technologies meant an ongoing demand for optimisation and workforce retraining.

Taylorism itself had developed quite a bit since the 1910's. During the war, scholars (mathematicians, statisticians, philosophers, etc.) in military research institutions were in search of new analytic and planning techniques that were made use of in war and work as well. The planning, optimising and controlling toolkit of managers and management advisors grew extensively in these years.

After the war, the soldiers arrived home and had not found their places. They had to be re-socialised and taught again how to behave as workers instead of warriors – not to mention

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9 George Elton Mayo (1880-1949), industrial psychologist, the founder of the Human Relations Movement.

10 Mayo, G. E. *The Human Problems of an Industrial Civilization* (Harvard University, 1933)

Roethlisberger, F. and Dickson, W. *Management and the Worker* (Harvard University Press, 1939)

11 Chester Irving Barnard (1886-1961), manager, the author of *The Functions of the Executive* (1938) and *Organization and Management* (1948).

12 Kurt Zadek Lewin (1890-1947), psychologist. He described management styles by the terms 'authoritarian', 'democratic' and 'laissez-faire' for the first time.

that in many cases technological development had changed the workshops and machines so that they had not only to brush up but to relearn their professions and skills. The traditional Tayloristic concentration on optimisation, selection and training therefore remained in practice after the war as well. When British, French, and German managers visited the USA in the 1950's to see how modern industrial management works, they found astonishingly high living standards, a booming industry lead by Tayloristic managers proudly showing them the up-to-date ways of manufacturing. No wonder that the notions of scientific management, effective industries and economic growth seemed for them to form a chain of causal relationships. Therefore, after getting back home, they integrated neo-Tayloristic methods in their practice.

Another direction of the expansion of Taylorism was Japan. American specialists like W. E. DEMING<sup>13</sup> and J. M. JURAN<sup>14</sup> went there after the War to help rebuild Japanese industry. Their modernised Tayloristic approach, blended with a considerably improved statistical methodology, soon proved to be successful. The alloy of Taylorism, modern analytic tools and traditional Japanese leadership and organisation approach became later known as Total Quality Management. TQM was so successful that in the 70s the Americans had to acquire it to defend their own markets against Japanese products. By the 80s it reached Europe too. Today it is one of the most important branches of management thinking.

## 2. Strategic thinking

A whole new system of mathematical, logical and statistical models and techniques had been developed in course of the 2<sup>nd</sup> World War by scientists of US military research institutes to help long-term military analysis, forecasting and planning. These were adapted to business under the name of *strategic planning* and *strategic management* by I. ANSOFF<sup>15</sup> and other scholars from 1960. Almost at once, strategic management became a separate, indispensable discipline within management sciences.

## 3. Motivation research

The 2<sup>nd</sup> World War presented a number of motivational questions to the everyday man. Nazism was itself a motivational problem: how could be 6 million Jews and many hundred thousand other people be burned or gassed? How can one man fanaticise a whole nation? In the same way, war itself set a number of similar questions: How can someone be motivated to kill another man? How can one be motivated to kill and be killed, instead of running away? How can an officer be motivated to send his people to death, and if need be, to go with them?

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13 William Edwards Deming (1900-1993), American statistician and consultant. A specialist of Statistical Process Control (SPC) techniques, standardisation and quality control. One of the “fathers” of TQM, a quality-focused new scheme of management (and leadership) theory and practice.

14 Joseph Moses Juran (1904-2008), Jewish-Romanian born American electric engineer, the other “father” of TQM.

15 Igor Ansoff (1918-2002), Russian-American mathematician and manager, consultant and theorist, a pioneer of strategic planning and management. The publication of his work *Corporate Strategy* (1965) was a landmark in the history of management thinking signing the birth of a new management discipline.

No wonder the very beginnings of motivation research took place in the 1940s. A number of the later developed models were set up during the war.

Motivation research and humanistic social psychology (organisational psychology) in the hands of the researchers of the “*Neo-Human Behaviour School*” reached its peak in the 1950s. In 1960, the publication of D. MCGREGOR'S<sup>16</sup> *The Human Side of Enterprise* (1960) marked the beginning of a new line of thought. The author suggested motivational questions to be mostly handled on the organisation level, so that the majority of it may be solved by the organisation itself instead of having the manager deal with it on an individual basis. To put it in another way: in order to effectively and efficiently handle motivation problems, we have to create organisations that do motivate their employees. Organisation structure, job design, career planning, process management, information management, decision forming, etc. all have to consider and respect the human aspect. If organisational decisions are taken so that they also serve the human side, management will need to invest much less effort in motivating their subordinates. This new attitude to the question of motivation and organisations is behind a new management discipline also starting off in the 1960's – the discipline of *Human Resources Management*.

#### 4. The dissemination of systemic thinking

Hunger, Fascism and Communism motivated millions of people to emigrate (mainly) to the United States in the 20<sup>th</sup> century. Among them were representative scholars of psychology, biology, sociology, mathematics, philosophy and other sciences, some of them relevant for management and organisation theory as well: A. SCHÜTZ<sup>17</sup>, L. VON BERTALANFFY<sup>18</sup>, P. DRUCKER, A. KOESTLER<sup>19</sup>, K. POPPER<sup>20</sup>, I. LAKATOS<sup>21</sup>, P. FEYERABEND<sup>22</sup>, and others. It is them who continued the export of contemporary continental world-views rooted deeply in the thought of the Viennese and Frankfurt Schools of Philosophy to the Anglo-Saxon academic world, together with such developments as systems theory or the modern theory of science. Engineers, physicists, biologists from Middle Europe took part in most historic projects of American modernisation from the creation of the T-Model<sup>23</sup> to that of the A- and H-bombs<sup>24</sup>.

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16 Douglas McGregor (1906-1964), psychologist, the developer of *Theory X* and *Theory Y*, a dualistic model of mechanistic and humanistic managerial worldviews.

17 Alfred Schütz (1899-1959), Austrian-American sociologist, philosopher, author of a number of important articles and books forming American sociological thinking of his age such as *Der sinnbare Aufbau der sozialen Welt: eine Einleitung in die verstehende Soziologie* (1932).

18 Ludwig von Bertalanffy (1901-1972), Austrian-American biologist, the father of General Systems Theory, author of *General Systems Theory: Foundations, Development, Applications* (1968) and a number of other books and articles.

19 Arthur Koestler (1905-1983), Jewish-Hungarian born British polyhistor, author, thinker. His work, *The Ghost in the Machine* (1967) discusses human behaviour in the light of open systems theory.

20 Karl Raymund Popper (1902-1994), Austrian-born British philosopher, founder of the London School. Probably the most influential thinker of the 20<sup>th</sup> century.

21 Imre Lakatos (1922-1974), Jewish-Hungarian mathematician, philosopher, a follower of Popper.

22 Paul Feyerabend (1924-1994), Austrian born American philosopher. Continued (and challenged) Popper's work, laying new foundations for 21<sup>st</sup> century thinking.

23 József Galamb (1881-1955), Hungarian born American mechanical engineer, worked for Ford Motor Company since 1905. Designer of a number of parts of the T-Model, inventor of the production line (1913).

It is enough to mention, that one of the most influential thinkers in the United States these days was called ALBERT EINSTEIN.

## 5. The leadership revolution

It was about 1943 when the leaders of the American armed forces recognised that officers coming from middle- or upper-class families and educated at the best military academies did not always meet the expectations of their superiors. On the other hand, astounding results were shown up by sons of the lower classes: the children and grandchildren of emigrants, workers, etc., who had no military education whatsoever.

There could be only one conclusion: the traditionally accepted thought that the sons of successful generations constituting the upper classes, due to the “successful” characteristic features (and genes) of their forefathers, have a higher potential to become good leaders, failed. “Everybody” can be a successful military leader, if in the course of their training, education and development the right impacts form their skills and capabilities, experience, knowledge and thinking. Due to this recognition, the armed forces began to put special effort on the selection and training of future officers, considering wider and wider layers of society for eligible. Leaders from then on are not born, but made. New questions were asked from then on in management theory: “How does the successful leader behave?” “How can he develop this behaviour?” and “How can this process be modelled for school education?”.

Answers to these and similar questions were provided by leadership style models researchers such as R. LIKERT<sup>25</sup> at Michigan University<sup>26</sup>, or E. FLEISHMAN, A. HALPIN and B. WINER at Ohio State University<sup>27</sup>. While Likert managed to prove the overall superiority of a participative leadership style over more autocratic ones, the Ohio researchers – to everyone’s surprise – had to conclude, that there is no “royal way”, there is no one best leadership style. The quality of leadership depends on a successful match of leadership styles and situational factors. A good leader has to know not only how to behave, but also under what circumstances which style s/he should use.

This tendency was slowly followed by other branches in the social reproduction system of managers and leaders: civilian universities, training institutions for business and public administration opened for beforehand unacceptable or underprioritised groups. Also education methods began to change – evening classes, correspondence and distance learning programmes offered more and more opportunities for the working citizen. Management and management education, we may state, began to be more and more democratic in the second half of the 20<sup>th</sup> century, and one of the causes behind this was the “leadership revolution”. A new channel of social mobility opened for everybody.

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24 Just to mention two of them: Leó Szilárd (1898-1964), Edward Teller (1908-2003).

25 Rensis Likert (1903-1981) management and leadership theorist, founder of the Michigan Institute for Social Research.

26 Likert, R., *New Patterns of Management* (McGraw-Hill, 1961) and *The Human Organisation: Its Management and Value* (McGraw-Hill, 1967)

27 Fleishman, E. A., “The Description of Supervisory Behavior” *Personnel Psychology* 37 (1953), 1-6  
Halpin, A. W., and Winer, B. J., “A Factorial Study in Leader Behavior Descriptions” in: R. M. Stodgill and A. E. Coons, *Leader Behavior: Its Description and Measurement* (Ohio State University, 1957)

From then on, the main educational question was not *who* may be an applicant, but *how* to develop better officers, better managers, better leaders. But this is subject of another story.

## Conclusions

War economy conserved a Tayloristic approach to management in the United States so that despite the theoretical developments in humanistic psychology and social psychology the 1940's and 1950's it remained the decisive line of management thinking. The war, however, also stimulated the appearance of new approaches and urged the headquarters to provide the necessary means for their elaboration. This period in the history of management theory added valuable input to management science as well as encouraged new lines of thought to abound. Together with the social and societal changes that have taken place there and then, the effects of the 2<sup>nd</sup> World War to the United States helped the widening of democracy in social, political and economic terms as well as opened ways for the coming of participative and democratic management styles.

## Readings

1. Laurie J. Mullins, *Management and Organisational Behaviour* (Pitman, 1985)
2. Martin J. Gannon, *Management; Managing for Results* (Ally and Bacon, Inc., 1988)
3. Andrej Huczynski and David Buchanan, *Organizational Behaviour* (Prentice Hall, 1985)
4. Raymond E. Miles, *Theories of Management: Implications for Organisational Behavior and Development* (McGraw-Hill, 1975)
5. Kile Bruce, "Henry S. Dennison, Elton Mayo, and Human Relations Historiography" *Management & Organizational History* Vol. 1, No. 2, 177-199