

IMPOSSIBILITY OF ATTAINING THE PERFECT PERFORMANCE

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ABSTRACT

Early on, the classics of management and organisational science created and dreamt up organizational worlds and operating systems capable of high performance with the given resources. In theory, the system works perfectly but in reality there are only a handful of exceptional success stories on this field. They are the unconventional organisations (Németh, 2009). In my opinion, some of the reasons of such failure include the errors, mistakes and biases in the decision making process. I am going to present some in the current study to better understand and raise awareness for such phenomena. This is the next step for better and more efficient organisation.

1. Introduction

Over the past centuries, organisational and management science has long reached the limit on the level of models and approaches where we more or less have a clear theoretical understanding as to how more efficient production may be reached. What works perfectly and logically in theory can, however, hardly ever be accomplished in practice, much less in a sustainable manner and in a long term. Due to limitations of space, my short study only illustrates that the classical authors of scientific management have reached a sort of high emission level that seems to be optimum in terms of resources. In the second half of the study, I name the thinking pattern of the human factor (perception and decision making biases) as one of the reasons for errors and under-performance. I started off with some basic works on economic behaviour and its special (by that I mean irrational or those that appear irrational to outsiders) such as Katona (1951), McGuire (1971), Scitovsky (1990) or Arieli (2011).

2. A short history of the early period of management science

The first clear signs of business related management and organisational issues surfaced with corporations in the 19th century after the Industrial Revolution. The priorities of management and organisational science have changed frequently over time with each period outlining different needs. Back then the key issues of organi-

sation focused on production with production policies as well as centralised production control and design functions.

Since the 1930s, the system of social relations and the issue of human motivation were of primary importance to be followed by operational research. Beginning in the 1940s, leveraging research for military purposes aimed at the quantification of decision issues (feasible for short-term well-structured tasks). The 1950s brought about the period of system analysis, the development of economic cybernetics and system behaviour on the whole. The new trend that began in the 1960s was coined with the terms strategic planning and strategic management. Strategic planning was needed because managers were faced with badly structured decisions and, for the most part, they made their decisions intuitively. Later it was replaced by total strategic management with organisational changes and corporate culture as the key values. Beginning in the 1980s, Japanese management methods focusing on quality brought along new ordering principles. The cognitive approach of the past decade has placed the emphasis on understanding the human thought process; the discovery of the information processing mechanism in the brain (earlier Barnard or Simon, later Winckens and Rasmussen (all quoted by Izsó, 1997)); the elimination of the errors of thinking and making judgements and a better understanding and improvement of complex decision making processes. Decision support systems have become available for everyday use both on the hardware and the software sides. These tools help decision makers avoid making certain typical mistakes in terms of human perception and decision making; however, they do not completely solve those issues.

2.1 The classics of Scientific Management: the era of Taylor, Fayor, and Weber (1880–1920)

The first scientific studies of the second half of the 19th century were written by authors like Charles Babbage, who highlighted the importance of the human factor and the usefulness of division of labour. An example: “The Babbage Principle says that labour costs can be lowered by employing a diversified workforce qualified for the specific tasks;” (Kieser, 1995).

The classical trend emerged around the turn of the 20th century. This trend basically includes three schools: Scientific Management, Administrative and Structuralist approach (Kieser, 1995).

Scientific Management was born in the United States and formulated general rules for the organisation of work. This school’s objective is to organise work to allow employees perform their best. The founders of this school were Frederich W. Taylor as well as Frank and Lillian Gilbreth (Taylor, 1983).

Due to the recession, F. W. Taylor (1856–1915) had to begin to work as a day labourer despite his qualifications in 1878. He climbed up the ladder quickly as he proved to be an excellent skilled worker. He earned his engineer degree in night

school and in few years' time he became the factory's chief engineer. The observations he made in various positions led to the results attained in the latter phases of his career. His book is based on the 30 years he spent observing and experimenting. As an industrial engineer, he was preoccupied with labour efficiency. He discovered a phenomenon he later called "soldiering". (Later social psychology research has confirmed the existence of the phenomena of social slacking (Latané, Williams and Harking 1979), the free-rider phenomenon (Stoebe and Frey, 1982) and the Ringelmann type (Kravitz and Martin, 1986) coordination loss (Steiner 1972, 1976) (they are quoted by Wilke and van Knippenberg, 1997). He is known for the rationalisation of corporate activities, the formulation of the design and management background, the principle of functional masters (assigning leaders to subtasks), the principle of time and motion studies and for the development of the motivation system based on wage benefits.

Taylor examined all jobs and roles and identified the most efficient way they can be carried out. He introduced the system of product wage. He redesigned job descriptions and introduced rest periods. He later quit and became an independent consultant. His methods improved performance and morale. His system is built up from four different steps.

First step: The manager first has to develop all elements of the specific job, i.e. study the specific work and identify the method of work to replace the previous "rule of thumb". Second step: The manager has to select, train and educate employees on a scientific basis as opposed to the earlier system when everyone picked his/her job and studied wherever and however it was possible. To avoid that, training for jobs has to be standardised (reference to the Babbage principle). Third step: The manager has to 'kindly' cooperate with the workers to facilitate working methods developed on the basis of scientific principles. This will allow the manager to ascertain that the workers have accepted the 'one best way'. By doing so, he recognised that man is not simply a 'biorobot', yet he rather despised manual labourers and considered them unintelligent. Fourth step: The manager has to take on design and organisation responsibilities to allow workers to carry out their tasks. This latter principle clearly separate white and blue collar workers.

Other members of the Scientific Management movement included F. Gilbreth, who used the now classic example of a bricklayer to illustrate the rationalisation of masonry. He was primarily interested in the welfare of workers. At the same time, he established the technical foundations for the filming version of motion study. As a deputy of Taylor, Henry Gantt developed the 'Gantt chart', which uses a chart format to allow a more easier understanding and analysis of task scheduling.

Critics of Scientific Management pointed out the lack of experiments, the low number of observations, and samples being taken without statistical means. It is a fact easy to observe that a systematic wasting of workers' expertise causes problems. Increasing product range and innovation rates necessitate the hiring of more workers with higher skills. The job description, therefore, should be broadened.

During the same period in Europe, the Harzburger Model (Kieser, 1995, p. 210) presented an alternative to the management theory based on the following principles: The decision is made by the employee to whom it belongs. Employees are led by managers within the overall framework of company objectives. Superiors may only make a decision if by doing so their subordinates would cross their lines of authority. The basic principles regulating the relationships of colleagues have to be put in writing and enforced to avoid misunderstandings. Job descriptions provide a detailed list of the responsibilities of workers. Due to its narrow and inflexible framework, this model was replaced by the MbO concept (management by objectives) where “each worker should negotiate with their superior”. As Peters and Waterman (1986) explained in their book, this is a more flexible approach.

The Administrative Management school of thought focused on the organisational structure as opposed to the Scientific Management school, which is more interested in the works of individual employees. This school is represented by Henri Fayol (1841–1925)(Fayol 1984), who developed a number of management principles he believed were universal and increased management effectiveness. These principles include the following: Division of Work, Authority–Responsibility, Discipline, Unity of Command, Unity of Direction, Subordination of Individual Interest to the General Interest, Remuneration, Centralisation, Scalar Chain, Order, Equity, Stability of Tenure of Personnel, Initiative, *Espirit de Corps*.

Fayol outlined the elements of management in the context of planning, organising, direct leading (commanding), coordinating, and controlling. This trend was never as popular as that of Taylor. (Taylor 1984; Bakacsi 1996; Klein 2001) Other authors from the era such as Chester Barnard contributed to the understanding of the distribution of authority and power within the organisation. Mary P. Follett was active in the fields of setting objectives and conflict management (Jones and George, 2002), Lyndall Urwick, and Gulick tried to integrate the central principles of scientific management with the concept of administrative management (Weber 1967, Horváth 1999, p. 46).

The most well-known representative of the Structuralist school (formalist organisational theory) is Max Weber (1864–1920) (Weber 1967), one of the greatest figures of modern civilian sociology, who identified the concept of bureaucracy. Weber outlined his own principles on the division of work, competencies, norms, hierarchy, and documenting. He even identified management typologies, including three types of managers, i.e. patriarchal, charismatic and bureaucratic.

Weber’s bureaucratic management method is characterised by clearly regulated bureaucratic division of work; solid regulation of authorities and distribution of commanding authorities; the principle of bureaucratic hierarchy and service path; written documentation of administrative activities; creating an office staff responsible for document storage and management; enforcing the principle of professionalism requiring qualifications for all specific bureaucratic activities; office posts occupied by full-time clerks whose performance is measured with

formal and impersonal procedures; changes in personnels do not affect performance requirements; bureaucratic work is carried out along universal, more or less recorded, comprehensible and learnable rules whose knowledge and enforcement are expected from clerks; clerks can exercise their impersonal and regulated power independently (autonomously); clerks fulfilling their duties receive clearly specified remuneration: fixed wage, promotion process, increased wage and authority, guaranteed pay after retirement.

Weber believes that the advantage of the bureaucratic management model is that, due to its nature, it guarantees accurate, quick, economical, cheap, objective and professional administration. This is a formal model (Zeller, 1995).

Criticism inspiring to further develop the bureaucracy model: organisations are different and, therefore, no general description may be applied to them. Technically speaking, they are efficient only under special circumstances, which need to be identified in each and every case. Every single organisation shows some characteristics of dysfunctionality that reduce efficiency. According to Merton, it is first and foremost the structure of bureaucracy that prevents the system being efficient (Merton, 1980). Other disfunctional elements may include the archives characteristic causing cumbersome and slow operation, excessive increase of regulations and conflicts raised between specialists and bureaucrats (Merton, 1988).

We have not yet talked about the father of mass production even though he had played a crucial part in advancing scientific management in the right direction. He was Henry Ford and his organisational principles were called Fordism (Kieser, 1995; Klein, 1998). Fordism was more of a production control and organisational system rather than a system of management principles. Ordering and systematic arrangement to ensure that materials have to travel the shortest possible distance. His theory on forwarding transport facilities, tools and finished work pieces, the first use of assembly lines, the broad-scale standardisation of products, and the exchangeability of parts are the main areas where Henry Ford left a lasting imprint.

In summary, if scientific management had developed only this far, we would have a relatively well operating system. We can talk about organisations operating on the basis of rational organisational processes and along the job descriptions of individual contributors (employees), which somewhat fit their individual objectives (because they consulted with their superiors based on MbO). Employees are selected and trained for the specific tasks based on their competencies (the right person to the right position). Managers think long-term and are real managers because they understand and know what their managerial tasks entail. Communication channels are well-defined: everyone sends and receives data and information required for the perfect completion of their work. Nowadays, if a company can be characterised by the above, it is considered a sought-after workplace by employees. The question is why such a workplace cannot be established even though we have known the principles for almost a century.

3. Why do we make decisions only almost rationally?

The section below is a sort of subjective collection of perception and decision biases that affect the implementation of the rationally operating system described above. Rationally designed systems are implemented by specifically rational people. Simon (1959) was one of the first authors to write about the limited rational operation of man, the one I previously described as specifically rational. Accepting the fact that man is by nature a creature with limited rationality meant a huge leap compared to the completely rational image of man represented by economics before. Back then it seemed that the fight is futile because it is impossible to find a system in an individual's decision making mechanism. This is so because seemingly irrational actions can be found when observing an individual because there are subjective decisions in the background. It is crucial to understand that individuals hardly ever see themselves irrational, i.e. from within everyone is completely rational as most of the time their decision making biases remain invisible. In terms of discovering the topic and locating the underlying system, co-authors Tversky and Kahneman have made valuable contributions (see their recommended works in the comment). The current scientific opinion is somewhat comforting in that these biases and distortions are not simply irrational but may be mapped out because they are regular and predictable (Ariely, 2011).

As for our topic, we have to distinguish between experience and expertise because the blurred limits between the two often result in significant slips in the world of organisations. Experience is defined based on the feedback loop with its repetitive presence, which is not sufficient by itself to reduce the impacts of biases (Neale and Northcraft, 1989). Expertise, however, involves recognition of the factors limiting one's rationality, which the literature calls General Bias Awareness (Kaufmann, Carter & Buhrmann, 2010). So the people we need to build a better future and a more efficient and perfect organisation and to lead the way are management and decision making professionals.

Cognitive biases are similar to optical illusions according to Pohl (1994). The decisive factors of their similarity involve deviance from normative standard, systematic deviations (i.e. not random but predictable differences). They happen inadvertently and automatically and, as a result, they are really hard to avoid. What do these cognitive biases entail? Piatelli-Palmarini (1994) summarised them using the following eight characteristics: General, systematic, directional, specific, being influenced from outside, hard to correct, hard to transfer, furthermore, independent from intelligence and qualifications. Publications have identified over 60 different biases and errors (Groth, Lubin and Sprung 2012). Focusing on business decision makers, Bazerman (2006), following the footsteps of Kahneman and Tversky (1973), lists 13 systematic, intuitive biases that are recurrent and robust in terms of the frequency they are committed.

Availability heuristics	Anchoring
Basic frequency error	Confirmation error
Insensitivity to the volume of the sample	Design error
Disregarding regression to the average	Retrospective bias
Conjunction mistake	

This list is easy to be supplemented with the most frequent biases represented in financial decisions such as overconfidence (Bazerman, 2006), the impact of self-attributing bias (which is known as basic attribution error by social psychology (Heider, Simmel, 1981)) or representational heuristics.

The excellent study by Busenitz and Barney (1997) pinpoint differences in the decision making processes of different groups of decision makers (managers of corporations and those of SMBs). Corporate decision makers with better structured and professional decision making processes were less exposed to heuristics and biases than entrepreneurs.

3.1 Decisions are indeed needed for organisations

Through their members, organisations have to be able to adapt to their changing environment as the rule of evolution in the world of organisations put it (Csanádi et al 2010). Decision making errors can be found at virtually any level of organisations. These errors are made by individuals as well as groups (the phenomenon of ‘group thinking’, Janis, 1971). Groups do not protect you from the errors of decision making but because of group dynamics, they actually make the system even more complicated. There are biases and errors visible in everyday decision making situations as well as on a strategic level. With regards to the organisational world, we cannot talk about pure decisions because the organisational culture and the organisational politics related to that significantly influence the perception and decision making repertoire of the person making the decision. We live in it and thus we are mostly blind to the operational motives of our own culture.

3.2 What’s wrong with intuitive decisions?

Basically nothing except that they are hard to reproduce. A system that tries to be self-sustaining, attempts to learn what keeps it alive and, in an ideal case, also tries to copy decisions. If a process can only be explained on the level of emotions, then the copying system is in trouble because it can only work with incomprehensible subjective factors. Systems prefer rational, repeatable and justifiable processes that can be derived mathematically because this is what can be copied and reproduced easily to maintain quality. Anticipation and intuition can significantly help managers and decision makers. However, other members of the system expect explanations right after the decision which they can understand.

4. 'Debiasing' offers a solution

The literature uses the term 'debiasing' to reduce the impact of cognitive biases on decisions (Bazerman 2006). The term refers to processes and techniques designed to allow the decision maker to mitigate or even prevent the impacts of cognitive biases in the decision making process.

It was also Bazerman (2006) who categorised such attempts and methods into 5 large categories: (1) acquiring experience and expertise; (2) analogous reasoning; (3) assuming an outside perspective; (4) replacing human decisions with linear models and other statistical means; (5) understanding biases in other people's decisions.

While making a proposal to change the decision making strategy, he lists 3 critical steps: (1) clarification of the presence of specific decision making errors; (2) identification of the causes and sources of errors, i.e. understanding the bias and heuristics; (3) ensuring that the decision maker would not take the identification of these errors as offence against their self-esteem. Since Goffman (1999) we have known how important an operation is to maintain the face of the individual, especially when that person is a manager.

The most efficiently operating organisations like Toyota, which is regarded as the company that depends on Taylorist principles the most (Liker, 2004), have found the perfect path of building the organisation and this path may even be one of those described by the 'classics'. However, managers of all modern and successful companies agree that now we know more about man as an individual, as a group member and as a member of an organisation. And it is really worth using this knowledge. For instance, as to how we create a productive and sustainable organisational culture based on working organisational values, how we can motivate and keep talented people in the long run or how we can help our colleagues to make less intuitive and more rational decisions.

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