

DOES TECHNOLOGY WIN OVER HUMANS?

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Abstract: *The dynamic development of the world is realized by changes in the current state, i.e. innovations, the parameters of which would allow relatively fast, even incomprehensible effects, from which competitive advantages and financial benefits are expected. On the contrary, it delivers quantitative values without their desirable quality that would satisfy the demands and expectations of innovation. Responsible management requires not only quantitative values, such as project or material and costs incurred, etc. It requires qualitative innovation to meet the ethical needs and social interests of the surroundings, and not just of the customer or the producer.*

We are talking about quantitative and qualitative innovations. Quantitative information can be tracked to a large extent during the implementation of innovation through the supplier's technical inspection. The qualitative values of innovation are gained by demonstrating its usefulness by observing technical and economic parameters, ethical and legal requirements and goals. It is too late to judge the qualitative values of innovation after their implementation.

Solving the problems of the current state or activity depends on the quality of decision and the definition of invention. It differs according to the degree of respect for the principles of managerial ethics and the difficulty of innovation. This is true regardless of whether the decision concerns a working or personal environment. It is certain, however, that only humans are able to decide and ethically solve the problem. Effective decisions depend on the level of responsibility and respect for ethical values when designing and implementing innovation.

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1. INTRODUCTION

Decision-making is both the input and the output of human activity in society. It manifests itself by solving problems that are a priority of the need or interest of an individual or society as a whole. It concerns the decision-making processes of the development of management theory and practice that are limited to solving specific situations or problems without respecting the existence of contexts that are related to and affect the problem. Ethical and systemic solutions to problems require complexity and maximum knowledge of their effects or causes. Effective decision-making requires respect for the integrity of the solution, which contributes to a relatively long-lasting and effective outcome.

An example is the dynamic development of new technologies which the society is not prepared for. These can be the additions to material needs and equipment accessories, or the requirements

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of social conditions that adequately increase productivity or quality of work done, etc. The time lag that arises from the origin of the invention or correction of earlier decisions reduces the effectiveness of the discovery and quality of decisions. In addition, it creates time for the application of unwanted activities, such as corruption, clientelism, or unfair business and political activities.

2. WHAT DO EFFECTIVE INNOVATIONS REQUIRE FROM A MANAGER?

If we make decisions only on the basis of quantitative information, our decision concerns only the quantitative values of solved problems, which produces quantitative management. Since every innovation requires a comprehensive solution, we must also respect the existence of the qualitative values contained within the addressed problems. The qualitative values not only result from, for example, the quality of material, but also from the quality with which the quantitative values were obtained. Ethical values reflect the ethics of management theory and practice, on the basis of which innovation was taken to benefit the society. This implies the importance of managerial ethics.

If we talk about the qualitative values of management, their real values can be difficult to read by technology, because we are not able to quantify them yet. When innovations do not respect the unity of quantity and quality, we are talking about quantitative management that enables consumerism. On the contrary, qualitative management complements the quantitative values of innovations by their properties and social benefits. It creates a prerequisite for the ethical and legislative climate in entrepreneurship and public administration.

The application of managerial ethics is important when deciding on strategic goals for transparent and integrated administrative cooperation. It requires integrated information that can be obtained on the basis of relatively wide cooperation not only from the internal structure but also from the professional environment, which contributes to the innovation process efficiency. In his time, Karel Čapek said that democracy is primarily based on ethical values. Transparency and responsibility concerns everyone who decides at work or on their own. The systematic application of managerial ethics in management theory and practice ensures its responsibility (Figure 1).

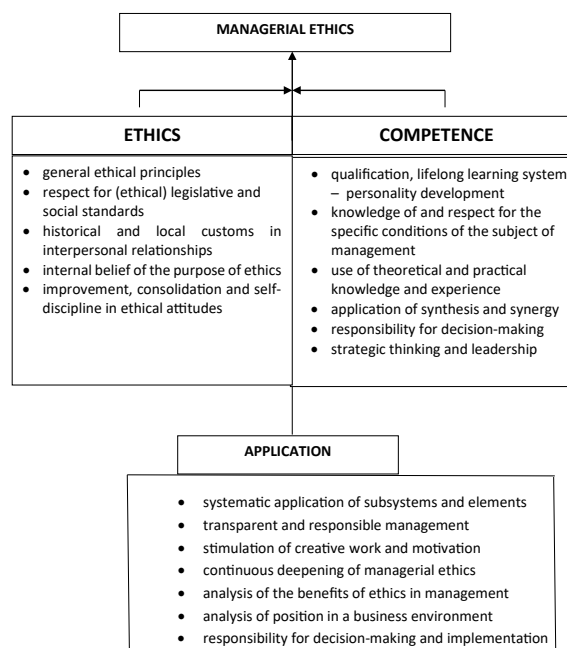


Figure 1 – Elements of managerial ethics, cf. Z. Dyrtr: Ethical and responsible management

3. IS THERE AN INNOVATION PROCESS WITHOUT MANAGERIAL ETHICS?

An innovation process has its own rules that, if not respected, reduce its efficiency. Innovation has the form of a sinusoid. Upper and lower sinusoidal values tell us whether we are talking about positive or negative innovations.

The rules of the innovation process are continuity, comprehensiveness, consistency and time-liness. Even the decision-making process requires respecting the dynamics of the development of management theory and practice methods, because we generally think of innovation as a change in the current state of innovation. Innovation in management theory and practice cannot be forgotten. We practically call this activity 'management'. The current management development, influenced by the success of technology, is more orientated on its technical side. The advantage is an accelerated solution, but only of the quantitative values of problems. Disregarding the existence of qualitative values requires the application of managerial ethics.

Since the decision-making process has the character of an innovation process, we can consider the individual decisions as a change in the current state, i.e. the creation of an innovation process. The innovation process consists of partial innovations as well as the decision-making process consists of several decisions. Top manager's decisions fulfil the role of stimulating innovation, which is the induced innovation that develops and implements the stimulating innovation according to the conditions of their workplace for the lower management level.

Managerial ethics is an important mean of increasing the integrity of controlled objects and is also important for transparent and integrate cooperation of individual production and scientific spheres. If innovation politics are not complex, it lowers the effectivity of economic and social development and deepens bureaucracy. Managerial ethics increase the responsibility for decision-making processes.

The creation of innovations and their effectiveness is ensured by humans. The results of their work can be beneficial or not. The importance of managerial ethics should therefore be part of education. The knowledge of managerial ethics is desirable to deepen within the education system. Present evidence demonstrates that the quantitative philosophy brings undesirable properties to management theory and practice if applied in the decision-making processes.

The creation of innovations and their effectivity is ensured by humans. The results of their work can be benefice or vice versa. That is why importance of managerial ethics should be a part of educational system. The present is a proof that if quantity philosophy is individually applied in decision-making process; it brings unrented properties in the theory and practice of management.

Therefore, managerial ethics requires unity of quantity and quality so that the decision-making processes prevent undesirable problems from the outset of the invention. It is necessary to innovate the methods and forms of the education system vertical, not only within the management theory and practice, but also to emphasize the need for application of human sciences. It is a human component of ethics that is and remains the role of a person who decides on the content, form and goals of management. With the ability of creative thinking, a person is required to apply acquired knowledge, skills and ethical thinking.

We are currently looking for an answer to the question of what role humans will have in the future society and how they will be ready to address the dynamics of the previously unknown

possibilities of technology. Will it be sufficient to monitor the development of quantitative values and not just to be a monitor of their development?

To what extent should one be responsible for the development of the entire society? There are methods in management theory that can be used to prepare the society for the future. It is already obvious now that the further impact of quantitative management development does not address the efficiency of the economy and that it requires preparation to be a human-manager in the future.

The question is whether it is necessary to prepare for the future? Stephen R. Covey states that the principles will be more important than new businesses for successful leaders. The unity of quantity and quality will increase the efficiency of decision-making processes. We already have experience of disregarding qualitative values in decision-making processes. Incomprehensive quantitative information, as a basis for decision-making, is dealt with *ex post* only after its implementation of innovation. As far as management is concerned, the innovation theory, which is part of managerial ethics and draws from human philosophy, can be applied as a 'management' method. Its usefulness is manifested by the comprehensiveness of decision-making processes in managerial and scientific activities.

Disintegration in management theory and practice exists even in teaching. In the framework of educational processes, the integrity of scientific disciplines is beneficial as it extends the application of scientific disciplines during the creation of study programmes of technical and human faculties. It is the preparation of (primarily university) graduates, so that they can be beneficial for the application of comprehensive working procedures as soon as possible when starting their employment. There is significant cooperation also between scientific institutions and production fields. Effective use of philosophy results from the combination of the existing quantitative values of management and the qualitative ones. Educational institutions should strive for teachers to lead future graduates to achieve individual success and competitive advantages by applying ethical methods.

4. PREREQUISITES FOR APPLYING MANAGERIAL ETHICS

The ability to develop the courage to innovate and the ability to take responsibility for invention, i.e., the ability to solve what a new state of affairs and relationships should be;

The ability to overcome the state of production or other activity in imagination, i.e. the ability to imagine that things and relationships could be different than they are now;

The ability to develop the courage to innovate and the ability to take responsibility for the implementation of innovation;

Manager cannot overlook the creativity of their subordinates and degrade it to inaction. They cannot claim the right to be the only bearer of fantasy and inventiveness, even if they are ultimately the ones who take responsibility for the innovation implemented. The use of creative capabilities of the company's staff is the basis of the theory of knowledge-based economy, developed since the beginning of the 1990s;

Business strategy, as well as the strategic goals of scientific and educational institutions, makes it possible to overcome the deepening of quantitative management in decisions, being the output activity of management and fulfilling the role of innovation. Thus, it positively changes the current development of the problem in question and increases reputation or corporate culture;

Specific conditions of considered innovations tell us about the uniqueness of the subject of management and influence the measurable quantitative values of the given innovation. We consider them to be the factors that make innovation a success. This is related to the comprehensiveness and relative equilibrium of the development of all factors that must be respected by everyone who makes decisions. This is true for everyone who decides, whether on their own or at work.

The rule of comprehensiveness in decision-making processes shows the level of management from its preparation to its final implementation. In essence, it is the application of the principles of innovation theory that demands a balanced development of factors. Responsible management should respect all the rules of innovation theory, continuity, comprehensiveness, timeliness and consistency.

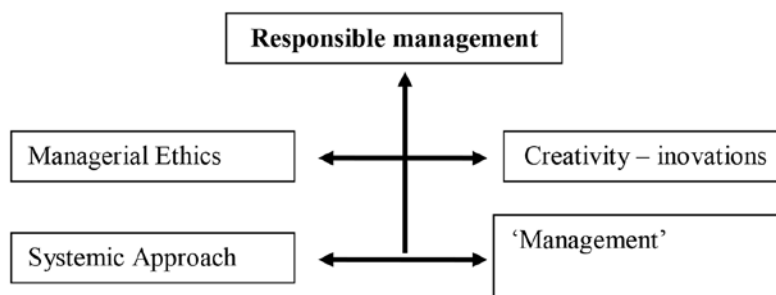


Figure 2 - Responsible management

This means that the stimulating innovation of the top manager is supposed to show economic, technical, administrative and social contexts and goals as stimulating innovation. Its development is considered to be the induced innovation of lower management levels. They participate in the form of induced innovation on the basis of their own specific conditions, within a set of individual factors of stimulating innovation. This ensures the integrity of subsystems and the comprehensiveness of decision-making processes of stimulating innovation. Creative teamwork is an advantage of the decision-making processes of individual management levels of a managed organization. The more complex and costly the innovation, the more challenging the innovation process is. A similar approach is also desirable for small and medium-sized organizations.

5. CONCLUSION

The rules of the innovation process (continuity, comprehensiveness, consistency and timeliness) must be respected as they are a prerequisite for implementing the effective innovations. Let us add the characteristics of the last two:

- **Consistency** requires a monitoring of decision-making on a project from the creative form of innovation to its implementation. It is the shortest time to find out the reasons for the derogations from the project or the management level at which they were created and why. Derogations of quantitative values can be detected relatively easily using analysis and computing. The consistent monitoring of causes and their range is more demanding with the values of qualitative character that cannot be numerically displayed.

It is necessary to work with the experts on the vertical management of the organization who are not yet ready for or led to ethical cooperation and loyalty.

- **Timeliness** is an important condition that requires the continuous development of the innovation process. When a functioning innovation implies a reduction in its efficiency, the process must be revived by a new innovation to ensure the efficiency of the desirable process. This is one of the most difficult decisions to be taken by a manager. The manager has to make their decision at a time when the original innovation is still functional to prevent chaos in the subject of management. It is necessary to determine the right moment for the implementation of a new innovation that would build on the original and not cause a diarchy, that is, chaos. It depends on the speed of decision and implementation of the solution. (1)

The inspiration and prerequisites to develop a dynamic development of technology are given to humans who, to survive historically, have had to fight nature and enemies from the outset of their existence. Genetically, they have worked to make innovations not only a development precondition, but also a requirement for their further development. Improving their development was a matter for humans, even though they had no idea of the current possibilities at that time, but the changes since the beginning of the development of society were innovations. Therefore, there is no reason for humans not to be considered as the primacy of innovative work.

However, the scope and dynamics of technological development at the present time requires further human activity so that the development and its dynamics, as a process, are intensified economically. Let us search for causes:

Reasons for the absence of cooperation in management theory and practice

Management goes through disintegration in its theory and practice. Its cause is a quantitative form of management that fails to respect the qualitative values forming unity and important tools for the intensification of decision-making processes. Failure to respect the unity of quantity and quality stems from generational problems of managers, the differences in the specific conditions of workplaces and institutions, and the extent of the requirements of public administration. Disregarding managerial ethics, which is the basis for qualitative management, is also an important reason.

The lack of cooperation between ministries and institutions, as well as among co-workers, is an important cause. Individualism in society is the consequence of quantitative management, which, although it produces competitiveness, is limited to quantitative values. It is a systemic breach of unity that creates room for maximizing human effort, but without managerial ethics.

The society pays for the lack of managerial ethics by the development of consumerism in various forms of corruption, clientelism and populism. To overcome it successfully, it is desirable to respect the qualitative management values in both the theory and practice since the formation of the objectives of decision-making processes. The actual decision-making process can then be managed as an innovate process, while respecting its rules.

The path to overcome quantitative management is challenging. It is therefore desirable to include the theory of managerial ethics that respects the unity of quantity and quality within the decision-making process in the teaching process. Decision-making affects everyone, because

we all decide about ourselves and about our job at work. An example is management education at universities of economics that do not use the appropriate parts of other disciplines in their curriculum. Ethical cooperation would also contribute to increasing the efficiency of decision-making processes. An example is philosophy and its meaning in management theory and practice. It is the influence of quantitative management that does not respond to the dynamics of technical development of the society. The cooperation of theoreticians and practitioners within the fields of science would also benefit from innovation in management theory, which can be called 'management' and the relative comprehensiveness of social development.

The required teaching of managerial ethics at universities would not be enough to implement qualitative management if it did not build on the knowledge of lower levels of the school system. It should be remembered that the system of school education is linked to the influence of family and the level of social culture. Quantitative management creates a special way of acting and thinking in the society. It is comfortable for people who enjoy an undemanding way of life and rely on the care of society. However, this is related to consumerism with all its consequences.

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