

## Beyond the Rationality of Scientific Management: Improvisation, Heuristics and other Concepts of Modern Management

The heyday of scientific management occurred in the first two decades of the twentieth century. Its most striking characteristic was the insertion of rationality, characterized by the incorporation of the process of control, analysis and improvement of the organizations' workflows. The search for economic efficiency and, later, for the quality of the work guided the development of a great theoretical framework that we call management theories. It is undeniable that the adoption and application of the scientific rigor of the exact sciences in the then incipient field of Business Management, which would be consolidated with the demands caused by the Second World War, brought many gains to managers and organizations. However, the growing appreciation of the human component by society and organizations, globalization, technological innovations, among other events, brought new challenges to organizations, highlighting many inconsistencies and inadequacies of some precepts of classical management theories.

We have witnessed the questioning and rethinking of many of the canons of classical management theories. Some actions considered until then as true sacrilege in the light of classical management theories started to be not only accepted, but also recommended as authentic innovations and incorporated into the set of best practices of organizational management. In this letter, we explore one of these great canons of Business Management reviewed, more specifically the transition from structured and rational thinking, as the only acceptable line of theoretical and practical conduct, to a posture of acceptance and exaltation of its opposite, the improvisation or the unplanned. We will explore this concept in three different areas of management, highlighting its pervasiveness in modern management theories.

Take the decision-making process as an example. The classical management theory motivated the generation of a multitude of algorithms and models for decision making in complex environments, the Analytic Hierarchy Process (AHP) being the most traditional and widespread of these. Such models demand the definition of criteria considered important by the managers for the decision, as well as the weighting for them. These models work well in decision-making where all relevant alternatives, their consequences and probabilities are known, and where the future is certain (concept of "small world" according to organizational psychology). However, the decisions of the current business environment are increasingly complex; they are inserted in the opposite context, of the "large world". Complex decisions always confront us with relevant information that is little known by the decision-making group or that must be estimated from samples, and where the future is uncertain, violating the conditions of rational decision theory. For complex decisions, where there is a lack of information, organizational psychologists observe that the adoption of simple heuristics proves to be more accurate, faster and cheaper than rational methods. The heuristic can be understood as mental shortcuts due to considering fewer criteria, reducing data collection efforts, criteria weighting, as well as shorter analysis time. Thus, the "less-is-more" concept is obtained, in which less information or calculations lead to more accurate and faster judgments, more adequately meeting the demands of the contemporary "large world".

Another area of Business Management that shifted the axis exclusively from procedural rationality to a more creative and proactive posture was operations management. Classical business management brought the concept and practice of well-defined and standardized routines, with very well defined rules and policies, with deviation or disrespect for these being characterized as a serious failure by the executor and the manager. The search for more flexible workflows for the adequate treatment of the unexpected (or exceptions), which are part of the evolution of open systems and of the particularities in meeting the needs of each client (principle of "customization"), demanded more autonomy and empowerment of process operators and managers. As a result, organizational improvisation, until then disowned and

disregarded by organizational theorists, is now perceived as a fundamental characteristic of modern business processes. The modern Business Process Management System (BPMS) allows process managers and even their operators, if managers wish, to handle exceptions that may occur in instances or transactions of their process. Thus, the BPMS allows changing the predefined work script for that instance, allowing it to follow a different and alternative path, if it is duly justified, with audit trails activated and respecting all good accountability practices, that is, autonomy with responsibility. Thus, organizational improvisation not only helps to solve day-to-day problems, but also allows expanding the adaptive capacity of companies in the face of increasingly dynamic and constantly changing business environments. Improvisation comes to be understood as one of the main resources of Disorganization Theory, an important tool to support the resilience of companies, a core capability for contemporary organizations.

The encouragement of organizational improvisation and the use of heuristics provides an environment that increases the innovative capacity of organizations, explored by the most recent practices of innovation management in organizations. In this new context, the challenge of designing new products and services, or even new versions of them, is not considered an exclusive challenge for a research and development (R&D) center, which incidentally does not exist in most small creative companies. Alternative innovative strategies, such as employee-driven innovation or customer-driven innovation, value and encourage other people, in addition to R&D professionals, to create, propose and implement new products, services or changes. In addition to the classic creative tactic of invention, more intellectually challenging and much more difficult and rare to occur in organizations, a broad set of heuristics is considered, simpler to be applied by all employees. It starts to value and encourage various heuristic actions, such as frugalism, exaptation, adaptation, degradation, improvement, the action of attributing use to idle resources or productive residues (nonadaptation spandrels), as well as considering the use of resulting from “creative failures” (nonadaptation junk).

Our objective in this first opening letter of “Letters to Innovators” is to highlight the field of organizational management as a very rich and prolific environment for insertion of innovations. Exploring two concepts, improvisation and heuristics, we observe how substantial changes have occurred in the way scholars of organizational theories think, as well as how modern managers act. It is fundamental to think and discuss organizational innovations in an integrated way, interweaving theory and practice, in the simplest and most direct way possible, showing the alignment between management theories and the best organizational practices.

Dr. José Osvaldo De Sordi  
Federal University of São Paulo  
osvaldo.sordi@unifesp.br

#### Further reading:

De Sordi, J. O., de Paulo, W. L., Jorge, C. F. B., Hashimoto, M., & Meireles, M. (2022). Exploring organisational improvisation through the experience of small business managers. *Technology Analysis & Strategic Management*. Advanced online publication. <https://doi.org/10.1080/09537325.2022.2156335>

Gigerenzer, G., & Gaissmaier, W. (2011). Heuristic Decision Making. *Annual Review of Psychology*, 62(1), 451–482.

Kheirandish, R., & Mousavi, S. (2018). Herbert Simon, innovation, and heuristics. *Mind & Society*, 17(1-2), 97–109.