

A black and white portrait of Henri Fayol, a man with a full beard and mustache, wearing a suit and tie. The text 'Henri Fayol (1841 - 1925)' is overlaid on the left side of the image.

Henri Fayol
(1841 - 1925)

□ The foundations of the operational decision-making culture in France 4/4

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le colonel Fabrice Clée

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Histoire & stratégie

Let us therefore see how, taking into account the problem of decision making, sociology, management and cognitive sciences have endeavoured to develop models of organizations that guarantee optimal rationality in decision making within companies. The German economist and sociologist Max Weber (1864-1920), considered to be one of the founders of sociology, was interested in the changes that took place in Western society with the advent of modernity. Through his analyses of industrial capitalism and bureaucracy, he focused on describing the process of rationalization of practical action.

At the same time, the American engineer Frederick Taylor (1856-1915) developed principles and methods from 1890 onwards.⁵⁵ leading to what will become the scientific organisation of work (OST). With Taylorism comes the distinction between operational functions and functional services within companies. The operational groups together all the activities and personnel directly linked to the manufacture and shipment of goods produced by the enterprise (production, sales, logistics, etc.).

The functional officer groups together activities and personnel with a support role to the company's main activity (human resources, management control, accounting, etc.), or involvement in cross-cutting projects. Functional services thus have a support and expertise role in relation to operational services. From the 2000s onwards in the French Army, this notion of operational functions has been used in the same way in general. Taylor's work was taken up by Henry Ford (1863-1947), who perfected and expanded the concept from 1908 onwards, with a model of corporate organisation and development that rapidly became a reference in the Western world. Translated into French in 1912, Taylor's work also influenced the work of a French mining engineer and business leader, Henri Fayol, considered one of the pioneers of management. He developed a theory,

Fayolism, which he formalized and published in 1916.⁵⁶ According to him, leadership is the key to good management. Responsible for the success or failure of a business, he or she must possess specific qualities, which are not innate and can only be acquired through training and experience.

These qualities, which are extremely close to those expected of a military leader, are as follows: health and physical vigour; intelligence and intellectual vigour; moral qualities (willpower, perseverance, daring, courage of responsibility, sense of duty, concern for others' interests, and the ability to work with others); general interest; strong general culture; broad competence in the characteristic profession of the enterprise; management knowledge; and the art of handling men. Fayol thus introduces the idea that future leaders should be selected on the basis of their qualities, but that these are not enough. Starting from the premise that a leader can only control a small number of people (5 to 10), he must be able to rely on experts (a staff) and management tools. For Fayol, a business leader performs five acts that he calls "elements of administration": planning, organizing, commanding, coordinating and controlling. Finally, he develops in detail modern management tools, such as dashboards for management control, or strategic intelligence for anticipation. These tools are designed to guarantee the most rational decision-making process possible. We will see in the second part of this document that all of the principles set out by Fayol are today found in what the military calls Command & Control (C2).

But the rationality instituted by the organization does not guarantee the rationality of the decision taken. Like armies at war, companies are confronted with uncertainty in the face of contingency and competition, cognitive limits in the face of the complexity and multiplicity of information, and the more or less assertive emotional and social intelligence of any decision-maker. Moreover, decision-making becomes more complex and difficult than in a military organisation, given the less assertive collective nature of the objectives pursued by a company. Beyond organisation, maximum rationality in decision-making must therefore be guaranteed by methods and processes. Thus, in the mid-1950s, sociology and work on corporate management made it possible to establish a classification of types of decision-making: decision in a certain environment, decision under risk and decision in an uncertain environment. This typology was to make it possible to better formalize the decision-making processes specific to the functioning of a company or an administration. Herbert Simon⁵⁷ (1916-2001) is considered the father of decision theory and the concept of limited rationality, for which he was awarded the Nobel Prize. Simon starts from the premise that in a given environment, decision-makers do not choose "the best solution" but the most satisfactory solution, taking into account their level of information, their motivation and their actual capacity for action.

Randomness, chance and unpredictability thwart our ability to use determinism, and therefore the principle of causality, to our advantage. He distinguishes in his work a rationality that he calls substantive, which is understood as the perfect rationality of the Cartesian approach, then the French positivist approach, and which assumes de facto that the individual has all the necessary information and sufficient "calculating" capacities to take the optimal decision. Since these conditions are only very rarely achieved, he therefore turns to a middle ground between total rationality and the renunciation of all rationality, which he calls procedural rationality. That is to say, a mode of reasoning based on procedures that make it possible to attenuate the uncertainty factor limiting rationality. One can also retain from Simon's work his theorization of the notion of staff (civil or military). He thus insists on the triple interest covered by an adapted organization in the decision-making process. Firstly, the creation and use of routine procedures makes it

possible to better deal with uncertainty. Secondly, organisation allows the decision-making process to be divided between several experts. Finally, the sequencing of the decision-making process limits the risk of error and can help to correct errors of appreciation. Simon thus attributes the following linear elements to any decision-making process:

- the identification of the problem and the acquisition of the necessary information to solve it;
- a process of research to discover goals and formulate specific objectives;
- the definition and selection of options to achieve those objectives;
- the evaluation of the results;
- the determination of a performance strategy.

It is therefore hardly surprising to find today the entire sequence in civilian and military operational decision-making methods, including in particular NATO's operational reasoning method, the Comprehensive Operations Planning Directive⁵⁸ (COPD), adopted at strategic levels⁵⁹ and operative⁶⁰ by the French army since 2012. At the tactical level for land forces, the method for drawing up a tactical operational decision (MEDOT)⁶¹ covers only the ^{first} three stages of the process described by Simon.

However, experience shows that the decision-making process rarely leads in a linear way from the identification of the problem, the famous "What is it about? Foch's famous "What is it all about?" to its solution, the desired end state. Indeed, the goals of a decision are often only confirmed in the course of action, due to the uncertainty linked to the variability of environmental factors, in particular competition or the enemy. Thus, studies and feedback on complex decision-making show that the steps described by Simon are rarely followed in an ideal way. Moreover, the intermediate conclusions of each of these steps can generally only be based on presuppositions that make it possible to compensate for uncertain or unknown factors in order to bring the search for solutions to a successful conclusion. Moreover, in many cases, these uncertainties can only be resolved in the course of action. However, some value can be attributed to this process, because at specific points in time before action, it allows a decision-maker to validate the interim conclusions of his or her staff. Pragmatism and common sense should therefore, in principle, lead to a very flexible use of these methods. However, this is not always the case, particularly in the military field, when the users of these methods, especially when they are not well versed in them, confine themselves to attributing to them only a normative and not an indicative function. Based on this difficulty of making a decision in a linear fashion in a complex and changing environment, a US Air Force pilot, John Boyd, drew up a diagram in 1960 to conceptualize his ability to beat all his students in simulated aerial combat.

He described four sequential processes through a decision loop: "Observe, Orient, Decide and Act" (OODA). Admitting that any logical model of reality is incomplete or even inconsistent, the cycle must therefore be adapted to each new observation. In practice, this concept has proven to be applicable in the business world. For example, this loop can be compared to the Deming wheel used in quality management (PDCA / Plan, do, check, act). By extension, military operational decision-making methods have integrated this

OODA concept. Thus, it is now accepted that methods such as COPD or MEDOT must be understood as logical iterative and incremental processes, rather than a succession of phases and steps to be carried out.

Derived from the work of Taylor and Fayol, and then enriched by Simon's work, organisational theory has today become an autonomous scientific discipline, aiming to identify principles for the administration and direction of work. This discipline, situated at the borderline between economics, sociology, management and political science, describes the types of structures possible for any type of organisation dedicated to decision-making. Matrix structures are part of the typology described in organisational theories. This type of structure is part of a set of practices that were developed to assist in the management of projects, such as the American aeronautics and space programs in the 1950s. After experiencing some popularity in the 1970s, these structures were finally abandoned by the large companies (General Motors and Sony, for example) that had adopted them in the 1980s, as they were too difficult to implement given their performance in their operations.

From the mid-1990s, however, with the concept of Revolution in Military Affairs (RMA), which aimed to master the technologies that gave control over different environments and information flows, the American armed forces drew inspiration from work on matrix organisations to imagine new types of command structures. Subsequently faced with information management and decision-making difficulties during their engagements in Iraq and Afghanistan, the US forces finally adopted some of these models to develop their operational headquarters from the end of the 2000s. The ISAF Joint Command in Kabul, for example, operated from 2010 to 2013 in a matrix mode. Also adopted for a time at NATO, which experimented with it from 2011 to 2014 with the Joint Force Command in Brunsum, this type of organisation was finally abandoned because it required too many resources in view of the operational results obtained. In addition to having ignored the experiences of the large civilian companies that had tried out the matrix, the designers of these headquarters had certainly neglected an essential postulate in the theories developed by Simon. While the decision is based on information, the acquisition of this information follows a law of diminishing returns. That is to say, its acquisition has a cost, which reduces and then cancels out the gain that can be expected from it, by increasing the efforts generated by the need for information.

As we have sought to demonstrate in this brief overview, the culture of operational decision-making in France is rooted in a long history. It has undergone notable changes in recent decades, mainly linked to an acceleration of scientific progress and a willingness, commendable incidentally, on the part of military leaders and private and public officials to draw inspiration from the good practices observed in both. Faced today with the challenges posed by the integration of new technologies, but also with the opportunities they offer, management experts and specialists in the field of military science and technology have to be ready to take up the challenge. Specialists in military doctrine are questioning the relevance of the Napoleonic hierarchical model, which still prevails in companies and with our operational command structures.

Exchanges between these two worlds have thus intensified with varying degrees of success over the last century, sometimes to the point of generating confusion. As a result, decision-making structures, methods and processes, sometimes very much adapted to the business world, now seem to have taken precedence over the real determining factors in wartime decision-making. In fact, the notions of the fog of war, complexity, adversity, contingency, and the personality of the leader, do not fit well with management

tools that require quantifiable and objective data to enable decision making. The second part of this document will therefore lead us to ask ourselves what the notion of operational command covers today. The question is whether modern command systems have been distorted by the misuse of technology and procedures, which has distanced them from their original purpose: to reduce complexity, facilitate decision-making and speed up the production and transmission of orders. Without this prior reflection, it is unlikely that an approach aimed at improving command performance will achieve convincing results over time.

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A graduate of the École militaire interarmes, class "Combats de Tu-Lê" (1992-1994), Colonel Fabrice Clée is currently head of the CDEC's Studies and Prospective Unit. As a Sapper, he commanded the joint civil-military action group from 2012 to 2014. His career has led him to serve mainly in combat units and operational staffs, as well as in the field of training. He has accumulated operational experience in the Middle East, the Balkans, Afghanistan and Africa on several occasions at the tactical level since 1990. As a senior officer, he has served in operations within French and multinational staffs five times in recent years, mainly in the field of planning, operations management and military influence.

Title : le colonel Fabrice Clée

Author (s) : le colonel Fabrice Clée

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