



WORKING PAPERS

Documents de travail i3

Henri Fayol. Performativity of his ideas and oblivion of their creator

Hervé Dumez

i3-CRG, École polytechnique, CNRS, Université Paris-Saclay
herve.dumez[at]normalesup.org

Working Paper 18-CRG-01
Janvier 2018

Pour citer ce papier / How to cite this paper: Hervé Dumez (2018) *Henri Fayol. Performativity of his ideas and oblivion of their creator*. i3 Working Papers Series,18-CRG-01.



Henri Fayol. Performativity of his ideas and oblivion of their creator

Hervé Dumez

i3-CRG, Ecole polytechnique, CNRS, Université Paris-Saclay

ABSTRACT:

Henri Fayol formulated one of the first theories of management and allows us to see how one of the first scientific approaches of management could or could not perform management practices. Therefore, Fayol is particularly interesting from the point of view of performativity (Callon, 1998, 2007, MacKenzie et al., 2007, Muniesa, 2014). The case is all the richer because it presents the rare characteristic of a direct confrontation between two rival theories, his and Taylor's, at the level of this process of performativity. In the 1920s, a battle was going on in France and in Europe between the Fayol's ideas and Taylor's ones, especially at the level of public management. In the short term, Taylor won this battle of performativity and Fayol lost it. In the long term, Fayol's ideas have shaped modern management practices.

Keywords: Fayol; Taylor; management theories; performativity; felicity conditions.

RESUMÉ :

Henri Fayol a formulé l'une des premières théories en management, ce qui peut nous permettre d'étudier la manière dont le management peut ou non « performer » les pratiques. De ce point de vue, Fayol fournit un cas d'étude de la performativité particulièrement intéressant. Ce cas est d'autant plus riche qu'il présente la caractéristique extrêmement rare d'une confrontation directe entre deux théories rivales qui, l'une et l'autre, cherchent à modifier les pratiques managériales. En effet, dans les années 1920, une bataille s'est déroulée en France et en Europe entre la théorie de Fayol et celle de Taylor, essentiellement sur le terrain du management public. À court terme, c'est Taylor qui a emporté la lutte de performativité. À long terme, les idées de Fayol ont marqué sans doute plus profondément les pratiques managériales.

Mots clés : Fayol ; Taylor ; théories managériales ; performativité ; conditions de félicité.

The study of the relations between theories and practices has been renewed for the past twenty years by the approach of performativity (Callon, 1998 & 2007; MacKenzie et al., 2007; Muniesa, 2014). This approach proposes that a theory can have an effect on practices, effect which, in turn, makes it true. A theory, therefore, is not true because it reflects reality adequately, but because it modifies reality to make it conform to the theory. Studies in performativity have focused primarily on finance and economics. Recently, however, their focus has shifted toward management, toward the practices implemented in organizations, and how management often seeks to modify them in order to improve performance (Cabantous & Gond, 2011; Abrahamson et al., 2016). It would in this perspective be relevant to reexamine the very notion of management, the way in which it intervenes and performs the practices. To do so, it is natural to turn to Henri Fayol, who in 1916 was among the first with Mary Parker Follett (Parker & Ritson, 2005b) and Chester Barnard (Lamond, 2005) to put forward the idea of a general administration or general management (Brunsson, 2007 & 2009; Wren, 2008/1972). Without using the word performativity, Karin Brunsson perfectly captures Fayol's impact: *"Whether or not Henri Fayol's notion was originally relevant and well founded is of little importance now [...], when it is generally taken to be an integral, even imperative part of the concept or organization [...]. The notion of general management is one example of how a hypothesis, in this case a hypothesis about organizations, may make not only a conceptual impact, but also affect organizational arrangements and the behavior of people and organizations [...]"* (Brunsson, 2007, p. 94) In this context, Fayol is particularly interesting for a second reason: it is rare in performativity studies to be able to observe the direct competition between two theories. This, however, was the case with Fayol. He and Frederick Winslow Taylor were contemporaries and formulated their theories a few years apart (in 1916 and 1911 respectively) – and during the 1920s in France and Europe, their theories competed directly in private companies and especially public administrations (Peaucelle & Guthrie, 2015, p. IX). This confrontation aimed at performing behaviors by instituting "scientific" management is the ideal situation to specify what should be the core of all reflection on performativity, that is to say the conditions a theory must meet to successfully change behaviors. Austin (1979), who invented the word "performativity," called them "felicity conditions".

What these conditions are exactly remains an open question. Berkowitz & Dumez (2014) identified three: operationalization, incorporation and realization. *Operationalization* means that a theory, in order to become performative, must be both descriptive and normative – it must aim at analyzing and improving reality. *Incorporation* expresses the fact that in order to change behaviors, a theory must materialize in devices that mediate between the theory and the behaviors it produces or modifies. Agamben (2009, p.14) defined such devices as an "apparatus", i.e. as *"literally anything that has in some way the capacity to capture, orient, determine, intercept, model, control, or secure the gestures, behaviors, opinions, or discourses of living beings."* *Realization*, the third felicity condition, relates to performance: a theory can perform practices if we expect a credible improvement in performance through the devices it proposes.

This article first examines the transposition of the notion of performativity from the domain of the philosophy of language to that of theories, and shows that while it poses a number of problems, it can also be fruitful. We shall then examine the comparative performativity of Fayol's and Taylor's ideas as a case study of felicity

conditions. Finally, it will re-examine the general question of the performativity of management theories.

Why and how it is possible to speak of the performativity of a theory

Austin (1979) notes that we generally conceive of language as descriptive of what happens in the world, and we therefore understand statements as likely to be true or false. "The cat is on the doormat" describes a state of the world. We open the door and just see that the cat is on the mat (the assertion is true) or that it is not (the assertion is false). However, Austin notes, many assertions are not likely to be true or false, but they aim to bring about changes. They are at the same time words and "speech acts" (Searle, 1969). They manage to change the states of the world (and are then felicitous) or fail (and are then infelicitous). If pronounced by a public official in a town hall room, the sentence "I declare you husband and wife" institutes a union between a man and a woman. If pronounced at the end of an evening among friends, it obviously does not change anything in the relations between a man and a woman. Austin calls "constative utterances" statements that describe reality and can be true or false, and "performative utterances" statements intended to produce an effect, and which can in that respect succeed or fail.

Starting in the late 1990s, the notion of performativity has been transposed to economic or financial theories (Callon, 1998 & 2007; MacKenzie et al., 2007; Muniesa, 2014) and more recently to management theories (Cabantous & Gond, 2011; Abrahamson et al., 2016). If a theory is likely to be true or false, it may also succeed or fail to change the real. In particular, MacKenzie (2007) showed that a price model of options invented by two financial theorists, Black and Scholes, created a market that made the theory true. In itself, the model was not formulated as either true or false. But a market materialized on its basis, and this made the model "true". The theory did not describe an existing state of the world; rather, it changed reality by making it conform to the theory (and therein consists the latter's performativity).

As always, however, the transposition of a notion from one field to another (here from the philosophy of language to the philosophy of science) raises problems. In the case of language, the world changes the moment a sentence is pronounced ("I promise to do something"). The phrase is an act in itself, hence the expression "speech act." In the case of a theory, there can be no such immediacy. On the one hand, a theory is anchored in the past. A management theory, for example, generally refers to practices that developed before it was formulated. On the other hand, it would be of course absurd to think that the mere fact of formulating or publishing a theory brings about a real change in the immediate world. Time is required for a transformation to happen. While the performativity of an act of language is immediate, that of a theory presupposes a past that accounts for its elaboration, and a future in which the theory will eventually perform the actors' practices. Hence the challenge of transposing the notion of performativity, which concerns primarily the linguistic world, to the world of theories. There are nonetheless three reasons why it is worthwhile to attempt such transposition.

The first is the emphasis the notion of performativity places on language, and therefore on how theories are formulated. Formulations can be very different; they can be a mathematical formula, as in the Black-Scholes model (MacKenzie, 2007), or take more literary forms, from the short note to the elaborate treatise in a variety of

styles. In companies, many actors explain that putting problems or situations into words helps them find solutions. The formulation of a theory in words or models opens for practice a field of possibilities.

The second reason that speaks in favor of transposing the notion of performativity to the world of theory has to do with mediation. A theory cannot change actors' behaviors immediately after being formulated; the notion of performativity draws attention precisely to the mediations, to the cogs and wheels that will enable the link between the theory and the behaviors it may transform. Callon (2007) puts particular emphasis on this dimension.

The third interest is that the notion of performativity places emphasis on felicity conditions. Austin remarks that a performative statement can succeed or fail, be felicitous or infelicitous. He is then interested in the felicity conditions – a notion that, curiously, has not been retained in recent work on performativity. Some authors mention it (Muniesa, 2014), but without trying to define the felicity conditions a theory would require to change behavior. In an account of Fabian Muniesa's work, Barbara Czarniawska (2015, p. 291) points out that the question remains open: "What are the felicity conditions for the performativity of social science?" Theorists have neglected this question, probably because there is no research on performativity failures apart from a case study of how the air traffic control sector resisted economic theory (Dumez & Jeunemaître, 2010)¹.

Berkowitz and Dumez (2014) tried to answer the question. Analyzing the case of Ed Freeman's stakeholder theory, they identified three conditions sketched above. The first one is operationalization. To be performative, a theory must not only aim at describing or analyzing the world, and therefore be likely of being true or false, but must seek to change it. It must be "entangled" in Putnam's sense (2002), that is to say, it must be both descriptive and normative. If its creator conceived it only as analytical and therefore likely to be true or false, other actors (theorists or consultants) must give it a normative dimension. The second felicity condition, incorporation, relates to the mediation between theory and management practices. The theory must become embodied in devices that will orient and even structure practices (Callon, 2007). If the devices are those the theory explicitly proposed, we speak of *framed performativity*; if actors invent devices in relation to the theory, but not explicitly foreseen by it, we speak of *overflowing performativity*. Finally, the third condition relates to the concept of performance. For a theory to transform practices, performance improvements must be expected. Performance must be assessed by comparing what can be expected of the new theory with what exists. Williamson (1996: 210) speaks of "remediableness" and identifies three criteria. For existing practices to be replaced, there must be an alternative; this alternative can be implemented; and this alternative gives hope for gains.

Does the way in which Fayol's theory changed behaviors, in confrontation with Taylor's, help us enrich these felicity conditions? To answer this question, we must begin with the process of performativity.

¹ Austin had a special interest in failures of actions (and thus of performativity), as shown in his paper "A plea for excuses" (Austin, 1979).

Fayol's ideas on management

As Karin Brunsson pointed out, Fayol's ideas are so obvious today because they have performed our own ideas and our own behaviors. What are they?

The generality of management

As indicated by Fayol's title *Administration industrielle et générale*, and even more so by its English translation, *General and industrial management*, the notion of administration or management is general; it affects all firms regardless of size or industry, and even all organizations, including political and religious ones: "Management plays a very important part in the government of undertakings: of all undertakings, large or small, industrial, commercial, political, religious or any other" (Fayol, 1949, p. XXI). This generality extends even to the family: "Like any other enterprise, the home has to be managed, i.e. it needs foresight, organization, command, co-ordination, and control. The family could be an excellent school for management" (Fayol, 1949, p. 96). Crucial for the performativity of Fayol's ideas is the fact that he saw no difference to be made in terms of management between public and private organizations: "There is not an administrative doctrine for industry and another one for the State; there is only one administrative doctrine" (Fayol, 1918 quoted in Henry, 2012, p. 45 – our translation). Private or public, management always concerns situations in which there is collective action, that is to say a group of actors who fixes tasks to be carried out at the better (Girin, 2011). This explains why the family and religious organizations are also concerned.

The generality of management explains the figure of the "general manager". A worker must develop a professional capacity directly linked to the company's activity, be it mechanical or other. In contrast, the manager remains essentially a manager, and that allows him to move from one company to another. The company's particular activity or product represents only a tiny fraction of the manager's personal capacity: "Specialized ability characteristic of the concern. This capacity, comprising almost the whole of an operative's evaluation, forms only a fourth or tenth part of the evaluation of a higher manager" (Fayol, 1949, p. 77). A manager, according to Fayol, must possess seven groups of qualities, of which only one, the last one, is specific to the sector of activity: "The industrial, commercial, political, military, religious leaders [chef] of comparable rank are alike as far as the first six categories go, and differ only in the matter of specialized activity characteristic of the enterprise" (Fayol, 1949, p. 74).

The content of management

Fayol attributes five main functions to the manager: foresight, organization, command, co-ordination, and control (Fayol, 1949, p. 5). These functions have for the most part a great degree of generality (organization or coordination for example) consistent with Fayol's generalist management approach. But Fayol also explains that the manager must know how to use management tools that are associated with these different functions: "The co-ordinating conference [weekly conference of the departmental heads] is to co-ordination what the plan of action is to foresight, what summarized charts of personnel are to the human organization; it is a characteristic sign and essential instrument. If the sign is missing there is a good chance that the function is badly carried out but the presence of such a sign is bo

absolute guarantee of smooth working and in addition the manager must know how to use the instrument properly, and the art of manipulating these various instruments is one of the qualities required of the manager" (Fayol, 1949, p. 107). Fayol offers a toolbox, some of whose components are mentioned here. As the company is organized in major types of operations (something to which we return below), there is the risk that each operation or activity, each function, will work according to its own logic. Thus arises the problem of coordination, which the manager must solve. Fayol proposed to hold regular meetings between those responsible for each type of operation, which he called "heads of service conference." Similarly, to manage assignment changes and new personnel departures or arrivals, Fayol offered a synoptic chart of staff that could be used at all levels of the company or organization. It should be noted that these instruments, whether the heads of service conference or the synoptic staff charts, are general: they can be employed in any type of organization or company. Fayol probably did not invent these instruments himself, but he gave them a more general existence and status by presenting them as the manager's tools.

Management can be taught and must be articulated with consulting

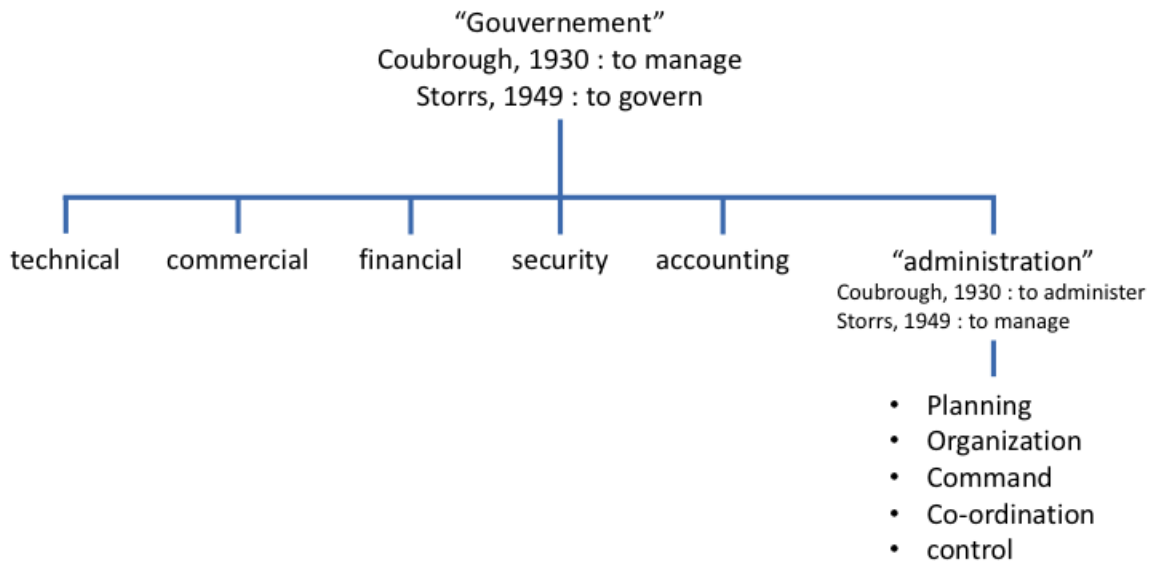
Chapter 3 of Fayol's *Administration industrielle et générale* is entitled "Necessity and possibility of teaching management" (*Nécessité et possibilité d'un enseignement administratif*). The word order is rather surprising since necessity precedes possibility. Fayol, however, noted that administration was in his time not taught. The dominant idea then was that, although there are many principles of management, they are personal and acquired through individual practical experience. For Fayol, on the contrary, administration had to be taught in primary and secondary schools (since it relates to family management), as well as in higher education. He enumerated fourteen principles of management, and stated that there may be others: division of work, authority and responsibility, discipline, unity of command, unity of direction, subordination of individual interests to general interest, remuneration of personnel, centralization, scalar chain, order, equity, stability of tenure of personnel, initiative, esprit de corps. For Fayol, there was no reason why teaching administration should be more difficult to providing a technical education.

Another element appears essential in Fayol's management approach. For him, even though administration can be taught, no manager has the perfect knowledge and information that would enable him to make all the decisions required: "There is no man alive whose knowledge embraces every question thrown up in the running of a large concern, and certainly none possessed of the strength and disposing of the time required by the manyfold obligations of large-scale management" (Fayol, 1949, p. 71). Therefore, by necessity, a leader must be helped by specialists such as "administrative and technical secretaries, consultants on various subjects, liaison and control officials, consultative committees, etc." (Fayol, 1949, p. 71). These consultants are part of what, by analogy with the military, Fayol called the staff [*état-major*]. He relied in this regard on Taylor's experience: "Taylor devised and carried out the foregoing procedure: sundry specialists are attached to the foreman, who absolve him from having to have special knowledge at his command, and relieve him of the innumerable interruptions which would occupy too great a part of his time. This is the work of the staff" (Fayol, 1949, p. 69). Given the scope and diversity of decisions involved in managing a company, and the limited physical and intellectual

capacity of any single individual, the use of consultants was in Fayol's view part of the very nature of the managerial function (administrative in Fayol's terms).

A representation of the firm

Fayol's *Administration industrielle et générale* contains many diagrams and figures. It does not provide a representation of the firm, but it can be easily reconstructed and corresponds to the following:



Three remarks should be made on this diagram. On the one hand, Fayol distinguished government and administration. His book says very little of the “government” that today we would call “management”. The opposition is obviously borrowed from the political world: the government is made up of ministers, the administration of civil servants who implement the policy and manage the day-to-day. It must be nonetheless noted that at the time Fayol wrote, the French government was very weak: ministries followed one another, and ministers were not very competent and remained very little in office. The balance between government and administration was more in favor of the latter. Secondly, Fayol's view in this respect was probably linked to his idea that, like other technical, commercial or financial activities, management can and must be taught. Government, in contrast, was for him more a matter of personal experience. Finally, the structure of the firm is linked in Fayol to a fundamental principle: the unity of command. This principle dictates a structure in which several areas of activities are connected to a single higher echelon. This structure is available from top to bottom of the company or organization. Today we would speak of a company's organizational chart managers must master to perform their task. It is obviously possible to add operations. For example, although Fayol spoke a lot about personnel management, he did not come up with the function of human resources. Similarly, one can easily add a legal direction, a direction of communication, and so forth. The representation is simple; it is an instrument with which the manager must play.

Performativity of Fayol's ideas

Fayol's great ideas were already recognized in his time, and they pointed to directions that structured subsequent approaches to management (Parker & Ritson, 2005a). Such double dimension characterizes a theory's performativity: the ideas it proposes are already current, but at the same time it opens up perspectives that will be explored later. As two of Fayol's students put it:

This small book [General and Industrial Administration], when one reads it through for the first time, may seem trivial, simply because we feel comfortable with it, as its thinking is close to ours; when one takes the trouble to meditate it, it amazes, enlightens, excites, by the richness of opened perspectives (Wilbois & Vanuxem, 1920, p. 12, cité in Segrestin, 2016, p. 132 – our translation).

For example, we find the idea that management is 90% general and only 10% specific to the business of the company in Drucker (1998):

[...] whether you are managing a software company, a hospital, a bank or a Boy Scout organization, the differences apply to only about 10% of your work. This 10% is determined by the organization's specific mission, its specific culture, its specific history and its specific vocabulary.

Mintzberg (1975) denounced Fayol's list of management functions (foresight, organization, command, coordination and control) as folklore, and argued that it didn't correspond to the manager's concrete activities. However, when he wished to study managers in concrete situations, he chose a consulting firm, a hospital, a high-tech firm, a consumer goods company and a school (Mintzberg, 1973), thus demonstrating that Fayol was right on one essential point: management is a general capacity, and managerial tasks are largely independent from the specific activity of the manager's organization (on the relations between Mintzberg and Fayol, see Lamond, 2003).

The fact that management is general and likely to be taught has led to the creation of business schools all over the world (Sahlin-Andersson & Engwall, 2002; Khurana, 2007). Similarly, Fayol saw well that management necessarily involved consultancy activities – and that led to the development of a consulting industry (Kipping & Engwall, 2002). Moreover, the representation of the company in the form of organizational charts of different functions is universally shared; Mintzberg (1979) gave it more elaborate forms, but in line with Fayol's vision.

Some of Fayol's ideas have of course fallen into oblivion. The most obvious case is that of "*ententes*" (French term) or "*cartels*" (German term). Fayol witnessed the rise of these collective phenomena and saw in them a probable revolution in the way business was conducted. That did not happen, and although he was wrong, he pioneered the idea of collective strategy (Astley & Fombrun, 1983). Ideas present in Fayol's other publications could also nourish the reflection on modern management (Hatchuel & Segrestin, 2016).

But if Fayol's great ideas structure our approach to management, why is does he remain so little known?

The performativity struggle between Fayol and Taylor

In a rare instance in the history of performativity, the 1920s saw a direct confrontation between two management theories that aspired to change practices. Taylor published *The Principles of Scientific Management* in 1911 and traveled to France in 1912 and 1913 to see how his ideas were applied. Fayol read his book and quoted it in his *Administration industrielle et générale*, particularly in connection with what he calls the staff, the specialized consultants who must assist the manager in his decisions.

The confrontation took place over a decade (Fridenson, 1987; Peaucelle, 2000), between the publication of Fayol's book in 1916 and the creation of the Comité national de l'organisation française (CNOF) in 1926, merging the Centre d'Études Administratives created by Fayolians in 1919 and the Conférence pour l'organisation française created by Taylorians a few years ago. The CNOF became the French branch of the International Committee for the Scientific Organization of Labor, and thus it can be said that at that time (1926) the Taylorian movement absorbed the Fayolian school.

Strangely, the confrontation was played out less in private companies than in public administration (Chatriot, 2003; Henry, 2012; Morgana, 2012), domain in which the Fayolians were mainly interested. Of the eight cases Wilbois and Vanuxem examined in 1920, three concerned the army, four public administration, and only a private enterprise.

We can compare Fayol and Taylor using the three conditions of bliss of the performativity of a theory proposed by Berkowitz and Dumez (2014).

Taylor and Fayol alike formulated ideas that were both descriptive and normative. Taylor described how workshops were managed in his time, and Fayol depicted the management in the companies he knew best, mines and steel mills. But both also explain the changes that would be necessary to improve performance. The two doctrines are entangled in Putnam's sense that they combine the descriptive and normative functions.

Taylor and Fayol, both engineers, proposed new management devices. Fayol, as we have seen, put forward the staff, the weekly conference of departmental heads, the organizational charts, and the action program or planning, insisting that one of the manager's functions was to know these instruments. Taylor is known for time and motion studies, payment in relation to productivity, Gantt's diagramme, and so forth.

However, whereas Taylor proposed visible, short-term improvements in performance, Fayol foresaw the possibility of improvements that would be more long-term and difficult to measure. Here is where the Taylorians won over the Fayolians. To understand how the comparative performance of the two theories, a fourth felicity condition must be added to the three proposed by Berkowitz and Dumez (2014).

This fourth condition relates to the nature of the change advanced or implied by the theory engaged in a process of performativity. It comprises three factors: the degree of definition of change, the scale of change, and the intensity of change.

The degree of definition of change

Regarding this point, the comparison between the two theories can be summarized as follows:

Fayol	Taylor
Principles are lighthouses that orient action (but do not determine it);	Principles are scientific and thus determine directly actions
There are at least 14 principles (a partial list...)	There are only four principles and they must be applied
Improvement also comes from workers' and middle managers' initiatives (therefore, change is not entirely predictable)	No initiative from workers or middle managers (every decision is determined)

The scale of change

Does the anticipated change involve the whole organization or only one of his parts?

Fayol	Taylor
The whole firm is concerned	The change will only affect plants, shopfloors or offices, the base of the pyramid (the first French translation – 1912 – of the <i>The Principles of Scientific Management</i> , is entitled: <i>La direction des ateliers</i>)
In the public area, "gouvernement" (Ministries) and "administration" are concerned (from the top the the bottom)	

We have seen that the confrontation between the two theories was to take place mainly in the public sector. In this field, the reforms demanded by Fayol were very large, involving (as Henry [2012, p. 48] emphasized), almost constitutional changes.

The Taylorians, on the other hand, concentrated on improving office work at the grassroots level. Their proposals seemed more directly useful and less disturbing.

Intensity of change

Taylor recommended a total reorganization of the base of the organization, workshop or office. Fayol, for his part, was not in favor of such large-scale transformation for companies, but did urge for state administration.

Fayol	Taylor
asks for a radical change in public management	asks for a radical change but at a circumscribed to the level of the public organization (offices)...

In summary, Fayol demanded an undetermined change, at a large scale (the whole organisation), not intensive (long term gains), and radical only in the public area. Taylor, in contrast, asked for a scientifically determined change, limited to the base of the organizational pyramid, and both radical and intensive (short term, visible gains).

Discussion and conclusion

As Karin Brunsson (2007) explained (and as Fayol's contemporaries also perceived – Wilbois & Vanuxem, 1920), that Fayol's ideas may have seemed "trivial" (as pointed by Wilbois & Vanuxem) was of little importance. Fayol took up and formulated ideas that were current during his lifetime, and he opened perspectives at the time he wrote. But his ideas have become essential today: management is a general technique that can be taught even if principles are only lighthouses, managers can manage successively companies or organizations in different sectors, they handle administrative tools and are assisted by specialized consultants or advisors. These ideas, familiar today, were new and uncommon when Fayol formulated them. Yet, while the ideas have performed contemporary management practices, their creator has been forgotten. This can be explained by the fact that in the 1920s, Taylor's theory overshadowed Fayol's contributions.

The two theories are descriptive and normative and both propose to set up new devices in companies and, more generally, in public or private organizations. They thus realize the first two felicity conditions identified by Berkowitz and Dumez (2014). As for the third, performance, Taylor won. To explain his victory, it appeared necessary to add a fourth felicity condition concerning the nature of the change involved in the implementation of theories. The confrontation took place in the field of public management. There, Fayol proposed changes from the top to the bottom of the French public system, and radical, almost constitutional changes at the highest level. These changes did not seem guided by a focused scientific approach, as did those Taylor advocated. The cost/benefit balance of Fayolian changes displays high costs and very uncertain gains. Taylor, in contrast, wished to change the organization of offices without carrying out large-scale administrative changes. The changes in question were radical, based on an approach Taylor considered scientific, and likely to bring visible gains in the short term. The benefits appeared credible and could be gathered quickly, with limited implementation costs.

What process of performativity have concretely followed the ideas of Fayol to impose themselves? Business schools (Sahlin-Andersson & Engwall, 2002) and a genuine consulting industry (Kipping & Engwall, 2002) had to be created, which explains the length of this process and at the same time its strength. It took a very long time for Fayol's ideas to emerge, but they have affected management practices in depth, to the point that they now seem obvious, while their source has been obscured. This process involved translations and adaptations. The opposition government/administration, characteristic of Fayol's thought but rather confused, was simplified in the first American translation of this book, which transformed "administration" into "management"; to this should be added the rapid forgetting of what Fayol (1949) called "Government." Before business schools developed, Luther Gulick, professor at Columbia University, through his librarian who read French, discovered Fayol's talk at a conference held in Brussels in 1923 and published a translation for a management development program at the Columbia Institute of Public Administration. Gulick adapted the five functions of Fayol's manager (planning, organizing, controlling, coordinating, controlling), and called them Planning, Organizing, Staffing, Directing, Coordination, Reporting and Budgeting (POSDCORB). This adaptation played an important role in the teaching of public management in the United States (Wren, 2003). Then, in 1953, Terry wrote the first major synthesis on management in the American context, and he rehabilitated Fayol's functions under the names of Planning, Organizing, Directing, Coordinating, and Controlling. Note that the French "commander", of military inspiration as often in Fayol's vocabulary, has been transformed into "directing".

This balance between a short-term victory of Taylor's ideas on those of Fayol, which eclipsed the name of Fayol, but a final long-term victory of Fayol, can be analyzed in the terms of the performativity of theories. The study of the confrontation led to the addition of a fourth felicity condition to the three Berkowitz and Dumez (2014) put forward. In sum, to win the battle of performativity, a theory must:

- be descriptive/normative, that is, to be oriented towards changes in reality (operationalization);
- propose or suggest concrete devices for change (incorporation);
- specify the nature of the change that it proposes or suggests with regard to three points – the degree of definition, the scale and the intensity of change (anticipation);
- be convincing about the performance improvements it proposes or suggests (realization).

The world of management today is profoundly Fayolian. Fayol is forgotten; but his ideas have performed management practices through those crucial institutions that are business schools and industry.

References

Abrahamson Eric, Berkowitz Héloïse & Dumez Hervé (2016) "A More Relevant Approach to Relevance in Management Studies: An Essay on Performativity", *The Academy of Management Review*, vol. 41, n° 2 (April), pp. 367-381.

Agamben Giorgio (2009) *What is an apparatus? and other essays*, Stanford, Stanford University Press.

Astley W. Graham & Fombrun Charles J. (1983) "Collective Strategy: Social Ecology of Organizational Environments", *Academy of Management Review*, vol. 8, n° 4, pp. 576-587.

Austin John Langshaw (1979) *Philosophical papers. Third edition*. Oxford, Oxford University Press.

Austin John Langshaw (1979) "A plea for excuses", in Austin John Langshaw (1979) *Philosophical papers. Third edition*. Oxford, Oxford University Press, pp. 175-204.

Berkowitz Héloïse & Dumez Hervé (2014) "Performativity processes of strategic management theories: Framing, overflowing and hybridization", Workshop on Unpacking Performativity Processes, Paris, Cass Business School & Mines ParisTech.

Brunsson Karin H. (2007) *The notion of general management*, Copenhagen, Copenhagen Business School Press.

Brunsson Karin (2009) "Henri Fayol – the man who designed modern management", *Le Libellio d'Aegis*, vol. 5, n° 4, pp. 13-20.

Cabantous Laure & Gond Jean-Pascal (2011) "Rational Decision Making as Performative Praxis: Explaining Rationality's Éternel Retour", *Organization Science*, vol. 22, n° 3, pp. 573-586.

Callon Michel [ed] (1998) *The laws of the markets*, Oxford, The Sociological Review/Basil Blackwell.

Callon Michel (2007) What does it mean to say that economics is performative. In MacKenzie Donald A., Muniesa Fabian & Siu, Lucia (2007). *Do Economists Make Markets?: On the Performativity of Economics*. Princeton, Princeton University Press, pp. 311-357.

Chatriot Alain (2003) "Fayol, les fayoliens et l'impossible réforme de l'administration durant l'entre-deux-guerre", *Entreprise et histoire*, n° 34, pp. 84-97.

Czarniawska Barbara (2015) "Book review: "The Provoked Economy. Economic Reality and the Performative Turn, F. Muniesa, Routledge, London, (2014), 160 p." *Scandinavian Journal of Management*, vol. 31, n° 2, pp. 288-291.

Drucker Peter (1998) "Management's new paradigms", *Forbes*, October 5, pp. 152-177.

Dumez Hervé & Jeunemaître Alain (2010) "Michel Callon, Michel Foucault and le "dispositif". When economics fails to be performative. A case study", *Le Libellio d'Aegis*, vol. 6, n° 4, pp. 27-37.

Fayol Henri (1999/1916) *Administration industrielle et générale*, Dunod [1^{ère} édition : Fayol Henri (1916) "Administration industrielle et générale", *Bulletin de la Société de l'Industrie Minérale*, n° 10, pp. 5-164].

Fayol Henri [ed] (1918) *L'Éveil de l'esprit public*, Paris, Dunod et Pinat.

Fayol Henri (1918) "Préface", in Fayol Henri [ed] *L'Éveil de l'esprit public*, Paris, Dunod et Pinat.

Fayol Henri (1949) *General and industrial management. Translated by Constance Storrs, foreword by L. Urwick*, New York, Pitman Publishing Corporation [reprinted by Martino Publishing, Mansfield Centre (CT), 2013].

Freeman R. Edward (1984) *Strategic Management: a stakeholder approach*, Boston, Pitman.

Fridenson Patrick (1987) "Un tournant taylorien de la société française (1904-1918)", *Annales Économies, Sociétés, Civilisations*, septembre-octobre, pp. 1031-1960.

Girin Jacques (2011) "Empirical Analysis of Management Situations: Elements of Theory and Method", *European Management Review*, vol. 8, n° 4, pp. 197-212.

Hatchuel Armand & Segrestin Blanche (2016) "Fayol, or the invention of the leadership for the unknown", Uppsala, "One hundred years of Fayolist Management", October, the 19th.

Henry Odile (2012) "Une entrepreneur de réforme de l'État : Henri Fayol (1841-1925)", *Actes de la recherche en sciences sociales*, n° 1931, 2012/3, pp. 38-55.

Kipping Mathias & Engwall Lars [eds] (2002) *Management consulting. Emergence and dynamics of a knowledge industry*, Oxford, Oxford University Press.

Khurana Rakesh (2007) *From Higher Aims to Hired Hands: The Social Transformation of American Business Schools and the Unfulfilled Promise of Management as a Profession*, Princeton, Princeton University Press.

Lamond David (2003) "Henry Mintzberg vs Henri Fayol: Of lighthouses, cubists and the emperor's new clothes", *Journal of Applied Management and Entrepreneurship*, vol. 8, n° 4, pp. 5-23.

Lamond David (2005) "On the value of management history: Absorbing the past to understand the present and inform the future", *Management Decision*, vol. 43, n° 10, pp.1273-1281.

MacKenzie Donald (2007) "Is Economics Performative? Option Theory and the Construction of Derivatives Markets" in MacKenzie Donald, Muniesa Fabian & Siu Lucia [eds] *Do Economists Make Markets? On the Performativity of Economics*. Princeton, Princeton University Press, pp. 54-86.

MacKenzie Donald A., Muniesa Fabian & Siu Lucia (2007) *Do Economists Make Markets?: On the Performativity of Economics*. Princeton, Princeton University Press.

Mintzberg Henry (1973) *The nature of managerial work*, New York, Harper & Row.

Mintzberg Henry (1975) "The manager's job: folklore and fact", *Harvard Business Review*, vol. 53, n° 4, (July-August), pp. 49-61.

Mintzberg Henry (1979) *The Structuring of Organizations: A Synthesis of the Research*, Englewood Cliffs (NJ), Prentice-Hall.

Morgana Laurence (2012) "Un précurseur du New Public Management : Henri Fayol (1841-1925)", *Gestion et management public*, vol. 1, n° 2, pp. 4-21.

Muniesa Fabian (2014) *The Provoked Economy: Economic Reality and the Performative Turn*, Oxford, Routledge.

Parker Lee D. & Ritson Philip A. (2005a) "Revisiting Fayol: Anticipating contemporary management", *British Journal of Management*, vol. 16, n° 3, pp. 175-194.

Parker Lee D. & Ritson Philip A. (2005b) "Fads, stereotypes and management gurus: Fayol and Follett today", *Management Decision*, vol. 43, n° 10, pp. 1335-1357.

Peaucelle Jean-Louis (2000) "Henri Fayol et la recherche-action", *Gérer et Comprendre*, n° 62 (décembre), pp. 73-87.

Peaucelle Jean-Louis & Guthrie Cameron (2015) *Henri Fayol, the Manager*, Abingdon/New York, Routledge.

Putnam Hilary (2002) *The collapse of the Fact/Value Dichotomy, and Other Essays*, Cambridge (MA), Harvard University Press.

Sahlin-Andersson Kerstin & Engwall Lars [eds] (2002) *The expansion of management knowledge*, Stanford, Stanford University Press.

Searle John R. (1969) *Speech acts: An essay in the philosophy of language*, New York, Cambridge University Press.

Segrestin Blanche (2016) "Présentation de « L'entreprise, conséquence de la science moderne » (1919)", *Entreprise et histoire*, n° 83, pp. 132-136.

Taylor Frederick Winslow (1911) *The Principles of Scientific Management*, New York, Harper & Brothers.

Terry George R. (1953) *Principles of management*, Homewood (Ill.), Richard D. Irwin.

Wilbois Joseph & Vanuxem Paul (1920) *Essai sur la conduite des affaires et la direction des hommes*, Paris, Payot.

Williamson Oliver E. (1996) *The Mechanisms of Governance*. Oxford, Oxford University Press.

Wren Daniel A. (2003) "The influence of Henri Fayol on management theory and education in North America", *Entreprise et histoire*, n° 34, pp. 98-107.

Wren Daniel A. & Bedeian Arthur G. (2008 6th ed./1972) *The evolution of management thought*, Hoboken (NJ), John Wiley.

L'institut interdisciplinaire de l'innovation

(UMR 9217) a été créé en 2012. Il rassemble:

- les équipes de recherche de MINES ParisTech en économie (**CERNA**), gestion (**CGS**) et sociologie (**CSI**),
- celles du Département Sciences Economiques et Sociales (**DSES**) de Télécom ParisTech,
- ainsi que le Centre de recherche en gestion (**CRG**) de l'École polytechnique,

soit plus de 200 personnes dont une soixantaine d'enseignants chercheurs permanents.

L'institut développe une recherche de haut niveau conciliant excellence académique et pertinence pour les utilisateurs de recherche. Par ses activités de recherche et de formation, i3 participe à relever les grands défis de l'heure: la diffusion des technologies de l'information, la santé, l'innovation, l'énergie et le développement durable. Ces activités s'organisent autour de quatre axes:

- Transformations de l'entreprise innovante
- Théories et modèles de la conception
- Régulations de l'innovation
- Usages, participation et démocratisation de l'innovation

Pour plus d'information: <http://www.i-3.fr/>

Ce document de travail est destiné à stimuler la discussion au sein de la communauté scientifique et avec les utilisateurs de la recherche. Son contenu est susceptible d'avoir été soumis pour publication dans une revue académique. Il a été examiné par au moins un referee interne avant d'être publié. Les considérations exprimées dans ce document sont celles de leurs auteurs et ne sont pas forcément partagées par leurs institutions de rattachement ou les organismes qui ont financé la recherche.

The Interdisciplinary Institute of Innovation

(UMR 9217) was founded in 2012. It brings together:

- the MINES ParisTech economics, management and sociology research teams (from the CERNA, CGS and CSI),
- those of the Department of Economics and Social Science (DSES) at Télécom ParisTech,
- and the Management Research Center (CRG) at Ecole Polytechnique,

meaning more than 200 people, including 60 permanent academic researchers.

i3 develops a high-level research, combining academic excellence and relevance for the end users of research. Through its teaching and research activities, i3 takes an active part in addressing the main current challenges: the diffusion of communication technologies, health, innovation, energy and sustainable development. These activities are organized around four main topics:

- Transformations of innovating firms
- Theories and models of design
- Regulations of innovation
- Uses, participation and democratization of innovation

For more information: <http://www.i-3.fr/>

This working paper is intended to stimulate discussion within the research community and among research users. Its content may have been submitted for publication in academic journals. It has been reviewed by at least one internal referee before publication. The views expressed in this paper are those of the author(s) and not necessarily those of the host institutions or funders.