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▶ **To cite this version:**

Johanne Paradis, Jacques-Bernard Gauthier. THEORETICAL FOUNDATIONS OF HOSPITAL PHARMACY MANAGEMENT. 2016. hal-01390202

HAL Id: hal-01390202
https://hal.science/hal-01390202

Preprint submitted on 1 Nov 2016

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THEORETICAL FOUNDATIONS OF HOSPITAL PHARMACY MANAGEMENT

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ABSTRACT

The lack of interest of researchers in relation to question of hospital pharmacy management, and the status quo of existing managerial practices serving the reforms, justifies analysis of theoretical foundations of hospital pharmacy management.

The objective is twofold. First, provide an overview of the socio-historical eras of the organizational theories in order to position the hospital pharmacy management on the axis of the changing ways of thinking about the organization and management. Secondly, reconsider hospital pharmacy management by the structuration theory (new direction in organization theory).

A systematic literature review of the Canadian Journal of Hospital Pharmacy, from 2010 to this day, was performed. The analysis of the theoretical notions discussed in the articles shows that the management of the hospital pharmacy departments stands on the concepts associated with the 'Modern era' of organizational theories. As a result, the hospital pharmacy management focuses on technical aspects. The reconsideration by structuration theory point out the strategic issues for hospital pharmacy practice underlie the interaction between the actors of the pharmacy department and the other stakeholders of the health system.

A proper management of the hospital pharmacy department goes beyond the technical aspects. It should also target the development of strategic professional skills of the pharmacists. That said, a substantial work remains to be done to understand the ins and outs of the structuration of the pharmacy practice and the management of its strategic-professional aspects.

KEYWORDS: *hospital pharmacy management, theories of organizations, structuring theory*

The Context of Hospital Pharmacy Management

The public healthcare system in Canada experienced a succession of reforms, which one after the other, promise to streamline and update the healthcare system to allow greater coordination of actions, greater quality of care, greater efficiencies. For the pharmacy, with the years 2000 came the agreements between the provinces and the Federal Government regarding health information and communications technology and the pharmaceuticals management. In 2004, proposed changes to healthcare structures were introduced and intended to implement a nation-wide pharmaceutical strategy.

These reforms and large-scale restructuring of healthcare institutions presumed an organisational management model, hierarchical and mechanistic, in which a clear distinction exists between the managers and workers[1,2]. This type of model is very different from a model that would allow for the development and deployment of expert knowledge and expert judgment, i.e. specific skills for multiple or different trades in complex human service organizations[1]. The practice of pharmacy is a professional domain using expert knowledge and for which management is performed as a component of a complex organization[3].

The environment in which hospital pharmacy management takes place is interesting to study because it must take into account two realities of the department. The pharmacy has two vocations, the distribution or technical service, and the care or professional service. There is, therefore, a differentiation between the daily operational management and the strategic management, the latter happening outside the pharmacy premises, between various stakeholders, such as the other clinical departments, the hospital administrative services, the professionals and users of healthcare services from the community.

That being said, management in organizational settings is not univocal. It is anchored to one or the other organization theories. Hence, before going further in our analysis, we find necessary to look upstream to the pharmacy management prior to looking at the performance or achievement of the service. To do so, we propose in the next section, an overview of four socio-historical eras to which the theories of organizations fashion itself. At the end of this primary exercise, a conceptual framework will be proposed.

The Evolution of the Major Organizational theories

It is at the beginning of the 20th century that the theories of the organization get started, with the emergence of major industrial enterprises. Organizational theories are based on two schools of thought: a *sociological* school with, authors like Durkheim, Weber and Marx, and a *managerial* school of thought with Taylor and Fayol[4]. There are as many ways to present the evolution of these theories as there are authors. For the purposes of this article, we choose to adopt the perspective proposed by Hatch and Cunliffe [4] because it appears to set a precedent in the field of healthcare in general and pharmacy in particular[5-7].

Both Hatch and Cunliffe[5] anchor organizational theories in four historical eras: *Prehistory*, *Modern era*, the *Symbolic era* and then the *Postmodern era*. In Figure 1, we present chronologically the four periods and organizational theories that are associated with them. The beginning of an era does not mean the abandonment of the theories of the previous eras. That's why, for example, organizational theories of the *Prehistory* extend into the present era (this extension is illustrated by discontinuous rectangles in Figure 1).

The starting point of the analysis of the evolution of the major organizational theories is the industrial development and with it, the need for order, discipline and work rationalization. It's the *Prehistoric era* (1900-1950) in organization theory. The concepts of the division of labor, the specialization of tasks and prioritization were established during this period. The performance and productivity were the main goal, as work efficiency and optimal use of resources. It is the introduction of the 'scientific' way of thinking in organizations, the beginning of the assembly line production (Ford), the 'scientific' management (Taylor) and the administrative management theory (Fayol). There is a radical separation between leaders and employees who execute the work. Reference is often made to these concepts as Fordism and Taylorism. Towards the end of *Prehistory* will come the *Weberian bureaucracy*, which is mainly based on rules and respect for the hierarchy[4,8,9].

The scientific and administrative management, as well as the *Weberian bureaucracy* will extend and consolidate during the *Modern era* (1960-1970) – see Figure 1. It is the time of the classical schools' organization theory, and the famous "One Best Way" of doing things.

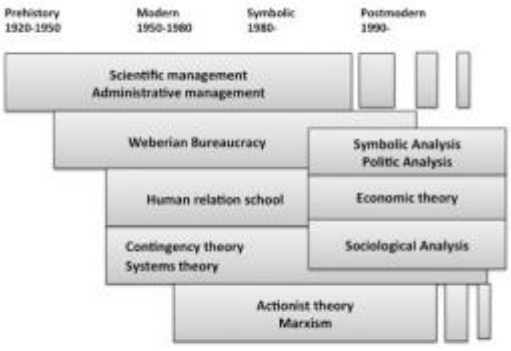


Figure 1 - Organization theories' socio-historical evolution

Good practice guides and guidelines are coming out, aiming at the standardization of practices, while assuming they will provide the expected results. The modern management principles in vogue are: the division of work, authority, discipline, unity of command or management, the subordination of the individual interest in the general interest, centralization, hierarchy, etc. Harmful and dehumanizing effects from this 'rationalization' of the modes of production are starting to be observed, and suddenly, the interest is shifting to human behavior, to the analysis of bureaucracy and systems analysis. While England is considered to be the birthplace of the contingency theories (Organizational adaptation to environmental change), in America, we are witnessing the emergence of schools of human relationships with authors like Lewin and Likert (leadership, personality), Maslow (hierarchy of needs, satisfaction) amongst others[4,8,9].

The third era is referred to as *Symbolic era* (1980-). It is a period that calls into questioning the theories that prevailed until then. People reject the managerial, anthropomorphic, deterministic ideology of the organization. There are two emerging schools, the social action analysis, for which work is oriented in a microscopic analysis of the interactions while revalorizing the role of actors, and the Marxist analysis that redefined the organization as the result of the contradictions inherent in the capitalist production system. In the second half of the *Symbolic era*, we see the emergence of the so-called 'contemporary management approaches'. The theories are organized around disciplines from which they developed: sociology, economics, politics, etc. It is also the moment where European writers begin to be heard, such as the Scandinavian school with the work of Alvesson[4,8,9].

Finally, Hatch and Cunliffe[5] complete their analyses of the evolution of the organization theory by the *Postmodern era* (1990-). Here the organization is understood as the dynamics of power/domination and resistance or as the text and speech. It is only seen in its social, political, and linguistic dimensions[10]. In the last years of the *Postmodern era*, important place is given to the individual, considered to be an actor capable of self-criticism, reflexivity and analysis of organizational contexts and practices that are conducted or to be conducted[4,8,9].

In summary, the synthesis of these four socio-historical eras illustrates the different ways of thinking about the organization. From the belief into a reality external to the actor, independent of knowledge, the organization in *Modernity* is conceived as an objective entity governed by universal laws. On the other hand, from the *Symbolic* perspective, the organization becomes a social space, a network who constantly rebuilds itself through its members and their interactions. Finally, the *Postmodern* perspective focuses essentially on socio-political games, languages and social interactions. In other words, the postmodern organization is a place of power relations, irrational, strained by inequalities, which are done and undone. Having said that, in recent years more attention is given to the individual skills to monitor their practices by which they give life to organizations, than on the power and domination relations in organization.

From these observations on the evolution of the ways of thinking about the organization, we can ask ourselves, "to which organizational theories, hospital pharmacy management is anchored?" Some authors have analyzed the pharmacy practices from different social theories[3,10]. To date, no author is interested in the socio-historical and theoretical perspectives underlying hospital pharmacy management practices. To explore the theoretical foundations of hospital pharmacy management, we analyze publications from the past five years in the Canadian Journal of Hospital Pharmacy (CJHP).

Literature Review on Hospital Pharmacy Management

Inspired by Ridley[11], we have undertaken a systematic review of the publications over the past five years about the hospital pharmacy management. We limited the literature review to the CJHP. Since of all Canadian periodicals on hospital pharmacy, CJHP is the only one to be listed by the SCImago Journal & Country

Rank. We excluded from this review, articles from the sections of the Editorial, Point Counterpoint, and Correspondence.

In the medical literature, the term 'management' generally refers 1- to taking charge of a pathology, a case, and 2- to the planning, organizing, coordination and control of activities and resources (people or things) [2] of a clinic or, in our case, a pharmacy department. This paper is only interested in articles referring to the second notion.

The next section presents the findings of literature review.

Presentation and Analysis of Findings

For the purposes of the analysis, the articles have been grouped into five categories: medication, standards, culture, technology, practice, and then declined following the major themes, theoretical notions and organizational theories to which these notions refer to. Table 1 presents the summary of results.

Table 1
Results Summary

		Articles	Themes	Theoretical notions	Organizational theories
Catégories	Medication	12 to 18 (in references section)	Costs, shortage, Drug formulary	Optimal use of resources, systems efficiency	Scientific management (SM), administrative management (AM)
	Standards	19 to 26 (in references section)	Accreditations, norms,	Standardisation, conformity, guidelines, evaluation, key performance indicators	SM, AM, Weberian bureaucracy, decision school
	Culture	27 to 33 (in references section)	Professional role, mentoring, personality, experience	Work satisfaction, working conditions, interpersonal relations, performance	AM, human relation school, sociologic analysis
	Technology	34 to 43 (in references section)	Automatization, information technology, tools,	Performance, efficiency, supervision, standardisation	SM
	Practice	44 to 60 (in references section)	Models, clinical activities, pharmaceutical services, international	Efficiency, performance, categorisation, evaluation, standardisation	AM, Weberian bureaucracy, human relation school

The analysis of the themes outlined in the articles reveal that the hospital pharmacy management as reported in the CJHP are mainly based on notions who come from *Modern* organizational theories. The organization is described as a formal structure, designed and managed according to rational and effective standards. The authors are interested in following topics: norms (practice), accreditation, the performance of drug distribution services. Figure 2 shows the socio-historical positioning of hospital pharmacy management in regards to the categories and the themes with the eras they relate to.

New directions in organization theory: A Reconsideration of Hospital Pharmacy Management by the Structuration Theory

In the introduction, we pointed out that the hospital pharmacy has a double vocation. The distribution of medication, the technical service (operational), and the professional care (strategic). In light of the definition given by Minztberg[2], and at least for the past five years, we find that the articles in CJHP focus more on the technical (operational) aspects of management than on the strategic side of management. These articles have an organizational conception known as 'post-war' (at the heart of the *Modern era* of the organization theories).

However, the strategic aspect should not be overlooked. It must be put forward as do other health professionals[61-63]. The strategic challenges of the hospital pharmacy go beyond the walls of the pharmacy premises, and beyond the medication management process. Patient care, participation in interdisciplinary teams, and participation in organizational committees are situations where there are strategic challenges for the hospital pharmacy practice. If the management of strategic issues does not get a great deal of attention in hospital pharmacy, this is due, in part, to the fact that the "social" aspects of organizations are less understood.

We propose a reflection on both aspects (operational and strategic) of hospital pharmacy management, with an innovative approach that diverges from the current thinking. This approach mobilizes the structuration theory originating from the social sciences. Hatch and Cunliffe[5] consider the structuration theory as being among the '*new directions in organization theory*'.

The Structuration Theory

To better understand the nature of our reconsideration of hospital pharmacy management, we must first return to the different definitions of the organization. Parsons defines the organization as a "social subsystem with specific goals''[9] in which the organization is seen as objective structures.

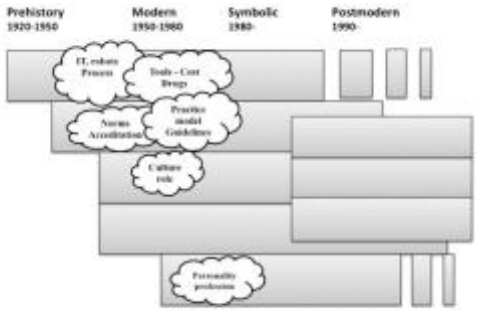


Figure 2 - Socio-historical positioning of the theoretical foundations of hospital pharmacy management

Others see the organization as collective action which, by the application of rules and under the leader's authority, seeks the implementation of a common task[64]. Unlike Parsons, the organization is here thought and described in terms of actors' subjectivity or in terms of "socially constructed" structures.

The organization is defined by Eraly[65] as a social order, sustainable and localized, constituted for a given purpose. He describes the organization also as a set of actions and interactions relatively hierarchical. This notion of organization assumes both a social order in space and continuity in time. For Eraly[65], the organizational structures do not exist independently of the human actions and interactions. If the actions and interactions stop, the organization no longer exists. So, organizational structures are generated and replenished through the daily activities lead by the people in the organization[4].

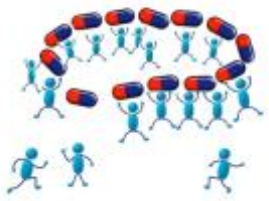
To better understand the structuration of organizations, Eraly[65] uses the image of a group of people holding at arm's length a set of blocks (organizational structures) that takes the form of a circle (see Figure 3). To account for the context of the pharmacy, we have replaced the blocks by giant capsules, but the idea remains the same. This image represents the organization and the inter-organizational network through relationships that are formed between the actors (the circle). The actors, the people who make up the organization, take turns constantly so as to keep this assembly. " Some go, others arrive who replace them, and beside this continuous swarming, the overall shape remains almost motionless at two meters above the ground " [65].

As noted earlier, the history of the organization theories is characterized by an opposition between *Modernity*, centered around the objectivity of the structures, and the *Symbolic era* (as well as some *Postmodern* perspectives) where emphasis is placed on the subjectivity of actors. In other words, the organizational reality has been defined only by structures, illustrated by the capsules in a circle at Figure 3, or only by actors without taking into account the structures*. For Eraly[65], this opposition is artificial, because the organizations and their structures do not exist independently of human action. The organizational structure is both objective and symbolic (or subjective). Eraly borrowed the idea of the duality of existence of the organizational structures from the British sociologist, Anthony Giddens [66].

Giddens'[66] structuration theory describes the structures as a set of resources (objective) and rules, standards, and values (symbolic or subjective). In the hospital pharmacy setting, we can think of drugs, automated dispensing cabinets as examples of resources. As for the rules, norms and values, there are, among other things, the professional codes, the codes of ethics, standards for drug preparations, etc. These sets of rules and resources, the 'structures', condition the practices of the actors (in this case the pharmacist) by directing their choices, their decisions or their tasks. For example, rules, financial restrictions, or lack of technological resources determine activities that can be accomplished. The structures may also make things possible to. For example, technical resources allow for more freedom for other activities.

* Over the past five years, the CJHP presented hospital organization primarily as objective organizational structures.

Figure 3 - Eraly's[65] adaptation of the structuration process



Condition the practice (in our case the hospital pharmacy practice) through structural measures (legislative change, add new resources or change it) is a modern perspective of managing practice in organization**.

According to the structuration theory, structures do not only condition the practices of the individuals in the organizations, they are also the result. In fact, it is the individuals who adopt rules for their organizations (the Pharmacy Department), and introduce the resources. For Giddens[66], the actors, the pharmacist or the technical assistant, are competent individuals and their skills are continually expressed on a daily basis. The actor puts this competence forward when he is constantly monitoring his practice, continually adjusting his actions according to the situation or the context in which he finds himself. The actor is also using this competence when he mobilizes the structure (the rule or the resource), which, in his view, is most likely to give to his practice, the scope he wants regarding the situation. The actor is not necessarily conscious of the existence of this skill. It is something that the individual does naturally in the daily course of his actions; a kind of logic or practical sense.

Although he can have all the will, the knowledge and the practical competences needed, an individual cannot act alone in order to reach the organization's mission. As a result, the organization is a network of individuals with a practical sense who interact sometimes in synergy, sometimes against each other. And so, the pharmacy department, as it is structured today (its rules and its resources), is the result of power struggles and domination games occurring throughout its history. Authors in a series of articles about "sociology and pharmacy", have written about the social aspects of the pharmacy's practices like dominance, inequality, feminism, ethnicity, etc.[67-70].

The physical or structural space in which the social interactions take place, the pharmacy department, is not an island. It is part of a larger organization. Locally, the healthcare facility is formed by other clinical departments and administrative services. At the same time, the healthcare facility is an entity of a regional, national and even global network (Figure 4). The activities that are taking place at regional and national levels shape the structures of healthcare facilities, affecting practices in all departments and administrative services, including the pharmacy department (descending arrows in Figure 4). In return, the national and regional structures of health organizations and healthcare facilities are the results of the practices carried out in departments and services composing them (upward arrows in Figure 4). Giddens[66] called this circular process: the structuration between global social systems (national and regional health organizations) and the practices (in this case the pharmacy practice) performed daily by individuals in different localized organizational contexts.

All the importance of better hospital pharmacy management (strategic) resides this circular process. Indeed, the potential for influencing others professional practices is not evenly distributed between the actors (individuals) or groups of actors (the departments

**A significant portion of reflections about hospital pharmacy management concern the planning, the coordination, the implementation and the evaluation of structural measure.

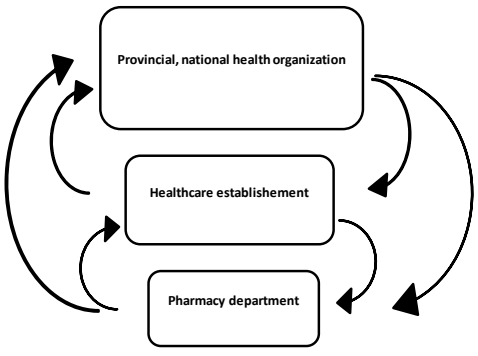


Figure 4 - Hospital pharmacy structuration processes

or services) in an organization. As noted above, in the course of the struggles and domination games, some individuals or professionals' groups have come to have greater power in the determination of the structures of an organization, in the establishment (or the change) of conditions for the exercise of their practices and those of other (such as the hospital pharmacy practices).

The participation of hospital pharmacy actors to the determination of the conditions of their practices requires a proper hospital pharmacy management who goes beyond the technical aspects. It targets, for example, the development of strategic-professional skills of hospital pharmacists. With better skills, the pharmacist could interact strategically with other professionals in activities outside of the pharmacy department; professional interactions who have the potential to define the future conditions of the hospital pharmacy practices.

Conclusion

The review done of the CJPH highlights the fact that the analysis of the hospital pharmacy management is essentially situated in the *Modern era*. The organization is described as a ''machine'', and consequently, the attention is focused on key performance indicators, prioritizing efficient work and the standardization of process - it takes a well-oiled machine! This is all done in relation with the principles of managing for results, for accountability, and performance.

That said, this vision where everything is thought of in a descending order (the structure determines the practice performance) leaves out the ascending mechanisms. Once again, the organization and its structure do not exist by themselves, as suggested by the modern theories of the organization. They are the results of activities carried out by individuals.

Among the new directions in organization there is the structuration theory. It goes without saying that we gave an overview of the structuration theory when we present this one as a conceptual way to analyze the circular relation between national, regional and local structures and daily practices. There is much more to say, but the key here is to demonstrate the relevance of this theory to the field of healthcare in general, and hospital pharmacy practice in particular. In fact, some authors have used the structuration theory in their research in medicine[71] or in nursing[72,73].
The structuration of the hospital pharmacy practice has received little attention. To our knowledge, two articles dealt with the structuration theory in the field of pharmacy. The first one is the study of the impact of the implementation of a new technology on three groups of employees in a pharmacy[74]. The second one is an exploratory research about the technical and strategic spaces in a pharmacy department[75,76].

By using the structuration theory, we note that the actors in the health system are involved in determining the conditions of their practices and those of other health professionals. This determination is the result of the interactions with other actors in strategic contexts (caring for patient, participation to a regional committee, etc.).

Actually, the hospital pharmacy management focus on the technical aspects. The structuration of the hospital pharmacy practice deserves more attention, because it is at the heart of the determination of the conditions of the practice of the hospital pharmacy where stands all strategic issues for the profession. However, substantial work remains to be done to understand the ins and outs of the structuration of the pharmacy practice and the management of its strategic aspects.

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