Historical and epistemological trends in public administration

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Introduction

Both the scope and the role of government have become problematic in the USA and in many other countries. Original ideas and reform proposals have been advanced in recent years which reflect a new understanding of social inquiry and of political practice in pluralistic, complex, "postmodern" societies. Has public administration merely gone through incremental changes adding another layer of ideas and practices to an already convoluted terrain or are we witnessing a radical transformation? Have we now entered the age of postmodern government?

Public administration is in ferment today. The positivist certainties of a few generations ago no longer provide the solid ground upon which the discipline can grow. The shift from positivism to post-positivism in public administration is, however, neither complete nor entirely evident. This chapter provides some insights on the circumstances and effects of this complex dynamics. But first I have to define briefly the terms of the debate.

Public administration is both an art and a science. It is not a single set of principles and concepts due to its socio-cultural context, its evolving intellectual content, and its tacit values. This chapter is concerned primarily with public administration in a North American context (i.e., the USA and Canada). Within this context there are obvious and not always reconcilable differences between national, state, provincial and municipal governments – even within any single level of government there usually are significant variations among departments, commissions, and so on.

The heterogeneity of public administration being granted, some concepts, values and goals cross institutional and disciplinary boundaries. The formative period was marked by a generally positivistic understanding of how human organizations function and of the psychology of their members. Now positivism is another vague term that has been rendered almost meaningless by critics who equate it with whatever methodology they reject. But, as a starting point, it can serve as a convenient umbrella for a range of approaches that were (or are still) characterized by their emphasis on objective, as opposed to normative, analysis; and the notion that law-like regularities can be identified for the purpose of explaining and predicting both natural and societal phenomena.

Post-positivism can best understood as a rejection of both assumptions but post-modernism goes farther. It includes philosophical currents that stand in

opposition to the rationalist doctrines that form the intellectual legacy of the enlightenment. In its most radical expression, postmodernism undermines all hierarchical orderings: there are, according to this view, no foundations upon which either theoretical knowledge or societal structures can be safely grounded.

Public administration was never unambiguously positivistic, nor has it become wholeheartedly post-positivistic. In public administration the positivistic discourse never became a coherent and all-encompassing "grand narrative", to quote Lyotard[1]. Here we encounter an interesting paradox: with its partial narratives, its succession of incompletely formulated or only superficially applied paradigms, public administration has always been standing "on the brink of the postmodern condition"[2, p. 9]. Today, however, it hesitates to take the next step.

The first section of this paper traces the origins of public administration back to a political and cultural climate that was very receptive to the idea that science could provide answers to the problems of the time. To a considerable extent, this outlook meshes with the view that organizations are like machines that can be designed and controlled by experts. The second section examines the circumstances that have led to new priorities, including citizen involvement in administrative and policy matters, the elimination of cultural and gender-based prejudices, and the design of adaptive organizations. In these developments one can discern an echo of post-modernism and its critique of one-dimensional rationalism. The final section examines new currents in scientific thinking that open up a post-positivistic perspective on the problems faced by complex societies; such a perspective could impart a whole new meaning on a science of public administration without altogether denying its possibility.

Disciplining administration

The nineteenth century was the age of positivism. Empirical observations and logical deductions came to be seen as the only legitimate sources of knowledge. Science and technology appeared to provide rational grounds for the establishment of a new social, moral and political order. Even if Auguste Comte coined the term "positive philosophy", he was not the only thinker who contributed to its development. Most nineteenth century social philosophers shared the view that social realities can be known objectively, i.e., that separating facts from values is both possible and desirable. This was true of John Stuart Mill, Herbert Spencer, Emile Durkheim, and Max Weber, and in a more qualified sense, this was true also of Marx[3, p. 19; 4, pp.41-3].

The practical effects of this new faith were not immediately visible. However, the political and bureaucratic elites in western Europe undertook to reform their administrative systems early in the second half of the century. By the 1870s, a politically neutral civil service commission was in charge of recruiting the members of the British professional administrative elite. A rudimentary system of classification was also in place[5, pp. 60-2]. When Max Weber wrote

his classical analysis of bureaucracy, the institutions he was describing existed in most countries of continental Europe. Administrative reforms in North America took a little longer to produce noticeable effects. In both the USA and Canada, the British example inspired many active reformers. However, the practice of political patronage was so well entrenched that it became necessary for the reformers to mobilize political support. While administrative reforms in Britain and in other European countries came about as a result of a top-down approach, it was a bottom-up process in the USA. Various groups, notably the National Civil Service Reform League, campaigned for a professional civil service[6, p. 32-4]. They had very practical objectives, but their discourse also revealed an underlying commitment to "science" defined less as a specific activity than as a mythical force.

The momentum toward administrative reforms gathered up speed during the progressive era (1896-1920). However, movement in that direction begun even earlier. In the 1870s and 1880s, political pressures and theoretical reflections converged. At both the practical and the theoretical levels, the ideal of a professional public service took shape. A variety of political groups came to the realization that the requirements of a modern industrial society in a period of rapid expansion could be met only by a professional public service dedicated to rational principles of efficiency and non-partisanship. Congress took a decisive step toward the implementation of the merit principle in the US government by passing the Civil Service Act (Pendleton Act) in 1883[7]. Throughout the following decades the scope of the merit system continued to expand at the federal level as well as in many states and Canadian provinces. The introduction of line item and yearly comprehensive budgets rationalized the budgetary process. At the municipal level, many cities adopted the city manager system; indeed some reformers tried to push the idea of a state manager as a counterweight to the governor[8, p. 192].

In this context, public administration emerged as a discipline. Woodrow Wilson's 1887 seminal essay "The study of public administration" is ritualistically cited as the historical foundation of the discipline. According to Paul van Riper, Wilson's paper actually had little impact at the time it was published[9,10, p. 36]. Regardless of its practical influence, Wilson's article eloquently conveys the values that the pioneers of the discipline defended and promoted in a number of classical texts (e.g., Frank J. Goodnow's Politics and Administration, 1900, or W. F. Willoughby's Principles of Public Administration, 1927). By proclaiming that politics and administration belong to different spheres, Wilson applied to public administration the positivist dogma that facts must be separated from values. From that perspective, the task of public bureaucracies is purely instrumental as it is concerned with the efficient implementation of policies and programmes. The instrumental quality of bureaucracies was also an essential element of Max Weber's analysis[11]. However, although references to his writings on the subject now appear in most textbooks, North American scholars were not familiar with them until the mid-1940s.

The politics/administration dichotomy ceased to be accepted as an empirical reality. Middle and upper-level bureaucrats are looked upon as policy-makers in their own right now. Nevertheless, the positivist separation of facts and values resurfaced in the early 1960s under a new form with the triumph of strategic planning. Planning programming budgeting system (PPBS)[12] was the most ambitious attempt to adapt strategic planning to the public sector. Its defenders described policy analysis as a rigorous, scientifically-based exercise in fact-finding and programme evaluation. In contrast, they considered politics as irrational and disruptive. This more modern version of the politics/administration dichotomy itself collapsed. The evidence has showed that strategic planning has failed in both the private and the public sectors [13, ch. 4; 14, p. 205;15]. Possibly, the same mistake will be repeated once again at the federal level in the USA when the new Government Performance and Results Act comes into effect in the fall of 1997. Thus concepts and methods that are said to be "revolutionary" innovations often turn out to be recycled ideas. Unfortunately, a historical perspective is too often lacking in public administration, as Guy Adams notes[10, pp. 32-6].

Harold Lasswell's efforts to create new interdisciplinary "policy sciences " [16,17] often evoke the politics/administration dichotomy and strategic planning. True enough, the epistemology of the policy sciences shares with the behaviourist social sciences of the 1950s and 1960s a commitment to linear causal modeling using statistical methods. However, Lasswell insisted that the policy sciences are not simply applied social sciences[18, p. 4]. The positivism inherent in his methodological prescription was balanced by a contextual orientation that took values as an integral part of the analytical process. The policy sciences he envisioned were to be "the policy sciences of democracy". Democracy needs both enlightened leadership and the freedom to engage in critical debates. The Lasswellian scheme achieved a synthesis of both aspects. The policy advisor or public sector manager who would wish to be guided by it would have to be both priest and jester, to borrow a metaphor from Douglas Torgerson. The priestly function is that of the professional analyst who carefully collects data according to the best methodological rules. Lest he or she confuses these data with the "real" world (or the many worlds constructed by other actors in the political system), the policy analyst must learn also to play the jester's role and to ask "is this perhaps not too neat?"[19, p. 228].

We can detect here the influence of John Dewey. His thought had a profound impact on the progressive social scientists who laid the foundations of public administration. Dewey defended the idea that the scientific methods should be used to solve social problems[20, p. 9]. However, Dewey was not a dogmatist positivist[21,p. xxxix]. Without denying that facts and values are distinct, he did not insist that they belong to completely different spheres. For example, he maintained that experience can help us sort out values, and that the empirical world is where values can be tested. Democratic procedures are precisely the means to that end. Lasswell was the student of Charles Merriam, and Merriam,

in turn, was influenced by Dewey, who had been his colleague at the University of Chicago (Dewey in philosophy, Merriam in political science)[22, p. 37].
    As Gerald Caiden explains,

> [Merriam] encouraged his staff to engage in public controversy and reform advocacy. It was from his department that L.D. White produced the first undergraduate textbook, Introduction to Public Administration (…1926), which evidenced less enthusiasm for basic principles and scientific management [than authors like Willoughby] and endeavored to take into account the political environment of public administration[22, p. 37; 23].

What have been the practical effects of the positivist science of administration? The answer can be found in the story of the rise and fall of "scientific management", as it is told in most textbooks[24]. This pre-World War II school of thought assumed that typical bureaucracies "are designed and operated as if they were machines"[25, p. 22]. Gareth Morgan argues that the machine metaphor is still one of the most "ingrained in our conceptions of organizations"[25, p. 24]. Even in the 1990s, reformers articulate bold alternatives to the bureaucratic model by speaking of "re-engineering" government[26].

Scientific management movement originated in the pioneering work of Frederick Taylor, although (a translation from the French of) Henri Fayol's major work also made a significant contribution[27]. Taylor studied industrial organization at the turn of the century by paying particular attention to the rationalization of manual labour[28]. He thought that the principles he had established – principles which Waldo described as "the inauguration of the positivist, the scientific and objective way of regarding human interrelations"[21, p. 50] – were relevant to the (then) new concept of "management"[29]. His ideas were carried over into public administration, with special emphasis on municipal government by Morris Cooke[30] and, especially, the New York Bureau of Municipal Research. Beyond the local level, scientific management provided the impetus for sustained efforts toward the development and implementation of systems of position classification, notably in the US government[6, p. 192] and in the Canadian federal government[31].

Taylorism survived Taylor. His ideas on scientific management were later recast into a more theoretical and systematic mold by Luther Gulick and Lyndal Urwick as the editors of the seminal papers on the science of administration (1937). This text concerns public bureaucracies more directly than Taylor's own work, but its underlying philosophy remains identical. Mariann Jelinek notes modern strategic planning systems replicates at the managerial level what Taylor had started at the level of the factory[13, p. 222]. Today the belief in the revolutionary potential inherent in computers and information management systems shows that Taylorism continues to resurface in different forms as circumstances change[32].

The way in which this story unfolds next entails the displacement of the machine metaphor by a behaviourist (and more or less) humanistic paradigm. Mary Parker Follett showed the way in the 1920s[33]. Then the Hawthorne experiments and the work of Elton Mayo in the 1930s served as the basis upon

which social psychologists[34] and management theorists[35-37] built the
human relations school of the 1940s, 1950s and 1960s.

Another important development was Herbert Simon's devastating critique of
scientific management in his *Administrative Behavior*[38]. This book offered an
original synthesis of the economic theory of rational choice and the psychology
of decision-making. Simon and authors like James March, or Richard
Cyert[39,40] did not belong to the human relations school. However, they shared
with it a preoccupation with the study of organizational behavior. Behaviourist
theories drew attention on the individuals who compose organizations, and
treated them as autonomous persons capable of both rational and emotional
reactions to their environments. To describe this behaviourist perspective,
Morgan uses the metaphor of the organization as a biological organism[25, ch. 2].
This metaphor conveys an impression of openness and adaptability. It stands in
sharp contrast with the mechanistic perspective that reduces individuals to the
status of replaceable parts. Efficiency and effectiveness remain essential criteria
of administrative performance. However, for the critics of the mechanistic
model, these goals can be achieved through relaxed controls and a less
authoritarian leadership style[36, pp. 179-89].

The subtext of that story is that the displacement of the machine metaphor
by the behaviourist approach was a step toward a more sophisticated
understanding of organizational dynamics. It was not, however, a radically new
departure. Even if this approach proposed a more subtle and realistic account
of the psychology of bureaucrats, it was still predicated on the notion that (a)
facts relevant to an analysis of organizational behavior can be ascertained by an
objective observer; and (b) reliable predictions can be made about the probable
effects of specific measure, e.g., changes in the structures of incentives. If
anything, the theories that emerged in the 1940s, 1950s and early 1960s were
even more clearly positivist than the classical bureaucratic models of the 1920s
and 1930s[41, p. 22].

The authors discussed so far shared two fundamental assumptions. First,
their understanding of the scientific method was consistent with at least some,
albeit not necessarily, all the tenets of positivism. They believed that objectivity
is neither impossible nor undesirable when studying human organizations.
They tended to favour an inductive, empirical approach to the discovery of
causal relationships. Second, their underlying political ideology was, if not
statist, at least tolerant of the administrative state and its expanded function in
the post new deal era. Both sets of beliefs have come under attack during the
last two decades.

Toward postmodern government?
Futurists such as Peter Drucker, Robert Reich, John Naisbitt, Alfin Toffler, and
others argue that profound cultural and structural changes are taking place[42-
47]. This is reflected in debates and controversies about fundamental concepts
used in academic or professional discourses, the emergence of new social
movements (e.g., the women's movement), the globalization of international

markets, and the shift from an industrial to a knowledge-based economy. For the sake of brevity, I use here the term "postmodern" to describe this new era. What the defining parameters of postmodern government and public administration consist of is an open question [48]. The public administration and public sector management literatures contain diverging interpretations of the challenges posed by the new socio-economic, political and cultural contexts. In spite of this diversity, there is agreement on the two following points: (a) objective analysis of policy problems, and the management of complex organizations by unbiased technical "experts" has largely failed [49-53]; and (b) hierarchical structures and top-down approaches to policy implementation no longer constitute adequate responses to problem situations faced by policy-makers [54-58]. (The next two subsections provide more details.)

The positivist credo was that reality can be faithfully represented – mirrored, as it were[59] – by scientific theories. Contemporary epistemology, by contrast, stresses the inevitable role of the observer/knower in constructing a relevant image of the world. The implication of this perspective for public servants is that their expert knowledge of the "facts" opens up only one of many possible windows on complex problems. Indeed, the very definition of what exactly is the "problem" is a contentious issue in the political/administrative environment[60]. The implications for public administration research is that there may be more to gain from the use of interpretive strategies than from trying to apply traditional empirical methods more rigorously, as noted later.

Toward a more client-centered approach
Over the course of the last two or three decades, many groups have demanded greater public involvement in policy formulation or implementation. In responding to these demands, the public administration community has argued in favour of more client-centered approaches to policy-making and programme management[61, ch. 2].

In the late 1960s and early 1970s, the priority was placed on the need for democratic participation and the importance of giving a voice to the less privileged members of society. To that end, reformers advocated a more active role on the part of civil servants. More recent reappraisals of the structures and goals of the public service, such as The National Performance Review[61] or Canada's Public Service 2000[62], reflect a greater concern for the loss of legitimacy which affects most public institutions today. Middle class tax payers have become alarmed by the level of public spending. They urge more "business-like" efficiency in government. However, the overall idea remains the same: traditional bureaucratic approaches, or even sophisticated planning systems, no longer offer viable solutions to our problems.

By the late 1960s, public administration was in a state of intellectual disarray. New graduate programs in public affairs and policy analysis were pushing public administration on the side lines of the academic world. Moreover, what was left of public administration as a discipline, with its heavy emphasis on formal structures and routine processes of resource allocation, was

regarded by a new generation of students and scholars as irrelevant to the
pressing issues of the day (e.g., the war in Vietnam, poverty, human rights, etc.).
The "new public administration" emerged a response to this challenge. It
originated in the Minnowbrook conference (1968) as a loosely structured group
of (mostly) young scholars[63]. It is no longer alive as such today, but it was
important to the discipline for some time, especially during the years when
Dwight Waldo, Frank Marini, and H. George Frederickson, who were committed
to the movement's goals, served as editors of the *Public Administration
Review*[41, p. xii].

Not only did the new public administration take as its point of departure the
rejection of the politics-administration dichotomy, it stressed that
administrators make significant policy decisions. One of the movement's goal
was to make social equity the dominant criterion for policy evaluation and
implementation. This implied that civil servants could – and even should – act
as advocates of the under-privileged groups in society in some circumstances.
Such a recommendation made sense in the politically charged climate of the
time, but it betrayed a certain degree of political naivete. There are limits to the
discretionary power of civil servants; internal bureaucratic politics being one of
the most obvious. Moreover, as Douglas J. Amy notes[64, p. 56], administrators
are often reluctant to pursue strategies that could threaten their image of
neutral technocratic experts. Doing so would clearly be against their interest,
both within government and vis-a-vis the public at large.

The idea of a more client-centered approach to policy development and
implementation has not disappeared from the political agenda as the new public
administration faded away in the 1980s[65]. However, it is no longer presented
in a progressive context, but as an aspect of the current populist wave of anti-
bureaucratic sentiments. One of the four principles identified by the authors of
the report of *National Performance Review* as essential to the reinvention of
government is: "putting customers first". In doing so, they were not really
breaking new ground as the private sector had been concerned about service
quality throughout the 1980s. Movement in that direction began, first, at the
state level (e.g., Minnesota) and then spread to the rest of the English-speaking
countries and to Western Europe. However, as Barzelay notes, government's
role may not appropriately be in every circumstance to deliver services to is
"clients" or "customers"[66]. In fact, who these customers might be is
sometimes hard to know (e.g., who are the customers of a prison guard?).

Both US and Canadian reforms stressed a client orientation. The national
performance review, which was itself the outcome of a wide open consultation
process, recommended four steps toward the goal of improving customer
service: "giving customers a voice – and a choice"; "making service
organizations compete"; "creating market dynamics"; and "using market
mechanisms to solve problems"[61, ch. 2]. The report of the service to the public
task force, that was part of public service 2000 (i.e., the Canadian counterpart to
the national performance review), listed three objectives on the way to the
creation of a more client-centered public service: the development of an

organizational culture supportive of this idea; more open and frequent consultations with clients and other stakeholders; and a more committed leadership style that would make "public servants feel valued, motivated, informed and challenged to put forth their best efforts"[67, p. 2].

In these reforms, the techniques used to make the public service more client-focused include public opinion polls and other market research instruments; the use of new informal communication channels like the Internet; task forces and legislative committee hearings; the organization of small workshops, large scale conferences and other means of convening interest group representatives and public officials (e.g., on environmental issues); freedom of information legislation; and the development of new incentives within the public service. Some agencies only implement a few of these measures. Other pursue a systematic and comprehensive strategy often known as total quality management (TQM)[68,69].

What emerges form these efforts is the realization that public administration is not an end in itself or a uniquely distinctive institution. Public officials must question their basic assumptions in the light of what the public expects of them by comparing themselves with what other complex organizations are doing. They have to learn to see the world through a multifaceted prism. Problem situations must be defined in partnership with different stakeholders rather than being fitted into rigid patterns reflecting traditional professional standards. If one reasons from the example of the continued neglect of feminist approaches in public administration[70,53], however, progress is slow.

Debureaucratization
Managerial hierarchies and rigid control systems are now seen in both the private and the public sectors as outdated structures that need to be redesigned. As we have seen, the mechanistic paradigm is seriously discredited. Nevertheless, its economic rationale retains some degree of common sensical appeal (e.g., piece-work). Using social choice theory and game theory, Gary Miller shows that "a narrow neoclassical version of organizational economics self-destructs"[71]. Organizations that do away with rigid hierarchies, and emphasize innovative leadership and cooperation among employees, are more efficient.

How this transformation can be achieved is a question that has received many answers. The Weberian bureaucratic model is not viable today. While no organization can entirely do away with command structures, least of all public bureaucracies, the better goal is to design institutions that are flexible and adaptive. But too much flexibility could degenerate into dysfunctional behavior. Thus, the new literature strongly emphasizes the importance of leadership[72]. The role of the leader of a post-bureaucratic organization is less to issue commands than to inspire a commitment to an integrating and forward looking "vision" and, ultimately, to encourage the development of an organizational culture that promotes co-operation and innovation.

Practitioners and theorists are marching to the sound of the same drummer. Two well known books on public management analyze a number of experiments that started more or less independently in several jurisdictions on three continents, and draw valuable lessons from these experiments[42,43]. Perhaps the most original lesson – and one that definitely has a certain postmodern ring to it – is that in adaptive and successful organizations the members have the power to make decisions and to represent the organization in their dealings with people outside of it. Empowerment, which, in a sense, is the opposite of the hierarchical principle, has received considerable attention in the reports and publications of both the national performance review in the USA and public service 2000 in Canada. Empowerment is also a trend at the local level.

The national performance review recommended decision-making power be delegated to the people who do the work. Empowerment means central controls must be eased to permit prompt and efficient delivery of services. Thus, accountability should be rethought; the emphasis is placed on responsibility for the results achieved rather than for strict adherence to regulations concerning the use of standardized inputs[48, ch. 3]. Hence the title of the report itself: *From Red Tape to Results*. Reflecting upon this evolution, P. De Celles even suggests the relationship between bureaucratic and political officials should be reversed in some measure. He argues empowered managers should have more opportunities for deciding what to do, and politicians should be more concerned with how to do it. What citizens want and expect has often more to do with issue of process than with the actual goals of public policy[73, p. 32].

There are reasons to doubt that these ideas will entirely displace more traditional governance structures. This is partly because of the inertia present in all organizations[74]. It is also because the democratic political process creates obstacles to the elimination of regulations that may be cumbersome while it guarantees openness and transparency in the conduct of public affairs[75]. Moreover, empowerment itself is fraught with intriguing paradoxes. On the one hand, it is predicated on the notion that the politics-administration dichotomy is obsolete. Public servants, who already exercise a significant amount of discretionary power, should be granted even more discretion. On the other hand, to fulfill their new mandate, empowered bureaucratic policy-makers must be able to prove to the public that their new responsibilities leave no room for partisan bias. In other words, they would have to prove that something like the old politics-administration dichotomy still makes sense[76]! From an epistemological standpoint, the important questions are: What kind of knowledge do these empowered participants in the policy process share? How do they communicate their understanding of the problems at hand?

From explanation to interpretation
The logic of a more client-focused and decentralized organizations is that there is more than one avenue to efficient management. There are potentially as may avenues as there are clients and or empowered bureaucrats. Strategies and

procedures must be negotiated and periodically re-evaluated in light of what a multiplicity of stakeholders think. Knowledge claims grounded in experience now compete with professional expertise or hierarchical status. This signifies a relaxation of the implicit positivism that still permeates organization theory. As Frederick Thayer argues, there is a close relationship between the concepts of objectivity and hierarchy – the latter being required to enforce the former[77]. Indeed, there is wide-spread skepticism about the technocratic experts' superior knowledge of the "facts" and this view cuts across ideological lines. In the 1960s and 1970s, the liberal left used to inveigh against the "technostructures" controlling large corporations and government bureaucracies. The neo-populist mood that now prevails in North America is a reaffirmation of "common sense"[78, p. 159; 79] in areas like education reform, welfare reform, and the administration of justice.

Jay D. White reminds us that "postpositivist philosophers of science have identified three modes of social research – explanatory, interpretive, and critical"[80]. Positivist science is interested in causal explanations. However, there is now a realization that the kind of "realities" that policy-makers deal with are multidimensional. In some respects, they are constructed by the policy-makers and the political actors with whom they interact. Thus, the other two strategies should be more attractive. Almost by definition, the democratic logic places severe limits on the power of any single individual or group to impose its preferences. In a functioning democracy, no single interest can determine criteria for selecting the relevant facts or interpreting their meaning. Values and factual events are constantly rearranged into different strategic positions that social actors pursue in trying to influence each other, or simply in making sense of their own situation.

Interpretive research seeks to bring out these relationships. It asks: What meaning do the actors involved in a particular context attach to their own actions and that of others. The interpretive approach uses the methodology of hermeneutics and accepts that practically all interpretations deserve equal consideration. The critical approach, by contrast, combines interpretation and evaluation. Inspired by the works of philosophers like J. Habermas, it rests on the assumption that the power structures of capitalist societies systematically constrain certain groups or classes from participating fully into the democratic process. Because it is constituted as a critique of the obstacles to unrestrained communications, it is known as critical theory or critical research.

The interpretive approach makes rather extensive use of abstruse concepts. In order to apply these approaches, however, policy analysts or managers do not need to use the language of theoretical philosophy. J. D. White suggests that the art of story-telling is an excellent way to put post-positivism into practice: "through storytelling, interpretation and critique enable social change"[81]. From that angle, case studies open up interesting avenues for post-positivist research. In the same vein, Steven Maynard-Moody and Marisa Kelly show that one of the best way to understand how managers create meaning is to examine "a set of stories, or folk tales, collected in several state government

organizations"[82, p. 71;83]. It is customary to lament the lack of methodological rigor and the narrow scope of case studies that the public administration continues to produce in abundance[84, p. 106]. What is really needed is research that combines good case studies with the critical element inherent in story-telling, solid analysis, and a carefully worked out research design.

Postpositivist science and public administration

Self-consciously postmodernist theorists (e.g., Foucault, Lyotard, Derrida, Rorty) and their followers in the social sciences[85] do not always clearly distinguish between positivist approaches to scientific research and science itself. Their critique of technocracy often leads them to adopt a relativistic understanding of science. Ignoring what ought to remain significant distinctions, they view all forms of expression as rhetorical weapons in a war of words. If this trend prevails, public administration, as a discipline, would become limited to the discussions of the politics and questionable ethics of bureaucratic power. As an art, it would become entirely subservient to the logic of political communications and interest advocacy. Indeed some movement in that direction seems to have taken place already[49].

There is a also a conservative or populist reaction to technocracy and top-down approaches. Populism is less explicitly relativist but it is nonetheless rather inimical to scientific inquiry. The advocates of the new public sector management paradigm promote their own brand of relativism. They skip too lightly over the differences between the public and the private sectors. They pretend not to see, and would like us to ignore, the fundamental difference between the logic inherent in public bureaucracies (i.e., constitutional and political accountability) and the logic of the market[75]. This confusion of values could damage the public interest, if it has not done so already.

There is no reason to despair about the future potential of a scientific approach to public administration, whether we define public administration as a distinct research domain or as a unique practice. Science and the philosophy of science have move far way from positivism during the last fifty years or more. Paradigmatic shifts as momentous as quantum physics and more recent developments like the sciences of complexity (e.g., chaos theory) give us a new window on scientific inquiry. Post-positivist science shares with philosophical postmodernism some important ideas, including the idea that whatever "reality" exists "out there" cannot be known with certainty and is often impossible to control. However, these two intellectual currents should not be confused.

To illustrate what is at stake here, I consider the suggestive metaphor first proposed by Karl Popper[86]: since the Newtonian revolution, science used to see clocks everywhere, now it has discovered clouds. Clouds are puzzling because they are far more complex than clocks. That is, they are made of elements that enter into unstable and largely unpredictable relationships. The notion of complexity is the point of convergence of the new scientific thinking[87-89]. In more technical terms, the new tools of scientific inquiry

make extensive use of non-linear dynamics (and, to a lesser degree, fuzzy logic[90]). They are being applied to the study of non-equilibrium phenomena. Non-linear dynamics describes relationships that are self-referential. These relationships are extremely sensitive to initial conditions. Thus small inputs can produce unexpectedly large outputs; dissimilar inputs, on the other hand, can have similar effects. Situations far from equilibrium are characterized by considerable uncertainty because they are subject to unpredictable and catastrophic phase changes[91]. Complex systems have a sort of virtual existence; they can acquire, depending on the circumstances, one of several potentially realizable configurations.

In addition to the displacement of determinism (or, at least, strict determinism), the new scientific vision also introduces another key concept, namely, autonomy. A complex system becomes autonomous from its environment when it acquires the capacity to be self-organizing. A system is said to be self-organizing when it can maintain its organizational integrity by producing, reproducing, and spontaneously rearranging its own structures. Self-organizing systems are not controlled by an external operator nor even by an internal and functionally specialized regulator. They operate as integrated networks in spite of the absence of any controlling center.

In the social world, free markets and democratic political regimes are often cited as relevant examples of this process of spontaneous self-organization[92-94]. How do these examples relate to organization theory and public administration? The new sciences of complexity provide theorists of post-bureaucratic organizations and reformers with a wealth of insights.

What is the effect of post-positivist science on public administration research and practice[95]? Although limited so far, there is already some movement in that direction. The potential for further progress is encouraging. At present, the literature consists of texts which (a) either try to convince scholars or practitioners that these new approaches are relevant to policy analysis or organization theory[96]; (b) articulate and explore metaphorical parallels [25,57,97]; (c) seek to be closer to the applied end of the spectrum to illustrate hypothetically how non-linear dynamics could be used to study administrative behavior and organizational change[98,99]. What is still lacking, however, are empirical studies using these new concepts and techniques as means to describe and/or evaluate the effects of actual programs or institutional arrangements.

Why should the members of the public administration community be impatient to learn about the results of such studies? They would find out more about the implications of the trends I discussed in the previous section without falling into the traps posed by outdated positivist assumptions. For example, the issue of leadership raises questions that non-linear dynamics could tackle in new ways. If the postmodern turn in political culture leads to the dismantlement of hierarchical structures that were designed to facilitate the communication of standardized instructions, an entirely different style of leadership must be invented. However, to illustrate how different that style

might be, it would be helpful to show that it could produce results only in the context of debureaucratized organizations. In other words, we would still have to prove that more efficient forms of leadership cannot eliminate the problems inherent in bureaucratic organizations. This involves demonstrating the impossibility of mapping data that describe discrete and non-linear phenomena on a continuous and linear space. Using hypothetical data, Douglas Kiel showed graphically that this is apparently the case. Because organizational behaviour is inherently complex, it sometimes results in chaotic variations that cannot be controlled by hierarchical command structures, no matter how efficient and "in control" supervisors appear to be, and even if employees are diligent[99, pp. 52-63]. Possibly, this kind of empirical research cannot yet be done. More qualitative explorations, using a variety of metaphors and other imaginative scenarios, are likely to continue to be the preferred strategy of research for the foreseeable future.

Conclusion
In recent years, pressure groups, editorialists, politicians, ordinary citizens, academics, and administrators themselves, have given much thought to reinventing government. A wealth of new ideas and suggestions exist. Leaders proposed, discussed and implemented reinventing reforms around the world at the national and local levels. On the surface, these changes reflect a cultural shift toward postmodern values, broadly defined. To put it another way, the epistemology of public administration appears to be less homogeneously positivist than it claimed to be a generation or two ago.

Movement toward the postmodern end of the spectrum has certainly taken place. As I mentioned, there is now a sizeable literature that discusses a variety of related topics such as:

- the limitations inherent in the experts' "objective" knowledge of policy "facts";
- the contradictions involved in trying to control large complex organizations; and
- the inadequacy of traditional dichotomies like the politics/policy-administration distinction.

However, the reform alternatives are not always carefully thought out. Some of the recent reforms may be, in part, "smoke and mirrors" that hide the ruthlessness with which budgetary compressions are carried out. Other reforms might be excessive even to the point of undermining the constitutional and philosophically significant distinction between the public and the private spheres. As these issues are further explored, hopefully we will learn to live without the crutch of positivist dogmas and to cope with complexity and multidimensional realities in a sensible manner. The post-positivist sciences of complexity should provide much needed assistance in this regard.

Notes and references

1. Jean-François Lyotard establishes a contrast between the modern tendency to frame all meaningful occurrences within what he calls "grand narratives", e.g., either Marxism or market capitalism, and the postmodern condition which he describes as a rejection of grand narratives and a critique of all foundationalist philosophies. See Lyotard, Jean-François, The Postmodern Condition: A Report on Knowledge, Manchester University Press, Manchester, U.K., 1984.

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