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# Organizational Learning in the Public Sector: Culture, Politics, and Performance

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A foundational principle of organizational learning is that it is a process requiring changing short-term rules and long-term norms. As public organizations are required to accomplish more with less, agencies are seeking innovative ways to increase programmatic effectiveness and efficiency. By using the lenses of organizational culture, public-sector politics, and public performance, this research gains insight from exploring the literature on learning while overcoming the bias of scholarship that favors private organizations. This is central to understanding ethical issues affecting public organizations. Distinguishing characteristics of organizational learning in the public sector help to uncover how these three factors operate together to produce learning. This study analyzes a longitudinal, in-depth case study on public-sector organizational learning to identify constructs and linkages that can be used for developing theories and articulating practical examples that may enhance an organization's ability to be both more efficient and effective at meeting their mission.

**Keywords:** ethics, learning, organizational culture, performance, politics

Some public administration scholars (Moynihan & Ingraham, 2004; Moynihan & Landuyt, 2009; Simon, 1991) consider organizational learning an emerging field, although it has been prevalent for over three decades in business administration. Government, however, tends to approach learning from the perspective of policy learning in the context of policy failure and policy implementation. Missing from this analysis is how public organizations learn, or in exploring the public-sector learning process, focusing on the agency implementing the public policy or program in an ethical manner. This research fills a gap in public administration literature by identifying relevant constructs of public-sector organizational learning that can be used to build theories and by explaining practical implications using a long-term, in-depth case study.

The present approach responds to Denhardt's (2011) charge for theory-building guided by "praxis," requiring ongoing critical reflection on the connections between theory and practice. Practically, research design studies how one public organization learned over the short- and

long-term. Normatively, this study applies organizational learning concepts to that learning process in exploring theory-building in the public sector. The working definition of organizational learning is grounded in the Fiol and Lyles (1985) conception of both changing rules, or short-term learning, and changing norms, or long-term learning. The present framework for understanding the process emphasizes learning in the context of public sector organizational culture, public-sector politics, and public performance. Organizational learning is distinguished from organizational change, though closely linked in the scholarship. The process-centric nature of learning requires, as Denhardt (2011) and Fiol and Lyles (1985) aptly note, reflection on the interface between behavioral and cognitive development. Although not an exhaustive list, organizational culture, public-sector politics, and public performance apply to organizational learning in the literature and provide the mechanism to overcome private-sector bias in research. Scholarship shows that these factors manifest differently in public organizations. To be sure, learning in public and private organizations is not a distinct process, but there is merit to this approach. For example, Simon's (1997) satisfying rule-following *Homo bureaucraticus* versus profit-maximizing *Homo æconomicus* in the decision-making process and Allison's (1979) comparison of the functions of public and private managers conclude that the sectors are similar in all unimportant respects. Perry and Rainey (1988) examine the research on public-private distinctions, arguing that qualitative, longitudinal research designs like this study "ha[ve] led to increasing recognition of the importance of issues such as this" (1988, p. 198).

These three factors (e.g., culture, politics, and performance) were identified because of their prevalence in the scholarship. Another factor for consideration in future research projects might include administrative communication techniques via organizational policies on social media usage, as limitations are in many instances germane to public organizations. Structuring an in-depth case study requires systematically applying these three factors of learning to explore this organization's learning process. This process-centric context facilitates an exploratory study of existing scholarship in an area that has not received much attention, that is examining how these dynamics operate together to result in organizational learning in this case study analysis. Developing relevant constructs of how public-sector organizations learn advances the body of scholarship in the field, leading to further theory-building.

The case study's organization is METRO, the Harrisburg Area Police Information Resource System, which began in Harrisburg, Pennsylvania. City leaders charged METRO administrators with creating a paperless criminal justice information-sharing system to increase effectiveness and reduce costs. METRO evolved into a 95% paperless system of 37 municipal, county, and state administrative agencies across two counties. A praxis analysis (Denhardt, 2011) of METRO's learning, both short-term learning, changing rules, and long-term learning, changing norms (Fiol & Lyles, 1985), results in a process of public-sector organizational learning that brings together culture, public-sector politics, and public performance. The conceptual model then applies these foci: culture and a public interest infusion, politics and learning archetypes, and performance and what is termed the learning trap theory.

## ORGANIZATIONAL LEARNING IN SCHOLARSHIP

Research in the area of organizational learning is driven by the purpose to explore a public organization's learning process; this literature synthesizes scholarship on culture, public-sector

politics, and public performance. This understanding highlights work in these areas in the broader context of Fiol and Lyles' (1985, p. 810) organizational learning as a process requiring changing short-term rules ("behavioral outcomes") and long-term norms ("collective consciousness") through Denhardt's (2011) critical reflection of knowledge and experiences. Linking existing research with practice in the case study attempts to explore these areas to find some conceptual order. Not an exhaustive list, the most oft-cited include: exploration versus exploitation (March, 1991); lower-level single-loop learning versus higher-level double-loop learning (Fiol & Lyles 1985); cognitive versus social learning (Chiva & Alegre, 2005); learning versus culture (Cook & Yanow, 1993); cognition versus behavior (Dekker & Hansen, 2004); actors' agency versus structure (Feldman, 2000); short-term versus long-term learning (Levinthal & March, 1993); and organizational learning versus the learning organization (Sun & Scott, 2003). At the most fundamental level, questions exist surrounding the learning process itself and the dynamic between individual and organizational learning.

### Learning and Culture

Simon (1991) cautions against nuanced definitions for fear of defining it out of existence; therefore, the analysis incorporates his notion of organizational learning into the working definition of changing short-term rules and long-term norms via behavioral and cognitive development. Previous research on norm development (Cook & Yanow, 1993; Denhardt, 2011; Fiol & Lyles, 1985; Mahler, 1997) focused on the individualistic creation of organizational meaning and long-term organizational consequences. Crossan, Lane, and White (1999) developed the 4I framework to explain the learning process as a collaboration within an organization; individuals *intuit* and *interpret* insight, and groups *integrate* to develop a shared understanding and take coordinated action, resulting in an *institutionalization*. Other research highlights the potential of organizational learning firms (Chiva & Alegre, 2005) or the stress created within subcultures (Brown & Duguid, 1991; Cook & Yanow, 1993). These challenges can be mitigated by focusing on learning (Garcia-Morales, Llorens-Montes, & Verdu-Jover, 2006; Goh, 2003). For Goh (2003), this facilitates the organization's ability to transform into a learning organization. There is evidence, however, that this is not always the case. Attention to the broader context is key according to Sun and Scott (2003).

### Learning, Politics, Performance

For public organizations, political power is a prevalent influence on environment and capacity to learn (e.g., separation of powers, politics-administration dichotomy). This is documented by Dekker and Hansen (2004), Schofield (2004), and Argote and Miron-Spektor (2011). Better implementation is also argued for in the work of Rubin (1990, 2002), wherein greater political accountability hampers effectiveness. Teodoro (2011) argues for heightened discretion ethical problem-solving. Power and political agendas motivate learning, according to Antonacopoulou (2006). Furthermore, the bureaucratic impetus for change and restraint are enabled by familiarity with making policies in the broader, ethical public interest (Olejarski, 2011). Others, such as Rainey and Bozeman (2000) and Lawrence, Mauws, Kyck, and Kleysen (2005), examine the complexity of public processes vis-à-vis the private sector.

Moynihan (2005) analyzes the import of linking reflection and learning to manage. Here, single-loop learning, which Fiol and Lyles (1985) describe as lower-level learning and “changing rules,” should be used when organizations have clear goals and measurable objectives, therefore, helping public organizations improve performance (Moynihan, 2005). Comparatively, double-loop learning, described by Fiol and Lyles (1985) as “changing norms,” is appropriate when practitioners regularly revisit organizational mission, goals, and strategies (Moynihan, 2005). Norms, or an organization’s culture and structure, have an effect on public organizations’ performance and capacity to innovate (Hurley & Hult, 1998).

Others, such as Levinthal (1991), March (1991), Attewell (1992), and Fichman and Kemerer (2001), view learning as contributing to organizational adaptability, expertise, and long-term development, while Feldman (2000) and Lumpkin and Lichtenstein (2005) emphasize the importance of learning and creativity in avoiding misattribution for success. Closely linked to this idea are March’s (1991) competency traps, in which organizations institutionalize new routines in the interest of performance, incorrectly attributing success to the new routine. In a related vein, Spender (1996), Lam (2000), and Tippins and Sohi (2003) all argue for better understanding and control of an organization’s capacity to learn.

## Learning Process

Public administration scholars and practitioners interested in the learning process of public organizations should consider culture, public-sector politics, and public performance holistically, as a process, within the context of the organization. These three factors result in organizational learning. Within an organization’s internal environment, culture affects the learning process by way of collaboration among individuals and external stakeholders with regard to outcomes, demonstrating the relationship between culture and public-sector politics and public performance (Crossan et al., 1999; Dekker & Hansen, 2004; Hurley & Hult, 1998; Lam, 2000; Lawrence et al., 2005; Levinthal & March, 1993; Mahler, 1997; Moynihan, 2005; Spender, 1996). Literature supports connections between culture and performance in subcultures and communities of practice concerning the role of overcoming procedural and communication challenges (Attewell, 1992; Brown & Duguid, 1991; Chiva & Alegre, 2005; Cook & Yanow, 1993; Goh, 2003). Linkages between culture and politics interact in light of organizational identity (Argote & Miron-Spektor, 2011; Senge & Sterman, 1990; Sun & Scott, 2003). Public performance and public-sector politics come together in the learning process by way of structure, political control, and agenda-setting (Antonacopoulou, 2006; Dekker & Hansen, 2004; Lam, 2000; Lawrence et al., 2005; Rubin, 1990, 2002; Schofield, 2004; Schulz, 2001). To be sure, the analysis above abounds with interactions between culture, public-sector politics, and public performance that produce public-sector learning.

## RESEARCH QUESTION

The analysis was guided by the constructs and ideas in the understanding of organizational learning in the public interest. Specifically, the analysis attempts to answer the question: *What are the managerial and ethical implications of the organizational learning process in the METRO case study?*

## RESEARCH METHODS

In order to investigate this research question, several techniques were used. First, it relies on triangulation via archival newspaper research, content analysis of METRO's records and related documents, and an organizational narrative to provide a deeper description for case study analysis. This triangulation allows verification, utilizing three independent sources before acknowledging a finding. (See Yin [2009] on analytical generalizability to advance theory-building using the single case study approach; see Geertz [1973] on organizational narratives and descriptions.) A third co-author was incorporated to independently verify the relationships and themes found by the first two authors. By doing this, the analysis attempts to verify the external validity of the findings and bring an outside perspective to the analysis.

## FINDINGS FROM PRAXIS ANALYSIS

Culture, public-sector politics, and public performance operate together to produce learning, interacting dynamically in the case study of METRO's learning process, which provides evidence that learning occurred through behavior outcomes and cognitive developments. See Table 1 for the praxis analysis and examples of the organizational learning process, both changing rules and norms, in the context of METRO's culture, public-sector politics, and public performance. Serving as a useful heuristic for viewing theory to practice relationships in the case study, Table 1 brings forth key elements of relevant theories as they apply to METRO. Each practical example is tied directly to a conceptual ideal. Exploring how learning occurs through these three factors' interactions produces contributions to the literature on organizations' international environment, external environment, and programmatic capacity.

### Learning Process: Culture and Internal Environment, the Principle of Public Interest Infusion

METRO's learning process began with the infusion of new members into the internal environment: Harrisburg's first strong mayor was elected, and the first public safety director was appointed (Simon, 1991). The actors cultivated the culture to emphasize public safety; the public safety director's previous experience was as a retired state police captain. METRO was the first project they worked on together, symbolic of the shift in culture. In METRO's learning process, the mayor and director facilitated the learning process by gradually transferring their individual-level learning to the broader organizational culture (Cook & Yanow, 1993; Crossan et al., 1999; Garcia-Morales et al., 2006; Mahler, 1997; Scott, 2003). Moreover, the mayoral appointment of Harrisburg's first public safety director is an example of short-term (rule-changing) learning (Fiol & Lyles, 1985; Simon, 1991). Infusing new members creates new procedures and provides an opportunity to transform tradition within the internal environment (Brown & Duguid, 1991; Cook & Yanow, 1993; Goh, 2003). Further evidence of culture's role in the short-term learning process is found in the police officers' support of the transforming culture (Brown & Duguid, 1991; Cook & Yanow, 1993; Goh, 2003), remarking openly about METRO's effectiveness within the first 60 days. Harrisburg officers' support for the

TABLE 1  
Praxis Analysis, Examples of Organizational Learning Process

Culture	Public-sector politics	Public performance
<p><i>Changing short-term rules</i> Harrisburg's first strong mayor appointed the city's first public safety director (Fiol &amp; Lyles, 1985; Simon, 1991)</p>	<p>Mayor, Public Safety Director, and Public Safety Deputy Director served appointments on the Governor's Justice Commission (Antonacopoulou, 2006; Lawrence, Mauws, Kyck, &amp; Kleysen, 2005; Teodoro, 2011; Vince, 2001)</p>	<p>METRO enabled Harrisburg police officers to use photo results returned from the system for "Wanted" posters as the system progressed, transforming the process (Fiol &amp; Lyles, 1985; Levinthal &amp; March, 1993; Moynihan, 2005)</p>
<p>In METRO's first two months, Harrisburg police officers began speaking out about its effectiveness (Brown &amp; Duguid, 1991; Cook &amp; Yanow, 1993; Goh, 2003)</p>	<p>METRO and Harrisburg Police Department staff secured grants from the Governor's Justice Commission and the Federal Law Enforcement Assistance Administration, demonstrating broad political support to stakeholders (Dery, 1998; Olejarski, 2011)</p>	<p>Director of Public Safety originally used Harrisburg's mainframe computer system for municipal billing to regionalize METRO (Senge &amp; Sterman, 1990; Tippins &amp; Sohi, 2003)</p>
<p>METRO initially regionalized with a neighboring municipal police department for geographic convenience, incorporating their administrators into the program, collaborating on the satellite METRO center (Cook &amp; Yanow, 1993; Crossan, Lane, &amp; White, 1999; Garcia-Morales, Llorens-Montes, &amp; Verdu-Jover, 2006; Mahler, 1997; Sun &amp; Scott, 2003)</p>	<p>Mayor and Public Safety Director collaborated to support grant-matching requirements, ranging from 10-25%, further evidence of political and administrative support (Mahler &amp; Casamayou, 2009; Rubin 1990, 2002)</p>	
<p><i>Changing long-term norms</i> New culture introduced with Harrisburg's public-safety oriented mayor and first public safety director (Cook &amp; Yanow, 1993; Crossan et al., 1999; Garcia-Morales et al., 2006; Mahler, 1997; Scott, 2003; Simon, 1991)</p>	<p>Harrisburg elected first strong mayor form of government at METRO's founding, continuing through its tenure (Dekker &amp; Hansen, 2004; Levinthal &amp; March, 1993; March, 1991; Schofield, 2004)</p> <p>Public Safety Department Administrative Assistant/METRO developer promoted to Deputy Director of Public Safety; new strong mayor and new Public Safety Director expanded METRO and relocated to new Public Safety Center (Antonacopoulou, 2006; Lawrence et al., 2005; Teodoro, 2011; Vince, 2001)</p>	<p>Harrisburg Public Safety Director charged administrative assistant with developing METRO to improve effectiveness and efficiency (Moynihan, 2005)</p>

<p>Within 12 months, Harrisburg police officers attributed METRO to solving over 30 cases, citing their increased efficiency (Brown &amp; Duguid, 1991; Cook &amp; Yanow, 1993; Goh, 2003)</p>	<p>When METRO's developer circulated the idea of regionalization, some members of the Harrisburg Police Department were initially resistant, but Harrisburg's Mayor and Public Safety Director advocated METRO's public safety benefits; the Governor's Justice Commission emphasized cost-savings of regionalizing METRO, rather than funding 67 counties or over 2,500 municipalities (Borgatti &amp; Cross, 2003; Joaquin &amp; Myers, 2014)</p> <p>METRO regionalized over approximately 15 years by soliciting feedback on the system logistics from collaborating counties and agencies (Argote &amp; Miron-Spektor, 2011)</p>	<p>METRO expanded structurally, doubling in space, as programmatic offerings continued, making more types of data available more often, based on departmental need (Hurtley &amp; Hult, 1998; Jimenez-Jimenez &amp; Sanz-Valle, 2011; Sinkula et al., 1997)</p>
<p>METRO developer worked with an in-house programmer to create technology for police car terminals to maintain effectiveness and reduce costs (Attewell, 1992); Bierly, Kessler, &amp; Christensen, 2000; Lumpkin &amp; Lichtenstein, 2005; March, 1991)</p>	<p>Senior METRO staff created new training manuals and protocols with support staff, administrators, and officials as METRO's capacity grew (Attewell, 1992; Feldman, 2000; Levitt &amp; March, 1988; Levinthal, 1991; Lam, 2000; Schulz, 2001; Spender, 1996)</p>	

new culture created by the mayor and public safety director increased long-term. As support grew, METRO began transitioning long-term learning with its initial regionalization, starting with a neighboring municipality; METRO brought their administrators into an existing fold. Doing so set the foundation for future learning (Cook & Yanow, 1993; Mahler, 1997) which included a broader group of stakeholders (Crossan et al., 1999; Garcia-Morales et al., 2006; Sun & Scott, 2003).

### Learning Process: Public-Sector Politics and External Environment, Three Archetypes

As METRO's new culture of public safety became the norm, administrators expanded their learning toward the external environment. Harrisburg's Mayor, Public Safety Director, and Public Safety Deputy Director served appointments on the Governor's Justice Commission, extending the political power base. These appointments established METRO's external, short-term learning process (Lawrence et al., 2005; March, 1991), because the actors' political agendas motivated learning (Antonacopoulou, 2006), provided funds, and maintained the actors' legitimacy as they increased discretion, moving from municipal to state levels of government (Teodoro, 2011). METRO and Harrisburg Police Department staffers secured grants from the Federal Law Enforcement Assistance Administration and the mayor and director provided matching grants. Serving on the commission, supporting grant-writing efforts, and contributing required funds, enabled these key actors to directly change the rules of METRO's external political environment. They connected with information- and power-brokers at the state and federal agencies (Dery, 1998), and provided expertise to external stakeholders, garnering political support (Olejarski, 2011)—all examples of short-term learning.

Role differentiation between the political and administrative actors in the state-level commission examples shows METRO's short-term learning (Mahler & Casamayou, 2009; Rubin, 1990, 2002). Strong mayors during METRO's tenure created potential for increased power behind programmatic development. If a new program survives from administration to administration, this speaks to its adaptability (Dekker & Hansen, 2004; Levinthal & March, 1993; March, 1991; Schofield, 2004).

If an organization fails to meet the demands of its external environment and merely changes it instead, the organization has not learned (Levinthal & March, 1993; March, 1991). METRO shows two examples of long-term norm-changing. First, Harrisburg elected another strong mayor who then appointed another Director of Public Safety; the director appointed METRO's developer to Deputy Director of Public Safety. This new administration continued the previous administration's political agenda for METRO, including service on the Governor's Justice Commission, further growing the power base (Antonacopoulou, 2006; Teodoro, 2011). Under the new administration, however, METRO relocated to a newly created Public Safety Center in Harrisburg (Lawrence et al., 2005). By using a scaffolding advocacy approach, METRO's external environment evolved to incorporate ethical value assessments on power and politics in relation to the bureaucratic hierarchy (Borgatti & Cross, 2003) as the Mayor, Director, and Deputy Director spoke on behalf of the public safety benefits to the commission. In turn, the Governor's Justice Commission lobbied the police department and other stakeholders, perhaps political overreach to some degree (Joaquin & Myers, 2014), on the cost-saving

approach. Administrators solicited feedback from collaborating counties and agencies, producing learning through task and culture identity of the membership (Argote & Miron-Spektor, 2011).

Applying examples from METRO's short- and long-term learning processes to scholarship on the role of politics and external environment allows us to draw broader conclusions about learning archetypes in producing learning (Mahler & Casamayou, 2009; Rubin, 1990, 2002). The three archetypes of public-sector learning, or the three roles described in the aforementioned praxis analysis, show how they contribute to learning. These are: Public Safety Director, executive public administrator; METRO developer/Public Safety Deputy Director, front-line bureaucrat; and Mayor, elected official. These three archetypes collaborated on the external political environment of METRO's learning process, capitalizing on social resources such as influence and networking (Lawrence et al., 2005; Levinthal & March, 1993; Rainey & Bozeman, 2000; Tamuz, 2001), information-sharing (Borgatti & Cross, 2003; Dery, 1998; Joaquin & Myers, 2014; Olejarski, 2011), and agenda-driving (Antonacopoulou, 2006; Dekker & Hansen, 2004; Schofield, 2004) to harness those resources toward changing METRO's rules and norms.

The executive public administrator archetype, METRO's Public Safety Director, provides content-area expertise and fosters a common vision throughout the organization to transform its internal environment via the culture. Moreover, this role's charge is to shake the proverbial money tree, securing funding for the program and to cultivate political relationships to ensure that the external environment is conducive to continual learning. In public organizations, appointed administrators serve at the pleasure of the appointing elected official, influencing power, authority dynamics, and programmatic support. A leading characteristic of this executive administrator archetype is the ability to serve as liaison between the other two archetypes, translating technical jargon (from the front-line bureaucrat) and political imperatives (from the elected official), as well as with key stakeholders. Threatening this archetype's power in the production of learning is relevance, or the willingness and ability to maintain actively engaged in the generation of subject matter expertise as it directly relates to legitimacy and discretion in the learning process (Teodoro, 2011). Another potential challenge is upholding an equitable presence politically as the content evolves (Joaquin & Myers, 2014).

As the front-line bureaucrat archetype, METRO's developer/Public Safety Deputy Director, his role is subordinate to the executive public administrator and elected official in the traditional bureaucratic structure. Understanding the technicalities required to operationalize the program and the appropriate tools and techniques to enhance the program is the primary characteristic of this archetype because it directly contributes to the organization's behavioral and cognitive learning. A principal threat to the front-line bureaucrat's power in the learning process is mindfulness of this external environment, rather than narrowly focusing on the fog of technological innovations (Dekker & Hansen, 2004; Schofield, 2004). On the contrary, this archetype is also vulnerable to ensuring that the highest levels of technical expertise are maintained to drive the learning process from the ground floor (Rubin, 1990, 2002).

The role of elected official, the mayor, serves as the third and final archetype of organizational learning. Here, this archetype moves political allies into position, controlling the dissemination of information and managing resistance. The elected official archetype's central characteristic is providing political "cover" in the external environment for the other two archetypes. Attributes of the archetype include maintaining a macro perspective on how the organization can produce learning, collaborating with the other two archetypes, and trusting

in the bureaucratic structure, its content and technical expertise. Potential goal incongruence may be a threat to the elected official archetype's power (Rainey & Bozeman, 2000; Schofield, 2004). Related are issues regarding time constraints and the ability to communicate effectively with the executive public administrator archetype on how to drive the learning process from a macro perspective (Schofield, 2004). Lacking political support, rendering it weaker and therefore extending that political weakness to the other two archetypes is also a challenge (Antonacopoulou, 2006; Dekker & Hansen, 2004). From a humorous perspective, the ideal names posed for the three archetypes are the "mover," the "shaker," and the "sausage-maker." The mover represents the elected official, moving all of the political pieces into play; the shaker represents the executive public administrator, shaking the money tree to secure funding; and the sausage-maker represents the front-line bureaucrat, responsible for operationalization and making the sausage (or scrapple, in Pennsylvania).

### Learning Process: Public Performance and Programmatic Capacity, the Learning Trap Theory

In METRO's learning process, public performance reinforced its internal and external environment, or its culture and power dynamics, resulting in learning through behavioral and cognitive developments. Short-term, METRO grew in programmatic capacity by changing the way Harrisburg police officers searched for and apprehended fugitives. This example of improved performance from METRO's learning process is what Fiol and Lyles (1985) call single-loop learning, changing rules, or Levinthal and March's (1993) short-term learning (Moynihan, 2005). Tippins and Sohi (2003) and Senge and Sterman (1990) address short-term learning and performance, noting that organizations should take a macro perspective to focus on the policy problem rather than privileging the technology.

Moynihan (2005, p. 204) describes the distinction as it applies to public performance: "Double-loop learning occurs when public actors test and change the basic assumptions that underpin their mission and key policies ... questioning the goals of a program." For METRO, this began when the Public Safety Director charged his then-administrative assistant with developing the program to increase information-sharing among criminal justice agencies in the city. METRO expanded structurally by doubling its physical space (Hurley & Hult, 1998) and continually providing more information to align capacity with performance (Jimenez-Jimenez & Sanz-Valle, 2011; Sinkula, Baker, & Noordewier, 1997). METRO's long-term, double-loop learning example of the eventual success developing police car terminals in-house shows evidence of enabling flexibility for creativity while building capacity (Lumpkin & Lichtenstein, 2005), technical expertise and institutional support to reduce the burden on users (Attewell, 1992), and the notion that organizations prosper when members share information (Bierly, Kessler, & Christensen, 2000). The director and deputy director's drive to innovate in-house technology capitalizes on March's (1991) balancing act. Closely related is the example regarding training manuals. As METRO's performance increased and programmatic capacity expanded, staffers' agency had to be harnessed in order to institutionalize new routines consistent with maintaining ethical standards (Feldman, 2000; Levitt & March, 1993). Senior staffers worked to blend new and existing procedures with METRO staff (Schulz, 2001; Spender, 1996) and to develop standardized processes for the field reporting system and additional data-collection

(Attewell, 1992; Lam, 2000). Common among these examples of METRO's long-term learning examples is the constancy of drive to improve METRO's capacity by the actors (Fichman & Kemerer, 1997).

Competency traps, as conceptualized by Levitt and March (1988), suggest that organizations institutionalize new routines in the interest of performance, though the organization incorrectly attributes success to that new routine. Layered with March's (1991) exploration of new knowledge, exploitation of existing knowledge, and Fiol and Lyles' (1985) short-term single-loop learning versus long-term double-loop learning, the learning trap theory occurs in the context of Levitt and March's drive for improved performance and a lack of March's existing knowledge to exploit. A learning trap may occur during a time an organization prematurely attempts advancement from single- to double-loop learning, but lacks programmatic capacity.

METRO's learning process to develop in-house police car terminals is a good example of the learning trap theory. Initially, METRO attempted information-sharing about the police cars before capacity could sustain the innovation, exploring new knowledge without a foundation on existing knowledge to exploit. The learning trap bypasses single-loop learning of changing rules, favoring a direct shift in METRO's norms by way of revolutionizing law enforcement communication technology. METRO aborted these early attempts, investigated privatization options, invested in training staff to develop the program, and ultimately succeeded in building the capacity required to sustain the in-car terminals.

## THE PUBLIC INTEREST MODEL OF ORGANIZATIONAL LEARNING

This article proposes a new model of organizational learning gleaned from previous research and the METRO case study. This model centers on the interactions within the culture of executive public administrators and frontline bureaucrats. As shown in Figure 1 below, executive public administrators and frontline bureaucrats both exist within and without culture.

The model represents the isomorphism that affects each role to varying extents. Elected officials function largely outside the organizational culture but shape the short-term rules (i.e., short-term learning processes) by interpreting public-sector politics. It also is the responsibility of the executive public administrator and to a lesser extent the front-line bureaucrat as to who contributes to building long-term ethical norms (i.e., long-term learning processes).

A few notes of clarification are necessary regarding the model. First, culture is not intended to be represented as passive. In fact, it is just the opposite. Organizational culture is represented to be ill-defined and unbounded because it is so influential. Second, front-line bureaucrats should not be insulated. Rather, politics filters through the culture of the organization before it impacts street-level actors. Ideally, this understanding of politics is infused with public interest awareness, but in some organizations, the politics may filter with much more negative aspects of culture.

The concept of public interest overlays the administrative aspects of the proposed model. Since short-term rules are filtered through culture to develop long-term roles in the ideal organizational learning model, the public interest infusion of the executive public administrator carries through culture and into the long-term rules by proxy. Public interest infusion occurs notwithstanding the learning trap when based on faulty single loop feedback the executive public administrator attempts to supersede organizational culture short-term rules and the most typical development of organizational norms. The last feature of the model is the process loop

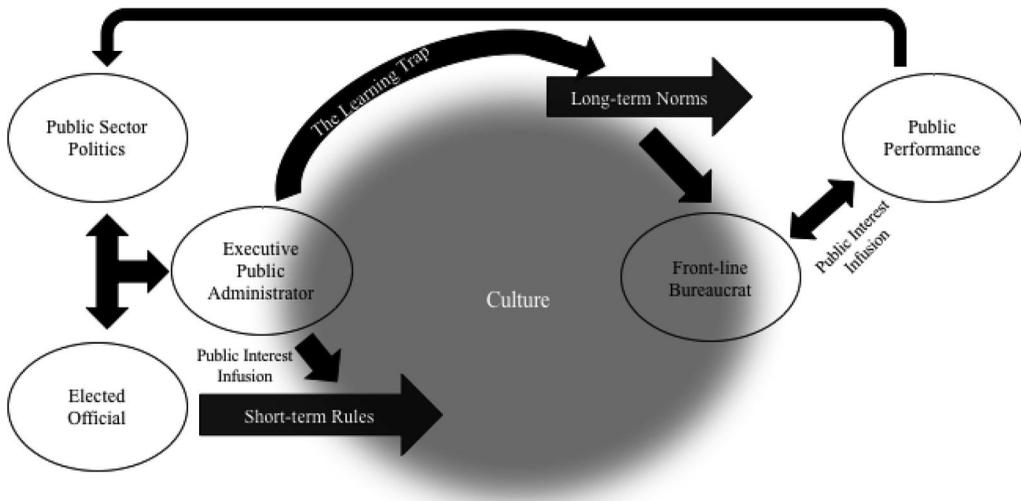


FIGURE 1 Public interest model of organizational learning.

from public performance to public-sector politics. The performance and delivery of services by frontline bureaucrats and their perceived effectiveness or lack thereof can cause a change to public-sector politics that once again starts the organizational learning process anew.

## ORGANIZATIONAL LEARNING IN PRACTICE

METRO's charge was to create, and subsequently regionalize, a criminal justice information-sharing system that Harrisburg, Pennsylvania, developed internally with the goal of improving programmatic effectiveness and efficiency. The case study examines METRO's inception and evolution through the learning process.

### METRO, Harrisburg Area Police Information Resource System

Regionalization is a controversial topic in many states, particularly Pennsylvania, with over 2,500 local governments. In 1973, Harrisburg had its first strong mayoral form of government, electing a public-safety oriented mayor. The mayor hired the city's first public safety director, a retired police captain. Collaboratively, the mayor and public safety director developed a project designed to modernize the Harrisburg Police Department; the director tasked his administrative assistant with establishing a records center and a communications center. This action was the beginning of METRO in 1974. In the communications center, a 3M microdisc minicomputer retrieval system was housed ("Brazil Visits Microdisc," 1975).

Structurally, Harrisburg's Department of Administration supported the new venture, with the mayor authorizing two rooms in City Hall for the records and communications centers to house

the retrieval systems for mug shots, fingerprints, and traffic accidents. METRO's space doubled in 1977 in the new City Hall building, and the file information availability expanded to include all crime reports; accidents; towed vehicle slips; and criminal history jackets. These data were accessible 24 hours a day, seven days a week through the computer index online. Fiscally, METRO received broad support from all levels of government. Staffers secured grants from the Governor's Justice Commission and the federal Law Enforcement Assistance Administration. The mayor and public safety director supported grant-matching requirements between 10 and 25%, with both actors serving appointments on the Commission.

Programmatically, METRO's minicomputer retrieval system enabled exchanging photo and fingerprint information among law enforcement and crime victims. Within 60 days of METRO's inception, officers in Harrisburg's police department remarked about the program's effectiveness; within 12 months, officers solved over 30 cases, and attributed success to METRO's technology increasing their investigative efficiency. METRO became a digital line-up, enabling police officers to use photos from the microdisc for "Wanted" posters ("City Notes Decline in Reported Crime," 1977).

METRO began to expand programmatic capacity. Law enforcement agencies created fingerprint cards by rolling fingers in ink as part of the booking process; the FBI, the State Police, and the Harrisburg Police criminal history jacket all created fingerprint cards. The Harrisburg Police Forensic Unit began entering a code into the minicomputer system for new arrests and re-coding approximately 5,000 prior criminal history jackets dating before 1973 for active defendants. Developing a new manual for a field reporting system and training personnel on the new process was a challenge, as staff provided minimal information under the existing system using a single report.

### Regionalizing Information-Sharing

As METRO's success spread through Central Pennsylvania, the records center began receiving calls from external agencies for viewings of the retrieval system. The public safety administrative assistant who developed METRO circulated the idea of regionalizing METRO; however, some members of the Harrisburg Police Department were resistant, initially. METRO's earliest adopters, Harrisburg's mayor and public safety director, remained supportive and advocated the public safety benefits. Moreover, the Governor's Justice Commission supported the prospect of regionalizing METRO; the administrative assistant/METRO developer joined the mayor and public safety director in serving on the commission. The commission emphasized the cost-savings associated with a regionalized METRO, rather than funding 67 counties and 2,563 municipal governments individually.

Dauphin County encompasses Harrisburg, so regionalization with another police agency began there. The public safety director and METRO developer approached Lower Paxton Township, a large local government, in 1975. Lower Paxton's police and administrative officials agreed to participate in regionalizing METRO, provided Harrisburg cover grant funding for 90% of the cost in the first year and 75% in the second year. In year three, Lower Paxton could continue with METRO, sharing information and paying a membership fee, or leave the program. Their center mirrored Harrisburg's, and regionalization moved to the forefront of the public agenda ("Lower Paxton and Harrisburg Share Records," 1975).

## Expanded Regionalization

The late 1970s were a transition period for Harrisburg and METRO because the city had a new mayor, its second strong mayor, and a new public safety director. METRO's headquarters relocated to the city's newly-constructed Public Safety Center, and METRO's developer/administrative assistant was promoted to the deputy director of public safety to continue regionalization. In 1976, METRO won an award from the local chapter of the Association of Records, Managers, and Administrators for innovations in records systems ("City Official Is Presented Data Award," 1976); it received honors from organizations throughout the region.

Harrisburg acquired an IBM mainframe computer system for a project unrelated to METRO (i.e., the municipal billing system). The director of public safety utilized the mainframe system in 1975 to increase METRO's regionalization by incorporating additional public agencies. In the 1980s, Lower Paxton's police department upgraded their equipment, and Susquehanna Township Police Department joined METRO, receiving their equipment from grant funding and paying an annual membership fee to METRO. These changes enabled data collection, yet, the ability to capture narratives from the crime reports online was still missing.

During the 1980s, METRO agencies integrated the Automated Fingerprint and Identification System (AFIS), providing digital photographs. Administrators discontinued the original system for photos, fingerprints, and accident reports. Focus shifted toward information-sharing in police car terminals, as innovation drove the mayor's public-safety advocacy. Car terminals were a unique technological advancement in 1986, and locating a reliable vendor with the skill set was problematic. METRO contracted with a private vendor for the first time in the system's history, but METRO canceled the contract due to poor functionality and lacking vendor support. After locating another vendor in Georgia and verifying that the system functioned, the deputy director of public safety/METRO developer and two Information Technology staffers conducted a site visit to study the systems operational mechanisms.

METRO began the process of developing the car terminal system in-house, including dispatch. Through the late 1980s, the price of electronic computer storage and computers dropped, enabling METRO to upgrade the mainframe computer storage and purchase personal computers for all staffers. Within five months, a programmer created a new dispatch system that connected to METRO's mainframe and blended into its records system. The programmer spent 18 months developing a system for online entry from car and computer terminals for reports, narratives, and dispatch information inside METRO's mainframe. By the early 1990s, grant funding resulted in approximately 150 municipal police cars having METRO terminals, and over 250 computers and printers connected to METRO across 37 public agencies.

## Long-Term Regionalization

METRO regionalized throughout Cumberland and Dauphin Counties, including an electronic file transfer to the Pennsylvania State Police Uniform Crime Reporting Office, warrant and citation file transfer to and from the Pennsylvania Administration of Courts, certified driving records from the Pennsylvania Department of Transportation for DUI testimony and other vehicle code offenses. Regionalization allowed dozens of police departments to view one

another's reports and arrests, and the ability to eliminate the "paper problem" between agencies and the Dauphin County District Attorney's Office. Most of the agencies employed METRO's field reporting system and agencies frequently used other third-party systems for dispatch. Having these agencies participating in METRO created a daily virtual crime meeting by collaboratively reviewing the reports from other agencies. METRO became a 95% paperless system.

## CONCLUSION

Scholarship shows us that there are important distinctions between public and private organizations, most notably in the culture, public-sector politics, and public performance. Yet much ground has been covered in studying the process of how public organizations learn. An in-depth exploration of one public organization's learning process encourages scholars and practitioners to continue reflecting critically on the interface between short-term behavioral and long-term cognitive development, as Fiol and Lyles (1985) and Denhardt (2011) advocate. The learning process adopted here moves toward enhancing the knowledge of how public organizations learn by identifying conceptual linkages. Given how conceptual order developed, inclusive of public interest infusion, the three archetypes, and the learning trap, future research might explore how this process manifests in other public agencies, perhaps larger bureaucracies at the state level.

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