



The Supremacy of the Sequence: Key Elements and Dimensions in the Process of Change

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Abstract

How single organizations manage the process of change and why only some of them are able to actually reach radical change are central questions in today's theoretical debate. The role played by the process of change and its dimensions (namely, pace, sequence and linearity), however, has been poorly investigated. Drawing on archetype theory, this paper explores: (i) whether a specific pace of radical change exists; (ii) whether different outcomes of change are characterized by different sequences of change in key-structures and systems (iii) how the three dimensions of the process of change possibly interact. As an example of organizational change the study takes into consideration processes of accounting change in three departments of two Canadian and two Italian municipalities. The results suggest the supremacy of the sequence of implemented changes over the other two dimensions of the process in order to achieve a radical outcome of change.

Keywords

accounting change, archetype theory, municipalities, process of change

Introduction

Questions such as how single organizations manage the process of change and why only some of them are able to actually reach radical change are central in today's theoretical debate (Greenwood & Hinings, 2006). In early contributions to organization theory, change was regarded as non-problematical, either as adaptation within the organization's life-cycle (Greiner, 1972; Quinn & Cameron, 1983) or as automatic response to the 'fit' requirements envisaged by contingency theory (Pugh, Hickson & Hinings, 1969). Most theories, including resource-dependency (Pfeffer & Salanick, 1978), institutional (Meyer & Rowan, 1977), ecological (Hannan & Freeman, 1977) and punctuated-equilibrium (Tushman & Romanelli, 1985) theories, however, have pointed out that accomplishing change is problematic. The overarching and still unresolved question is, then, 'not

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whether organizations can adapt, but the circumstances that enable or constrain them from doing so' (Greenwood & Hinings, 2006, p. 830).

Extant literature typically poses the emphasis on the dichotomy between exogenous and endogenous factors affecting change and making only some organizations successful. Little attention has been paid to account for the role played by the process itself on the final result of change (Pettigrew, Woodman & Cameron, 2001; Hinings & Greenwood, 2002; Amis, Slack & Hinings, 2004; Schreyögg & Sydow, 2011).

Drawing on archetype theory and looking at both radical and incremental change in organizations, this paper aims to investigate whether the characteristics of the process affect the probability of the final outcome of change. It explores: (i) whether a specific pace of radical change exists, i.e. a fast, revolutionary pace, sudden and global in the elements being changed, as opposed to a step-by-step process; (ii) whether and to what extent different outcomes of change are characterized by different (more or less) linear sequences of change in key-structures and systems; and (iii) how the three dimensions of the process of change (namely, pace, sequence and linearity) can possibly interact.

To these aims, change in accounting systems and structures was studied as an example of broader organizational change. The issue and the importance of change, indeed, have been long investigated also in relation to accounting practices (see, for instance, Libby & Waterhouse, 1996; Oakes, Townley & Cooper, 1998; Burns & Vaivio, 2001; Nor-Aziah & Scapens, 2007).

The exploration was carried out in three departments of two Canadian and two Italian municipalities, for a total of 12 cases, which underwent a full range of accounting changes during the last decade. Such changes aimed at shifting from a traditional bureaucratic model of public administration to a managerial one, i.e. from a model embedded in laws and formal norms, where the main focus of control was on procedures, financial resources and inputs (Weber, 1992; Liguori & Steccolini, 2012), to a model stressing decentralization and autonomy, output and outcome control (Pollitt & Bouckart, 2002).

Differently from previous studies (in particular, Amis et al., 2004), the analysis suggests that not only a right sequence of key-elements to be changed exists, but it is the only necessary and sufficient condition in order to achieve radical change. The sequence of changes appears to be not strictly related to decision-making tools, but rather to the purpose, the accountability structure and the focus of such systems. The overall process, moreover, is relatively smooth and linear.

The paper is structured as follows: Section 2 presents the literature review concerning the process of change and its dimensions; Section 3 outlines methods, dimensions and context of inquiry; Section 4 presents the accounting changes in the analysed departments. Finally, Section 5 discusses findings and possible interactions among the three dimensions of the process of change; and Section 6 draws some conclusions, implications and further research avenues.

The Three Dimensions of the Process of Change

In order to explain the final results of change, studies have largely focused on exogenous factors, such as technology, market and institutional pressures (Meyer & Rowan, 1977; Tushman & Romanelli, 1985; Tushman & Anderson, 1986; Scott, 2001), and endogenous factors, such as leadership, capabilities, culture and power (Pettigrew, 1985; Oliver, 1991; Greenwood & Hinings, 1996). However, changes vary both cross-sectionally and longitudinally in their rates, modes and paths (Meyer, Goes & Brooks, 1993). Successful changes and reorientations are rare and usually happen in response to crises. There is, thus, the need for a further attempt to understand and differentiate change processes and their direct effect on the final outcome of change, i.e. through

which dimensions the process unfolds and how these affect the final achievement of radical change (Pettigrew et al., 2001; Hinings & Greenwood, 2002; Amis et al., 2004; Schreyögg & Sydow, 2011). This paper, in particular, adopts the Greenwood and Hinings' (1993) definition of change, i.e. the movement from one archetype to another.

Punctuated equilibrium theory (Miller & Friesen, 1984) provides the first important theoretical explanation for how organizations change and still represents the foreground of academic interest (Brown & Eisenhardt, 1997). It suggests that organizations go through relatively long periods of evolutionary convergence that are interspersed with or punctuated by relatively short periods of dramatic revolutionary change (Tushman & Romanelli, 1985; Romanelli & Tushman, 1994). This model describes the process of transformation as evolving through relatively long periods of stability in organizational activities that are punctuated by short breaks of revolutionary change (Romanelli & Tushman, 1994; Rosenkopf & Tushman, 1995). Over time, organizations have to respond to changes in contextual circumstances and evolving and competing institutional prescriptions. This is done through punctuated responses (Fox-Wolfgramm, Boal & Hunt, 1998). Many authors have argued that indiscriminate rapid change across many different organizational elements cannot accurately describe how it actually takes place (Child & Smith, 1987; Pettigrew, Ferlie & McKee, 1992). Moreover, 'while the punctuated equilibrium model is the foreground of academic interest, it is in the background of the experience of many firms' (Brown & Eisenhardt, 1997, p. 1), which actually change continuously. Archetype theory, presenting a competing interpretation of the process of change, can actually help answer some of these limitations.

An archetype is defined as a set of structures and systems that reflects a single interpretive scheme, made up of ideas, beliefs and values (Greenwood & Hinings, 1993). Organizational structures and systems, as well as accounting ones (Dent, 1991), can be seen as embodiments of ideas, beliefs and values which constitute an overarching and prevailing interpretive scheme. According to this approach, change is not indiscriminate, but happens differently on the basis of the levels involved (i.e. systems and structures and/or interpretive schemes). The consistency of change with the existing archetype defines the distinction between incremental and radical change. The former takes place when organizations modify their structures and systems in a way that is consistent with the existing archetype. Radical change, instead, involves a shift in both structures and systems and interpretive schemes from an existing archetype to a new one (Greenwood & Hinings, 1996).

Strictly speaking, the object of a process of change deals with organizational structures and systems being changed (Hinings & Greenwood, 2002; Amis et al., 2004). While Lawrence, Winn & Jennings (2001) propose a dynamic interpretation of the process of change in terms of institutionalization within the field, Amis et al. (2004) deal with a more organizational view. In particular, they characterize the organizational process of change through three dimensions: (i) pace, related to the speed and comprehensiveness of change; (ii) sequence, related to the existence of some key-structural elements and the order with which they change, and (iii) linearity or oscillation in the unfolding of the process of change itself. Such dimensions have been studied showing often conflicting results.

(i) *Pace*. A lack of attention to the pace of change can hide important dynamics of the process (Gersick, 1994). On the basis of the scale and pace of upheaval and adjustment, change is defined as evolutionary when it occurs slowly and gradually; revolutionary when it happens swiftly and affects virtually all parts of the organization simultaneously (Greenwood & Hinings, 1996). Some evidence indicates that evolutionary change that proceeds at a relatively slow speed is more effective. More gradual change is seen as less disruptive and more manageable (Braybrooke & Lindblom, 1963; Pettigrew et al., 1992). However, following a punctuated equilibrium perspective, some

researchers suggest that for radical transformations to be accomplished changes must be implemented rapidly (Romanelli & Tushman, 1994). Studies on accounting tend to share the latter perspective, when they state radical change to be associated mainly with a revolutionary pace as a consequence of pushes coming from the external environment (Liguori & Steccolini, 2012; Burns & Scapens, 2000). These pressures are particularly strong in the public sector, which is traditionally characterized by pervasive regulative requirements, often defining the timing of reforms. Managerial reforms, in particular, have been said to spread either by incubation (when ideas do not come into full effect until long after the original introduction) or acute peaks (Dunleavy & Hood, 1994). As a consequence, in the cases under study, we might expect a revolutionary pace to be associated with radical change.

(ii) *Sequence*. Most of the literature on change assumes that all elements of an organization change simultaneously. Nevertheless, change can involve all aspects of an organization or rather be selective (Pettigrew et al., 2001). Very little is known about the sequence of activities that takes place during a process of change (Fox-Wolfgramm et al., 1998; Van de Ven, 1992) and how this impacts on the final outcome of the transformation. Organizational structures and systems are not neutral and value-free (Amis et al., 2004). Members give them meanings that incorporate interpretive schemes, values and interests that define the basis of the orientation and the strategic purpose of the organization (Ranson, Hinings & Greenwood, 1980). These values and beliefs are more likely to be embedded in some key-elements than others. Such 'high-impact' elements (Hinings & Greenwood, 1988; Kikulis, Slack & Hinings, 1995) are those with an important functional and symbolic role in the effective functioning of an organization. Some authors suggest that change needs first to be made to the more peripheral parts, moving then to the more contentious areas (Beer, Eisenstat & Spector, 1990). However, the majority of evidence points out the need to change more central elements earlier than others, because their high symbolic value helps convey the importance of change itself (Pettigrew, 1985).

The importance of the sequence of events over time has been addressed more in general by Abbott (2001). The author claims for a bigger effort in understanding the sequence of past states in order to predict current and future developments and identify common sequences. Similarly to the punctuated equilibrium perspective, Abbott (2001) sees the process of change as characterized by discontinuous turning points. Trajectories of turning points must be hooked up into reasonable sequences. Regular periods of trajectories are less consequential and causally important than random short periods of turning points.

Some accounting changes will be of higher impact than others. In particular, the change in the basis of accounting (from cash to accruals) has been publicized as one of the main pillars of the public-sector managerialization process, dominated by the introduction of private-like practices and ideas (Pollitt & Bouckaert, 2002; PriceWaterhouseCoopers, 2005). As a consequence, although the sequence is the dimension most in need of empirical exploration, we might expect the basis of accounting to be one of the first core elements to be changed.

(iii) *Linearity*. Existing literature points out the importance of the degree of linearity, trend and periodicity of change over time (Monge, 1995). According to archetype theory, the extent to which organizations remain over time within a given archetype or move between archetypes is signalled by their movement across tracks, which can define a more or less linear trajectory. Four main tracks can be identified (Hinings & Greenwood, 1988): (i) reorientation, involving a shift from one archetype to another; (ii) inertia, showing the retaining of the old archetype; (iii) discontinued excursion, implying temporary movements towards alternative archetypes, but the final return to the initial one; and (iv) unresolved excursion, occurring when an organization remains in an intermediate category over a long period of time.

Mueller, Harvey & Howorth (2003) suggest modifications to this model, which lends too much weight to the role of a dominant interpretive scheme. A possible coexistence of different archetypes has been envisaged by Cooper, Hinings, Greenwood & Brown (1996), who propose a further view where the process of change happens, rather than by replacement of subsequent interpretive schemes and archetypes, by sedimentation. Sedimentation reflects a slow layered dialectical pattern of elements of new emerging structures, systems and beliefs sedimented with pre-existing ones (Malhotra & Hinings, 2005). It points out the persistence of values, ideas and practices, even when the formal structures and processes seem to change. Studies on the healthcare sector (Kitchener, 1999; McNulty & Ferlie, 2004) observe both continuity and change where old and new forms of organization and ideologies coexist. Consistently, we might expect a number of oscillations and reversals to characterize the process of accounting change, as a consequence of the layering of different reform initiatives and regulations. This would explain the coexistence of tools related to different logics, where both old and new information contents are present mainly because of new external requirements (Nor-Aziah & Scapens 2007; Liguori & Steccolini, 2012).

Methods and Research Setting

Organizations set norms of behaviors, rules of communication and values related to accounting systems and structures (Dent, 1991): planning and budgeting activities, systems of hierarchical accountability, performance appraisal, budgetary remuneration all depend on accounting practices. 'Inevitably, therefore, accounting is likely to be implicated in organizations' cultural systems' (Dent, 1991, p. 706) and permeate organizational activities and values. Accounting systems embody by themselves assumptions about the organization, its rationality, authority and time. As a consequence, this paper adopts processes of accounting change as examples of organizational change.

Change can be investigated at different levels of analysis: field, organizational or departmental (Kirkpatrick & Ackroyd, 2003; Dent, Howorth, Mueller & Preuschhof, 2004). The paper adopts a departmental perspective where each department can be seen as a self-standing case because: (i) different departments can have specific accounting systems and tools, different from the corporate ones; (ii) people within different departments bring their own values and ideas related to accounting systems.

Many authors claim that more work, most of all in terms of case comparison, is needed to understand processes of change and justify the connection among the dimensions of pace, linearity and sequence (Hinings & Greenwood, 2002; Amis et al., 2004). Case studies allow a finer grained approach to understand dynamics and processes of change, i.e. how the process evolves and how we can define its elements in terms of reached outcomes and contents. To this article's aims, multiple comparative case studies were carried out (Eisenhardt, 1989; Patton, 2002). Comparative case studies can be seen as configurations of theoretically relevant aspects, which cohere as a package (Ragin, 2000). Diversity is described by patterns as potential different kinds of case. Once a set of causally relevant variables is identified, we define the possible combinations of the configurations. The unit of analysis is the configurations showing similar outcomes. Necessity and sufficiency conditions are sought among the different combinations (Ragin, 2000). In this paper, each of the 12 cases was coded and analysed in terms of compact configurations of the variables under study. As discussed later, the existence of configuration patterns has been investigated to understand the role of the dimensions of the process in affecting the outcome of change.

The process of change has been examined reconstructing backwards the period from 1995 to 2008. Over this time, different kinds of change were tracked. This helped identify the key-elements

and understand how the three dimensions of the process interacted. Time has been divided into homogeneous periods of four years (with the exception of the last two years). Change, in fact, takes place over lengthy periods of time. Not less than three years are usually required to gain some indications on how the changes are proceeding and how different factors interact (Huber & Van de Ven, 1995; Greenwood & Hinings, 1996).

The research presents the comparative study of three departments in two Canadian (A and B Town) and two Italian (C and D Town) municipalities,¹ making a total of 12 cases. Cases were added to reach the theoretical saturation necessary to answer the proposed research questions (Patton, 2002). Italian and Canadian municipalities have undergone a continuous process of change since 1995, becoming an interesting field for change studies. One of their major reforms, in particular, involved accounting systems and required a shift from the traditional bureaucratic archetype to the managerial one (Pollitt & Bouckaert, 2002). Although characterized by different administrative traditions (see the classical contrast between continental, state-based systems with civil law on the one hand, and Anglo-Saxon common-law systems on the other – Kickert & Hakvoort, 2000; Hammerschmid & Meyer, 2010), in the 1990s both countries started decentralizing public services in an attempt to rationalize the public sector and increase efficiency (Pollitt & Bouckaert, 2002). Interestingly, in 1995 both Italy and the Canadian province under analysis passed a new law introducing private-like terminology and requirements in the municipality field. In both countries pressures to change derived from new centralized law requirements. In Italy, decisions regarding accounting settings and standards historically took place at the central government level. The main legislative actor for municipalities' accounting was, instead, the province in Canada. The many similarities, also in the presence of different administrative traditions, in their municipal accounting reforms make the Italian and the Canadian cases a relevant area of investigation. The present study explores the dimensions of their process of change and whether similar configurations emerge at the organizational level.

In order to increase the research validity a multi-sampling strategy was adopted (Patton, 2002; Trochim & Donnelly, 2006). In particular, sampling was carried out in two main steps. First, stratified purposeful sampling: the sample was selected taking care of controlling for organizational size (i.e. only big municipalities with population above 600,000) and geographical location (all Italian cases are from the northern area, all Canadian cases are from the same province). None of the selected municipalities had a history of financial distress in the recent past. Second, maximum variation sampling: departments were selected in a way to achieve a full range of variation in the resulting outcome of change (in accounting systems and structures). Preliminary interviews were taken in order to ensure variability in the outcome of change. This allowed selecting specific organizations. Once this was assessed, further in-depth interviews were arranged. The three departments (Social Services, Environment and Public Infrastructures) were first identified in a way to diversify the performed activities. To this aim, Brown & Potoski's (2003) classification of public services (in terms of measurability of their output) was adopted. According to the authors, Public Infrastructures show the highest output measurability, followed by Environment and Social Services (Brown & Potoski, 2003). This further strengthened the variety in the type of accounting systems put in place.

The comparison of multiple cases and similar departments, not only across but also within countries, allowed controlling for country specificities and regularities. In all departments, changes in accounting systems were initially triggered by new regulatory and normative requirements. Thanks to the decentralization process in the 1990s, in both countries municipalities were largely autonomous in arranging and delivering social, environmental and infrastructural services. Municipalities themselves, indeed, were directly responsible for them. The three identified departments, moreover, represented a relevant share of the municipal services, since they span from

recreational and welfare-related activities (children and elderly care, housing and social funding, etc.), to environmental protection and waste services, to road and public infrastructure services (construction, maintenance, etc.). The content of such services was consistent in both the Italian and the Canadian cases, so that similarities in the adopted tools also emerged (see the ISO systems in the Environment departments). Each department had to adopt the compulsory corporate accounting systems, but was left free to implement additional, more 'customized', tools.

Interviewees were identified by snowball sampling. Two to three senior or middle managers from each department were interviewed. Managers from the Finance Office were interviewed as well to track back the story of change in the organization and to double check other interviewees' answers. Given the need to reconstruct ex-post the process, a combined approach was adopted (Patton, 2002): semi-standardized open-ended questions, aiming at increasing the comparability of answers were combined with elements typical of the episodic interview in order to deepen personal perceptions and experiences (Flick, 2002).

Interviews reconstructed: (i) how new accounting tools affected organizational behaviours and interpretations over time and whether they were actually used (Hinings & Greenwood, 1988; Greenwood & Hinings, 1996; Kitchener, 1999); (ii) how the process of change developed (Hammerschmid & Meyer, 2005; Greenwood & Hinings, 2006); (iii) accounting tools characteristics (why they were adopted, their actual vs. expected purpose, their structure and content, the required competences, their evolution over time – Olson, Guthrie & Humphrey, 1998; Pollitt & Bouckaert, 2002; PriceWaterhouseCoopers, 2005). Field notes were separately taken in order to account for both interviewers' perceptions and interviewees' behaviours/reactions.

Finally, the study required the analysis of original documents (such as budgets, business plans, etc.) to collect background data and reconstruct the process of change. The documents played a fundamental role also in order to double check interviewees' answers. Triangulation of data sources (i.e. interviews, field notes and documents gathered from different informants) and tools (i.e. interviews, field notes and documents) allowed increasing both the internal and conclusion validity of the study (Patton, 2002; Trochim & Donnelly, 2006).

Identification of variables

According to archetype theory, in order to reach radical change, structures, systems and interpretive schemes have to change consistently (Hinings & Greenwood, 1988; Greenwood & Hinings, 1996). Literature has studied change looking at shifts between archetypes with different characteristics (Kirkpatrick & Ackroyd, 2003; McNulty & Ferlie, 2004; Hammerschmid & Meyer, 2005). This study, in particular, addresses the change from a bureaucratic to a managerial archetype (for an application of the two archetypes to accounting change see Liguori & Steccolini, 2012). To assess the extent of archetypal change, questions have been asked to investigate not only the existence, but also the actual use of the new accounting systems, structures and tools (Table 1). Examples of the use of new tools were asked. Decision-making criteria to take accounting decisions were investigated in order to understand whether decision-making processes shifted from bureaucratic to managerial principles. Finally, questions about the level of interviewees' agreement with new managerial ideas were posed (Hinings & Greenwood, 1988).

As far as the dimensions of the process of change are concerned, the pace of the process was measured in terms of how fast change proceeds, i.e. by looking at both the number of years necessary to achieve an archetypal change and the number of elements that moved per time at once (Greenwood & Hinings, 1996). The pace is evolutionary when change takes place over more periods and the amount of elements changed together at the beginning is relatively low. It is

revolutionary when the periods of time to achieve change are few and many elements of the system are changed together (Table 1).

Being the most contentious dimension in literature, the sequence of change has been investigated in a fully explorative way by looking at the 'accounting elements' being changed. Drawing on existing literature, the items that characterize the two competing archetypes (the bureaucratic and the managerial one) were identified in relation to accounting (see Tables 1 and 2). Every item represents an element of the process of change. The validity of such elements has been strengthened by interviewees' answers, which eventually highlighted these items as building blocks of the accounting systems and, thus, as possible objects of the change processes. The sequence of change in these items has been tracked to understand whether key-elements exist that have to be moved in order to achieve different outcomes of change.

With the introduction of the managerial archetype, accounting systems and structures were supposed to move towards a non-incremental resource allocation (item i, Table 2), with decentralized control systems, where single departments were responsible for reporting and bookkeeping (item ii – Pollitt & Bouckaert, 2002). The management and control of activities were supported by an increasing focus on performance measures (PMs) in terms of process efficiency and effectiveness, outputs and outcomes (item iv).

This shift was mirrored in personnel performance appraisal systems, more and more evaluated on the basis of managerial competences and performances, rather than professional requirements (item iii – Hinings & Greenwood, 1988). Simultaneously, the push towards private-like practices usually resulted in the adoption of accruals-based accounting systems (item v – Pollitt & Bouckaert, 2002; PriceWaterhouseCoopers, 2005).

The main declared purpose of the new accounting systems was no longer expenditure control and formal compliance, but cost efficiency and non-financial goal attainment (item vi). Similarly, the formal budget was supplemented by new tools, claimed to be the main intended source of information for decision-making purposes. Business plans, management executive budgets and performance reports were introduced in order to help managers steer the organization on more economically rational bases (item vii – Hood, 1998; Olson et al., 1998, Schedler, 2007). As a consequence of these changes, also the reporting and accountability structures were clarified (item viii). In particular, managers became more autonomous and were held accountable not only to the Finance Officer (initially responsible for all the traditional financial and appropriation-based accounting at the corporate level), but also to the controllers and auditors appointed after the introduction of the new managerial systems. This shift translated into the creation of ad-hoc auditing and strategic offices.

Finally, linearity is related to the identification of tracks (reorientation, inertia, discontinued excursion, unresolved excursion – Hinings & Greenwood, 1988). In particular, the measure of linearity is given by the number of reversals and stops that the process of change shows over time. By looking at the number of reversals and their evolution over time, it is possible to identify the different types of tracks (Table 1).

Research setting: The managerial reform in Canada and Italy

Both Italian and Canadian municipalities have undergone a continuous process of change since 1995 under the wave of reforms known as New Public Management (NPM – Hood, 1995; Pollitt & Bouckaert, 2002). Different authors have recognized a required shift from the bureaucratic to the managerial archetype (McNulty & Ferlie, 2004; Hammerschmid & Meyer, 2005), where one of the main areas of reform has involved accounting systems (Olson et al., 1998; Steccolini, 2004).

Table 1. Summary of variables definitions and categorization

Variable	Definition	Measure/categorization/questions
Outcome of the process of change (Greenwood & Hinings, 1993; Greenwood & Hinings, 1996; Hinings & Greenwood, 2002)	<p>Final result: of the process of change, defined in terms of the type of change achieved, i.e.:</p> <ul style="list-style-type: none"> • Incremental: change only in structures and systems • Radical: change in both structures and systems and interpretive schemes 	<ul style="list-style-type: none"> • introduction of new accounting systems and structures • actual use of the new accounting systems and structures • decision-making criteria to take accounting decisions • level of interviewees' agreement with new managerial ideas • number of years necessary to achieve an archetypal change • number of accounting 'elements' that moved per time at once
Pace (Romanelli & Tushman, 1994; Greenwood & Hinings, 1996; Hinings & Greenwood, 2002; Amis et al., 2004)	<p>Speed and comprehensiveness of change. It can be:</p> <ul style="list-style-type: none"> • Evolutionary: slow and gradual process • Revolutionary: swift and comprehensive process 	<p>number of reversals and stops that the process of change shows over time</p>
Linearity (Hinings & Greenwood, 1988; Cooper et al., 1996; Mueller et al., 2003; Amis et al., 2004; Malhotra & Hinings, 2005)	<p>Movement trajectory across archetypes identified as:</p> <ul style="list-style-type: none"> • Reorientation: shift from an archetype to another with no stops or reversals • Inertia: no movements • Discontinued excursion: existence of reversals • Unresolved excursion: stop in-between two different archetypes 	<p>explorative search for accounting key-elements changed, drawing on literature review (e.g. Osborne & Gaebler, 1992; Olson et al., 1998; Pollit & Bouckaert, 2002; Schedler, 2007)</p>
Sequence (Hinings & Greenwood, 1988; Kikulis et al., 1995; Abbott, 2001; Amis et al., 2004)	<p>Order of elements involved in the process of change (selectivity)</p>	<p>number of reversals and stops that the process of change shows over time</p>

Table 2. Accounting elements in the bureaucratic and the managerial archetype

Accounting structures and systems elements	Bureaucratic Archetype	Managerial Archetype
i – resource allocation systems	Incremental resource allocation system	Non-incremental resource allocation system
ii – centralization of control and information systems	Hierarchical bureaucratic control system, centralized data gathering, information processing and use	Decentralized control system, data gathering, information processing and use
iii – systems for performance appraisal	Formal evaluation, based on regulation and professional competence	Evaluation on efficiency and effectiveness criteria, professional and managerial competence
iv – information focus of accounting systems	Focus on input and formal procedures	Focus on processes, financial and non-financial outputs and outcomes (PMs)
v – accounting basis	Obligation and cash basis	Accrual basis
vi – purpose of accounting systems	Main purpose: to limit spending; to show compliance of actions with budget	Main purpose: to increase cost efficiency, orient behaviours toward non-financial goal attainment
vii – accounting tools for decision-making purposes	Main decision-making tool: budgetary accounting	Main decision-making tools: business plan, executive budget, performance reporting
viii – reporting and accountability structures	Reporting to the Finance Officer	Reporting to the Finance Officer and the Controller

Accruals-based systems, performance measurement, benchmarking and market-oriented management, indeed, were put in place in opposition to the traditional bureaucratic model, embedded in laws and formal norms, where the main focus of control was on procedures and a great importance was given to accountability on financial resources and inputs (Weber, 1992; Behn, 1998).

Italy has four levels of government: central government, regions (20), provinces (107) and municipalities (more than 8000). Municipalities provide public services and are responsible for the development and promotion of local communities. Italy has been usually associated with the so-called 'strong mayor form' system, where the mayor is elected directly and represents the public leader, who selects the CEO (Mouritzen & Svava, 2002). Being a country with civil law traditions, the municipality field has been traditionally inspired by the bureaucratic archetype dominated by a form of budgetary accounting whose main purpose was to limit spending (Liguori & Steccolini, 2012). In the 1990s, NPM ideas started spreading in the public sector, showing the possibility of a new 'managerial archetype'. Like in other countries worldwide, such a model was incorporated in various legislative initiatives inspired by managerialism and marketization principles (Mussari, 1997; Pollitt & Bouckaert, 2002). Municipalities were given more autonomy in levying taxes and determining fees for services, while witnessing a steady reduction in the amount of transfers from higher levels of government. Decentralized control systems were introduced through more integrated systems for data gathering and processing. Their main focus shifted from procedures to processes, efficiency and effectiveness. Financial Officers were supplemented by the appointment of internal auditors and controllers (Liguori & Steccolini, 2012). The first big accounting change took place in 1995, when municipality accounting was significantly reformed by a central government's law requiring the introduction of: (i) the year-end accruals-based reporting, usually derived ex-post from the budgetary accounting; and (ii) the Executive Management Plan (EMP), identifying, for each performed activity, specific managerial objectives and targets to be achieved through the resources assigned in the legislative budget. Municipalities maintained their traditional cash-and obligation-based system for budgeting, accounting and reporting. However, this was supplemented by 'managerial' tools, such as accrual-based reports, strategic plans and executive budgets. In 1999 municipalities were also required by law to introduce four formal control systems: (i) control on compliance; (ii) strategic planning and control; (iii) management control; and (iv) personnel performance evaluation. While these laws made compulsory the introduction of new accounting systems and tools, municipalities were left free to organize, detail and structure such systems internally, especially in the case of strategic and management control systems.

Canada has three levels of government: federal government, provinces (10) or territories (3), and municipalities (about 4000). This paper focuses on two municipalities situated in one Canadian province, recognized as one of the most radical reformers over the past decades (Harrison, 2005). In 1995, in particular, it was the first province to recognize municipalities with broader authority to operate thanks to the Municipal Government Act. In this province a system similar to the 'committee-leader form' is present, where the mayor is directly elected and represents the political leader, but shares the executive functions with committees of elected politicians and a CEO (Mouritzen & Svava, 2002). Traditionally, government funded and was funded on input bases. Municipalities suffered from the traditional 'silo' problem due to fragmented structure and uncoordinated departments (Tindal & Tindal, 2000) and there was a widespread feeling against red tape and bureaucracy. Federal initiatives decentralized a great portion of service delivery. This led provinces to reorganize their own financial structures and measurement systems devolving more and more functions to the local municipal level. Particular interest was placed by new law requirements on NPM techniques enforcing a customer-oriented vision to pursue efficiency and accountability (Tindal & Tindal, 2000). The 1995 legislation introduced the concept of municipalities as business-like

corporations, endowed with natural person powers, rather than a lower form of government. The Act detailed the content of annual operating and capital budgets (consistent with accrual accounting principles) and the municipal debt limits. It required three-year business plans outlining objectives and goals, accompanied by a series of performance indicators and measures to reduce costs and improve accountability (Harrison, 2005). This process was made smoother by the pre-existence of accruals-based accounting. The selected municipalities, indeed, had already been using accruals-based accounting for some years, issuing financial statements based on modified accrual accounting principles. The level of adoption of accrual accounting had been left up to the municipalities and relied, more than on regulatory requirements, on professional recommendations. In the analysed province, only in 2004 were municipalities required to move to full accrual accounting by the end of 2009, in accordance with PSAB (Public Sector Accounting Board of the Canadian Institute of Chartered Accountants) standards.

In both Italy and Canada, the rules for municipality accounting were set through laws issued by the higher level of government and it was the regulation itself to trigger the main changes. Some documents (such as the EMP in Italy and the strategic plan in Canada) were made compulsory. Autonomy, however, was left in implementing and structuring the new systems.

Changes in Accounting Systems and Structures: An Overview

A Town has about 750,000 inhabitants and lies in a commercial area, characterized by the presence of oil-related projects. Table 3, 4 and 5 summarize its corporate and departmental changes following a progressive temporal order. While some of the managerial elements were already present in the 1990s (e.g. an accrual-based accounting system was already in place since the 1980s), most of the changes were introduced after the Municipal Government Act. The process of change started with the introduction of the corporate business plan. Ideas of increasing efficiency and effectiveness led the whole process of change until 2007, when the accounting system was finally decentralized down to single departments. In 2007, however, the organization also stopped updating the corporate business plan because of staff turnover. Among the analysed departments, only the Environment decided to actually give up this practice. Different IT systems were introduced mainly corporately, such as SAP in 1996 and Pacman (a project management module of SAP) in 2007. The only 'bottom-up' change under this respect was represented by Class in 1995, software that was meant to allow the Social Services department to gather in-depth information on citizens' registration, rate per program, etc. In 2000 the Environment department implemented the ISO 14001 system. The ISO environmental standards are meant to minimize organizations' negative effects on the environment and are related to specific environmental management systems. Such standards specify requirements for planning correct environmental policies, objectives and targets, and controlling impacts of organizational activities and services. At the end of the period under study the integration between accounting and management systems and ISO ones could not yet be seen.

B Town has about 1 million inhabitants and is known for the petroleum industry, and the agricultural and touristic activities. Its corporate and departmental accounting changes are reported in time order in Tables 3, 4 and 5. Like A Town, B Town has been subject to the Municipal Government Act and an accrual-based accounting system was already present within the organization at the beginning of the time under study. First attempts of change in budgeting and PMs started in the early 1990s, so that business plans experiments were present at the departments' level. At the beginning of the period under analysis they showed already a corporately decentralized accounting system. It was centralized again in 2003 in order to make internal transactions quicker. For efficiency reasons a 3-year budget was introduced in 2006. PMs were linked to this new budget. In 2006 the 'deputy

Table 3. Process of accounting change in Social Services

Social Services department		1995–98	1999–2002	2003–2006	2007–2008
Town/ Years					
A Town	Pre-existing departmental Business Plan and PMs (financial and non-financial) Corporate business plan SAP corporate introduction Class departmental introduction Project City 97 reorganization and departmental amalgamation: departmental creation of a strategic service Integration of Class with the other departmental systems		New push towards non-financial PMs (thanks to the new leader's arrival in 2002)	Fusion of Community service and Emergency departments	Finance function decentralization SAP non-financial integration and reporting Stop to the corporate business plan, the department goes on by its own
No. of changes	5	I	I	I	2
Sequence	vii, vi, viii (v already existing)	iv	–	–	ii
B Town	Pre-existing departmental PMs on trends, strategies and inputs/outputs Corporate Business plan and related financial and strategic objectives/ measures		Corporate integrated IT system (HR, accounting and finance) Infra annual financial report (3 times per year) Corporate reorganization	Recentralization of the finance function Control systems update (risk management) First 3 year budget (operating) Corporate PMs restructuring PMs monitored quarterly at strategic level: improved quality and detail (number of participants vs. facilities uses, number of participants per class of citizens, citizens' satisfaction, etc.) Deputy owners	First 3 year budget (capital)
No. of changes	I	3	6	6	I
Sequence	vii (ii and v already existing)	–	iv, vi, reversal (ii)	–	–

(Continued)

Table 3. (Continued)

Social Services department		1995–98	1999–2002	2003–2006	2007–2008
Town/ Years					
C Town	Previous attempts of financial and non-financial performance measures Integrated corporate accrual accounting system Corporate EMP by objectives Corporate personnel evaluation (pay-related) on results	Corporate management control systems and Internal Audit office Corporate management control and cash based accounting decentralization Territorial decentralization of accounting functions	Mayor's Strategic Plan Corporate Cost accounting (standard and actual costs) Social Service Reports (service expressed demand, demanded quantities, manifested needs, financial resources, etc.) Inspections, random quality control, customer satisfaction surveys <i>Webdistretti</i> software introduction (Social Services intranet and monitoring) Corporate dashboard: six month performance reporting (direct and indirect costs per area and service, demand monitoring, efficiency and effectiveness indicators)	Technical Reports (detailed information on cases charged to the Municipality: customer's needs, actions taken, evolution over time) External service accreditation (and related indicators/standards) Corporate Accrual accounting decentralization New Corporate Strategic Plan by objectives and year by year investments	4 –
No. of changes	3	3	6		
Sequence	v, iii	ii, i, viii	vii, vi, iv		

Table 3. (Continued)

Social Services department		1999–2002	2003–2006	2007–2008
Town/ Years	1995–98	1999–2002	2003–2006	2007–2008
D Town	Pre-existing corporate personnel evaluation (pay-related) on specific results and objectives and departmental infra-annual personnel evaluation Corporate reorganization by divisions Corporate ex-post accrual accounting Corporate EMP by objectives Unstructured departmental financial reporting (every 2/3 years)	Corporate management control systems (first experiments in 1980) and Internal Audit office Corporate management control and cash based accounting decentralization Structured departmental cash based reporting Service quality monitoring system Link btw the service quality monitoring system and the EMP	Corporate Social Reporting Corporate Cost accounting by service area on cash based accounting information	Corporate 'File data' (monitoring of service costs, customers, expenditures, etc.) Bookkeeping control and expenditure monitoring on locally decentralized services Regulatory Social Plan (political document) demand monitoring and programming 3
No. of changes	4	5	2	–
Sequence	(iii) already existing	ii, viii, iv, vii	–	–

Table 4. Process of accounting change in Environment

Environment department		1995–1998	1999–2002	2003–2006	2007–2008
A	Town	Corporate Business plan and related financial and strategic objectives/measures SAP corporate introduction Project City 97 reorganization and departments amalgamation	ISO system first attempts for Water and Waste Management	ISO system certification for Water and Waste Management ISO system first attempts for the other branches and areas (still ongoing)	Finance function decentralization SAP non-financial integration and reporting First more structured link btw individual targets and pay for the equipment branch Stop to the corporate business plan, the department stops as well
No. of changes		3	1	2	4
Sequence		vii (v already existing)	–	vi	ii, reversal (vii)
B	Town	Corporate Business plan and related financial and strategic objectives/measures	Corporate integrated IT system (HR, accounting and finance) Infra annual financial report (3 times per year) Corporate reorganization	Recentralization of the finance function Control systems update (risk management) Long range planning: i) water efficiency plan, ii) storm strategy (10 year program) Department reorganization: construction group integration First 3 year budget (operating) Identification of strategic and process responsibilities Corporate PMs restructuring Development of specific departmental PMs for operational and customer purposes Deputy owners	First 3 year budget (capital) Budget monitoring and reporting systems (by activity) with online update, fully accessible within the department. SPL software (tracking work on the field) introduction department reorganization: from functional model on services (waterworks and wastewater to water services and resources).
No. of changes		1	3	9	4
Sequence		vii (ii and v already existing)	–	vi, viii, iv, reversal (ii)	–

Table 4. (Continued)

Environment department		1995-1998	1999-2002	2003-2006	2007-2008
Town/Years					
C Town				Mayor's Strategic Plan Corporate Cost accounting (on standard costs, real costs) Corporate dashboard: six month performance reporting (direct and indirect costs per area and service, demand monitoring, efficiency and effectiveness indicators)	Corporate Accrual accounting decentralization New Corporate Strategic Plan by objectives and year by year investments First structured link among strategic guidelines, budget and objectives 2008 First 'Air quality' strategic plan
No. of changes		3	4	3	4
Sequence		v, iii	ii, viii, vi, vii	-	iv, i
D Town				Corporate Social Reporting Corporate Cost accounting by service area on cash based accounting information Customer-based service catalogue	Corporate 'File data' (monitoring of service costs, customers, expenditures, etc.)
No. of changes		3	2	3	1
Sequence		(iii already existing)	ii, viii	-	iv

Table 5. Process of accounting change in Public Infrastructures

Infrastructures department		1995–1998	1999–2002	2003–2006	2007–2008
A Town	Corporate Business plan and related financial and strategic objectives/measures SAP corporate introduction Transportation Masterplan Project Management Guidelines for Road construction Project City 97 reorganization and departments amalgamation	Drainage ISO certification	Drainage revision of PMs (cost analysis)	Finance function decentralization SAP non-financial integration and reporting Pacman software introduction Stop to the corporate Business plan, the department goes on by its own Initial stage of non-financial PMs development Departmental responsibility reorganization Project management introduction for capital planning	
No. of changes	5	I	I	6	
Sequence	i (v already existing)	–	Iv	li	
B Town	Almost 30 years ago: infrastructure PMs, payment quality index tracking service conditions of city constructions (puddle per km, new residential units per population, number of building permits issued per population, construction value of total building permits issued per capita, etc.). Corporate Business plan and related financial and strategic objectives/measures PMs on customer based measures and expectations on the service. Link btw performance appraisal (objectives and indicators) and recognition programs to allow employees to 'thank' other employees with a cash reward when projects are accomplished	Corporate integrated IT system (HR, accounting and finance) Infra annual financial report (3 times per year) Corporate reorganization	Recentralization of the finance function Control systems update (risk management) Structured but not complete inventory for roads and large infrastructures Infrastructure strategic report First 3 year budget (operating) Corporate PMs restructuring Deputy owners	First 3 year budget (capital) From historical cash-based budget to a Zero Based Budgeting for capital budget Accrual accounting asset depreciation from CCAA and PSAB Construction record building, economic analysis on inflation trend. First structured link among performance target and business plan, Infrastructure cost analysis with RIVA (real time infrastructure valuation analysis) like life cycle analysis and reporting.	

Table 5. (Continued)

Infrastructures department		1999–2002	2003–2006	2007–2008
Town/Years	1995–1998	1999–2002	2003–2006	2007–2008
No. of changes	3	3	7	5
Sequence	iv, iii (ii and v already existing)	–	reversal (ii)	1
C Town	Pre-existing compulsory PMs (sector specific regulation) Integrated corporate accrual accounting system Corporate EMP by objectives Corporate personnel evaluation (pay-related) on results	Corporate management control systems and Internal Audit office Corporate management control and cash based accounting decentralization Triennial and Annual investment Plans Structured link btw Triennial Plan and EMP GULP software introduction (monitoring system for public works advancement, time and phases) 5	Mayor's Strategic Plan Stop to the link btw Triennial Plan and EMP Corporate Cost accounting (on standard costs, real costs) Corporate dashboard: six month performance reporting (direct and indirect costs per area and service, demand monitoring, efficiency and effectiveness indicators) 4	Project files introduction (financial and work advancement reporting) Corporate Accrual accounting decentralization New Corporate Strategic Plan by objectives and year by year investments 3
No. of changes	3	5	4	3
Sequence	v, iii	ii, viii, vii	reversal (vii)	–

(Continued)

Table 5. (Continued)

Infrastructures department		1995–1998	1999–2002	2003–2006	2007–2008
D Town	Pre-existing corporate personnel evaluation (pay-related) on specific results and objectives Corporate reorganization by divisions Corporate ex-post accrual accounting Corporate EMP by objectives Triennial and annual public infrastructures plans Public work advancement monitoring system (monthly) and related resource bookkeeping	Corporate management control systems (first experiments in 1980) and Internal Audit office Corporate management control and cash based accounting decentralization Technical Office for activity monitoring, random technical and financial compliance check, training, support and communication Link btw the management control system and the public infrastructure control on technical and financial compliance	Corporate Social Reporting Corporate Cost accounting by service area on cash based accounting information	Corporate 'File data' (monitoring of service costs, customers, expenditures, etc.)	
No. of changes	5	4	2	1	
Sequence	(iii already existing)	ii, viii, iv	–	–	

owner' rule was introduced: managers became accountable for their own budget. They gained managerial autonomy to roll down objectives through their organizational structure and were held responsible for money and results. In the Environment department the clarification of roles between the strategic (responsible for management, communication and changes) and the process (responsible for problem identification/resolution and routines) managers was the first action taken to address inefficiencies and improve communication.

C Town is a city in the north-east of Italy with about 650,000 inhabitants. The main resources of the area are provided by commerce and tourism, as well as shipbuilding and petrochemicals. Tables 3, 4 and 5 show the accounting changes ongoing in the departments during the period under analysis. As legally required, since 1995 all departments introduced the EMP and the related personnel evaluation and management control systems. The municipality autonomously decided to go further with the accounting reform and to introduce an integrated accounting system, where accruals-based information was recovered and tracked during the whole year (not only at the end as prescribed by law). In 2000 the Social Services department started decentralizing service and accounting monitoring to territorial offices. In the following years they developed different kinds of reports in order to help operational people control and take decisions about their services. Also the Public Infrastructures tried to better customize the new accounting tools by linking in 2001/2002 their main planning tool, the triennial plan, to the EMP with its objectives and indicators. Such practice was abandoned the following year because of difficulties in balancing political programmes (in the triennial plan) with managerial objectives (in the EMP).

Finally, D Town is a major Italian industrial centre. It is located in the north-east of Italy and has a population of about 900,000. They introduced the new accounting systems required by law, but without pushing them further (Tables 3, 4 and 5). In this municipality most of the accounting changes were corporate-driven. Only few attempts were done, mostly by the Social Services and the Public Infrastructures departments, to customize accounting tools and systems to their activities and information needs. Such attempts didn't always aim to embrace the new managerial archetype, but rather to better clarify and reproduce old bureaucratic systems (see, for example, the Public Infrastructures with the Technical Office and its control on compliance).

Results and Discussion

The outcome of the process of change

The analysis highlights that four departments (Social Services in A Town, Environment in B Town and Social Services and Environment in C Town) experienced radical change, four incremental change (B Town's Social Services and Public Infrastructures, C Town's Public Infrastructures, D Town's Social Services), and four no change (A Town and D Town's Environment and Public Infrastructures). In order to comply with space constraints, only some representative quotes are reported. More details are available from the author.

Before 1995, A Town's Social Services already had a departmental business plan and PMs. Taking the law requirements and the other corporate changes as an opportunity, in 1995 they asked IT people help for their activities and through a participated process they finally seemed to win the resistance present in the department. During all the period under analysis, they went on developing managerial ideas and tools in order to improve information quality. As a consequence, they were able to achieve a radical change already at the end of the second period (1999–2002):

I would say that certainly the awareness to address some keys has definitely occurred. Performance measurements are really used to monitor past performance and look at areas that should be improved. (Manager 1, A Town's Social Services)

The Environment department in B Town shows similar final results. Managerial changes were introduced since 1995, but the real radical change can be highlighted from 2003 to 2006 with the department's answer to law and organizational changes. Over this period, they redefined their responsibilities (process vs. strategic) and introduced new personalized reporting tools. As a consequence, their way of managing and thinking changed as well (Table 4):

Change forced you to look into long term programs and start link PMs more tightly. So rather than going back every year and asking for money, you can take a longer term view and manage a project with performance indicators: 'am I meeting my goals in terms of revenues, water demand...?' (B Town's Environment, Manager 2)

In C Town both the Social Services and the Environment departments experienced radical change. In the former case, previous attempts of performance measurement were finalized over the period 2003–2006, when the department actually developed its own indicators and reports in order to answer the growing need for service monitoring.

Like in A Town, but with different results, the process of change in C Town's environment was deeply influenced by the introduction of a quality certification system (ISO 9001) in 1999. It helped people to focus on results and slowly move from input to output evaluation. It was only in the period 2007–2008, however, that the new tools were actually used not only to formally control, but also to evaluate and plan future activities:

At the beginning in order to identify our objective, we just described our day-to-day activities. The logic changed: we identified an objective, we explained the context, we needed more efficiency ... With the ISO certificate there is no doubt the department changed and improved its efficiency too. (Manager 1, C Town's Environment)

B Town's Social Services and Public Infrastructures underwent only a series of incremental changes, where only structures and systems moved towards a managerial archetype (Tables 3–5). In the former case, the only change often recalled as important was the 3-year budget, while the other managerial tools (such as the PMs), although pre-existing, didn't seem to be understood or linked among them. The process of change and the related ideas were perceived as top-down constraints. The latter case showed a situation where managers were still stuck to old bureaucratic tools and systems (i.e. the traditional budget) and saw the new ones only as formal templates to be filled in. Managerial ideas were not understood and rather competed with professional ones, which were, however, not strong enough to stop the spreading of new accounting systems in the department.

Similarly, in D Town's Social Services the introduction of new accounting tools was mainly interpreted as law-driven (the only bottom-up 'managerial' changes were represented by the service quality monitoring, and the bookkeeping control on decentralized services in the last period, Table 3):

We still have a bureaucratic compliance culture! (Manager 2, D Town's Social Services)

In C Town's Public Infrastructures changes were introduced and attempts to better link old and new systems and ideas (e.g. the triennial plan and the EMP, Table 5) were made. Nevertheless, such

attempts were unsuccessful because many of the new accounting tools were perceived as useless in everyday activities. Moreover, strong professional and technical values were able to slow down the process of change over all the 12 years under study:

We have the same tools they use at the central offices, so we monitor commitments to be paid and establishments of account receivables to be recovered and expenditures ... We have the EMP, but we still don't own it. (Manager 2, C Town's Public Infrastructures)

No change can be envisaged in the Environment and the Public Infrastructures of A Town. In the first case, corporate changes in accounting systems (such as business plan and SAP) didn't play a major role in the management of activities (managers themselves don't refer to them). In 2000 they introduced the 14001 ISO system but lost sight of the other accounting structures, which remained barely touched by the process of change. In the end systems were not integrated (data were held and used separately) and their actual use focused on the old idea of formal compliance of activities. As a consequence, they became a tool for reproducing bureaucratic values. In the Public Infrastructures case, change was just a formalization of existing professional practices and tools. Moreover, engineers had enough power to completely stop the adoption of incoming corporate changes, such as PMs, considered as a superfluous nuisance to their technical activities:

The performance measurement is still a struggle ... If we can come up with true indicators identifying how we perform, we're all onboard. But if we can't find a true indicator, then we don't want to measure it ... After the change we really used the same decision ... It was more a matter of clarifying, there wasn't something new. (Manager 1, A Town's Public Infrastructures)

Even more restrictively, in D Town's Environment department there were no other accounting changes than those centrally introduced (Table 4). They acknowledged the existence of a managerial reform, but could not really point out improvements in their management activities, which went on as before the change:

I would say that the EMP flew over our heads ... (Manager 1, D Town's Environment)

In the same organization, also the Public Infrastructures' managers pointed out that the new tools were seen only as formal requirements. The department went on using its old monitoring systems. The new decision-making tools, such as the triennial and the annual plans, were mainly programming and descriptive documents, with a cash- and obligation-based approach. The biggest change they claimed to introduce, the Technical Office, was actually the attribution of apparently new meanings to a previously existing subject. It remained mainly concerned with compliance control, still reproducing the traditional bureaucratic archetype and barely changing at all.

The dimensions of the process of change

Tables 3–5 summarize the evolution of change in the 12 cases, highlighting the number and the sequence of changes in the accounting elements. Where only corporate/top-down changes existed, and they were not supplemented by specific departmental ones, no radical change happened. This can indirectly indicate the level of internalization of the new ideas: those who internalized more tended to supplement and modify central systems according to their specific needs, finally achieving radical change.

In the following pages configurations and interactions of the three dimensions of the process are explored (Table 6). Evidence highlights the overwhelming effect of the sequence of changes over the other two dimensions.

Pace. When looking at the cases, literature expectations are met only in part. Radical change, indeed, was associated with both revolutionary (B Town's Environment and C Town's Social Services) and evolutionary (A Town's Social Services and C Town's Environment) paces, while incremental and no change showed no particular pattern (Tables 3–5).

In A Town's Social Services radical change took place between the periods 1995–98 and 1999–2002, when a 'PM Manager' was especially hired to give new momentum to change (Table 3). In C Town's Environment radical change took even longer to happen, involving almost three periods (from 1999 to 2008). The process of change began with the introduction of the ISO 9001 system, which allowed the department to develop its own PM and monitoring systems, fully exploiting its autonomy. The process followed a slow and constant pace, where accounting changes were introduced and found further refinement over time, up to 2008:

We cannot think of the ISO system as something static. Every office goes on adding new indicators. We are more and more shifting towards real performance measures. (Manager 2, C Town's Environment department)

Also in B Town's Environment the process of change started in 1995, but it was actually concentrated in 2003–2006 with a massive number of changes altogether (Table 4). From the interviewees' answers change happened in a quick and revolutionary way, maybe also thanks to the previous slow process of incremental changes which created a favourable path. Finally, in C Town's Social Services change took place in 2003–2006 with the 'sudden' development of departmental reports and tools aiming at supplementing the general information provided by the new corporate systems. It has to be noticed that the Social Services were able to introduce subsequently IT (see *Webdistretti*, aiming at monitoring on line all the information related to the service provision decentralized within the city, in order to get a comprehensive perspective), managerial (social service reports), and technical (technical reports) accounting tools. Different tools were thus provided to different users in order to fulfil their information needs (Table 3).

These results suggest that the pace of the process doesn't strictly influence the final outcome of change. Expectations drawn on punctuated-equilibrium theory are not met. This is consistent with what previously found by Amis et al. (2004) in their empirical study. Fast-paced change early in the transition process, indeed, doesn't ensure lasting, long-term transformations. Interestingly, the cases show also that change moving both structures and interpretive schemes since the beginning of the process (i.e. around 1995, see A Town's Social Services and C Town's Environment) is characterized by evolutionary pace, while change actually taking place later in time (B Town's Environment and C Town's Social Services) has a revolutionary rate. This is different from what previous literature would suggest, since Amis et al. (2004) themselves didn't find cases of successful reorientations in the late fast-paced innovators. This could be explained by the fact that new ideas need time to be internalized. Since 1995, those starting the process of radical change together with the spreading of the new ideas proceeded more slowly. On the contrary, those who took more time to internalize new changes and ideas at the beginning, and only subsequently started the radical change, changed more quickly.

Consistently with this interpretation, the amount of changes (but not necessarily their level of importance for the organization) is higher at the beginning of the process (1995), also as a consequence of external pushes. After the experience with the new ideas increases, we can find another

peak of changes in 2006 irrespectively of the type of department and country (Tables 3–5). This is also coherent with previous studies on the implementation of NPM reforms, where both incubation and peaks were found (Dunleavy & Hood, 1994), but suggests that neither a revolutionary nor an evolutionary pace is sufficient to generate effective (radical) change in accounting and, more generally, organizational systems. A slower change doesn't ensure change to be more manageable, nor does a faster one guarantee the actual transformation of the organization (Pettigrew et al., 1992). What seems important is not the pace in itself, but the timing which defines the beginning of the process of change.

Sequence. As expected, the findings confirm the existence of high-impact elements during the process of change and a specific trajectory steering towards a radical outcome (Kikulis et al., 1995; Abbott, 2001). A non-precise sequence, instead, is followed in cases of incremental and no change.

A shift in the main decision-making tools, such as business plan and EMP (element vii), was on average the first change that could be found throughout all 12 departments (Tables 3–5). Such a change, however, was mainly pushed by law in both countries. As a result, it's present in cases of both radical and incremental change and doesn't help identify a pattern of key-elements determining radical change. Radical change is identified by a configuration of initial joint change in element vi (main accounting systems purpose) and viii (accountability structure). These elements can affect positively the achievement of radical change under two perspectives: first, consistently with previous literature (Amis et al., 2004), a change in the purpose of the systems has a strong symbolic meaning. In terms of the accomplishment of archetypal change, this directly affects the subsequent change in values and ideas. Second, a change in reporting and accountability structures is directly linked to actual behaviours and use of new tools. This, again, strengthens the accomplishment of radical change. The creation of both internal audit offices and strategic branches and the identification of internal auditors to whom to report all represented drivers of change:

The vision and the operation have really changed from being public service provider to being more like a corporation, with business principles. ... With the devolvement of the strategic services arm we now have a centre of excellence for performance measurement. (A Town's Social Services, Manager 2)

Only C Town's Social Services presented a partially different pattern, where the accountability structure changes before the main accounting systems purpose. As said before, the timing of this change for Italian municipalities was strongly influenced by the law, which, in 1999, introduced management control and audit systems. As a consequence, for this element there was less autonomy and the timing is similar in all the Italian cases.

Change in the main purpose and in the accountability structure is followed in all departments by a revision in the focus of accounting systems and structures (element iv), which comes at the end of the period (when the other two elements change as well) or at the beginning of the next one. This represents the fundamental third key-element to achieve a complete radical change. Consistent with the literature, also this change can be said to have a strong impact on both the symbolic function and the actual use of the systems themselves (Pettigrew, 1995). Contents and types of available information, indeed, can direct people's behaviours towards a certain archetype.

It has to be noticed that contrary to what previously found by Amis et al. (2004), a change in decision-making tools is not necessary to achieve a radical outcome. The sequence of coordinated changes in the purpose, the accountability structure and the focus represents the necessary condition to achieve radical change irrespectively of country and department. Finally, contrary to initial expectations, the basis of accounting does not appear among the core elements to be changed, which are more related to behaviours and purposes rather than technical skills and tools. This

contributes to expand previous theory (Hinings & Greenwood, 1988; Kikulis et al., 1995; Pettigrew, 1995), since it suggests not only the symbolic valence of the key-elements, but also the importance of the rationale behind the introduction of the new systems. A simple declaration of change in the technicalities is not sufficient to change radically, even when involving highly symbolic elements. New ideas pushed from the external environment not always find recognition within organizations, which interpret differently the various elements of a reform (Greenwood & Hinings, 1996; Lounsbury, 2001). The accrual basis of accounting might represent a propaganda platform on which academics and scholars are concerned more than those actually responsible for the implementation of change.

Linearity. Contrary to theory expectations (Cooper et al., 1996; Mueller et al., 2003; Amis et al., 2004), radical change seems to be characterized by quite smooth processes (Tables 3 and 4). In the cases under study, described by a variety of subsequent reforms, which would suggest the sedimentation and coexistence of different structures and ideas (McNulty & Ferlie, 2004), the process leading to radical change is mainly linear. In A Town's Social Services voluntary changes started even before the corporate business plan. They slowly but linearly reoriented themselves towards a radical change in both structures and values. A different pattern with similar final outcomes can be found in B Town's Environment. Given the presence of a reversal (the corporate re-centralization of control and accounting systems in 2003) a discontinued excursion, followed by a final reorientation in 2003–2006, is visible. The possible negative effect of the reversal might have been offset by the fact that it's been corporately driven, not decided by the single department. As a consequence, it was intended as something that had to be done. In C Town, finally, neither the Social Services nor the Environment presented reversals, thus configuring a linear reorientation.

If we consider incremental change, in B Town's Social Services all new tools were implemented corporately. As a consequence, the department seems to be stuck between a discontinued (due to the reversal in the decentralization of controls, element ii, Table 3) and an unresolved excursion (where the final destination of change is still unclear). Similarly, in B Town's Public Infrastructures changes were top-down driven and not understood. Managers often raised professional issues related to their engineering activity, but they didn't have the strength to stop or re-direct corporate changes. A 'centralized' reversal is present, thus depicting a case of discontinued excursion (Table 5). A discontinued excursion is present also in C Town's Public Infrastructures department, which experienced one reversal concerning the link between the triennial plan and the EMP.

The Environment department in A Town focused on the introduction of a new managerial system, the ISO model, which actually helped reproduce old logics of auditing and formal compliance. Their management systems were not integrated with the PMs and the business plan. In 2007 they also experienced a reversal due to the stop in the issuing of the latter. What can be envisaged is a discontinued excursion, which is almost inertia. Almost inertia can be found also in D Town's Public Infrastructures, where most of the introduced changes were still attached to old bureaucratic ideas (see, for instance, the work advancement monitoring system on obligation-based information and the Technical Office).

Finally, three cases of unresolved excursion can be identified in A Town's Public Infrastructures and D Town's Social Services and Environment due to the still existing difficulties in breaking with the old bureaucratic interpretive schemes (Tables 3–5). They introduced only the tools centrally and 'legally' prescribed.

The small number of reversals (3 cases), only after some years from the introduction of the new systems (Tables 3–5), contrasts with a change characterized by oscillations and reversals at sub-organizational levels (Amis et al., 2004). Moreover, reversals do not represent a sufficient condition to hamper radical change, as would be expected. A reversal is present in B Town. Nevertheless,

the Environment department was able to achieve radical change. An explanation for this could be that change prompted by external pressures tends to reproduce itself and, rather than oscillating, describes a linear trajectory, independently of the final outcome of change. This is particularly true in the municipality field, where most of the changes are made compulsory by law. In some cases, it will become impossible for the organization to ignore the change or to stop the process, especially if it is normatively prescribed. This also gives further evidence to the paradox of the 'triumph of hope over experience' (Hood & Peters, 2004), often observed in public sector reforms. According to this, indeed, a repeated introduction of the same reform recipes occurs despite past disappointments in the attempt to protect the knowledge previously acquired by the organization. Finally, the cases highlight that a certain time is needed to evaluate the effects of different changes. This can further postpone and finally reduce the number of stops and reversals, especially in bigger organizations, such as those under analysis, which tend to be more formalized and less flexible (Pugh et al., 1963; Pasmore, 1994).

Interaction among the three dimensions. Looking at the interaction among the configurations of pace, sequence and linearity of change (Table 6), a necessary and sufficient condition emerges, associated with radical change achievement. This is, indeed, fostered by the right sequence of key-elements, irrespectively of the pace followed. Also the existence of reversals during the process doesn't affect the resulting outcome (see B Town's Environment). Under this respect, more studies are needed to look at cases of departmental vs. corporate-driven reversals in order to understand whether and how they can influence the outcome of change. Incremental change and no change are, on the opposite, characterized by very different patterns, where the only common element is the wrong sequence of key-elements (Table 6).

The results show that, when investigating radical change, a specific pattern of the process emerges both across and within countries. The consistency of this pattern strengthens the present conclusions also in comparison with previous studies. Despite prior literature findings (Amis et al., 2004), indeed, the 12 cases suggest that the only necessary and sufficient condition for radical change is represented by the right sequence of change in the key-elements with the stronger symbolic and behavioural values (Pettigrew, 1985). This alone offsets the possible negative influence of the other two dimensions (such as the presence of reversals) and holds irrespectively of the type of department and country considered. The sequence is not strictly related to decision-making tools, but rather to the purpose, the accountability structure and the focus of such tools and systems.

Conclusions

This paper has focused on the dimensions of the process of change and explored whether and how they affect the probability of radical change to happen. To these aims, change in accounting systems and structures was studied as an example of broader organizational change.

The findings suggest that radical change is associated with the necessary and sufficient condition of the right sequence of key-elements. This is described by a joint change in systems purpose and accountability structure, followed by a change in their focus. Radical change happens independently of the existence of reversals and with both revolutionary and evolutionary pace. Organizations, then, should pay more attention to the sequence of elements to be changed and their relative timing. Under this perspective, the study has two main implications: (i) managers should be aware of the results and the different meanings that the introduction of certain elements can bring about; and (ii) in a reform process political decision-makers should consider that a settling time is needed between different changes in order to absorb both new values and actual changes in systems and

Table 6. Emerging configurations of pace, sequence, linearity and change

	Pace	Sequence (time order)	Linearity	Outcome
A Town				
Social Services	Evolutionary	Decision making tools (vii), Purpose of accounting systems (vi), Accountability structures (viii), Information focus (iv), Centralization of control (ii)	Reorientation (1995–2002)	Radical change
Environment	Evolutionary	Decision making tools (vii), Purpose of accounting systems (vi), Centralization of control (ii)	Discontinued excursion/ inertia	No change
Public Infrastructures	Revolutionary	Resource allocation (i), Information focus (iv), Centralization of control (ii)	Unresolved excursion	No change
B Town				
Social Services	Revolutionary	Decision making tools (vii), Information focus (iv) Purpose of accounting systems (vi)	Discontinued/ unresolved excursion	Incremental change
Environment	Revolutionary	Decision making tools (vii), Purpose of accounting systems (vi) Accountability structures (viii), Information focus (iv)	Discontinued excursion/ reorientation (2003–2006)	Radical change
Public Infrastructures	Revolutionary	Information focus (iv), Performance appraisal (iii) Resource allocation (i)	Discontinued excursion	Incremental change
C Town				
Social Services	Revolutionary	Accounting basis (v), Performance appraisal (iii) Centralization of control (ii), Resource allocation (i)	Reorientation (2003–2006)	Radical change
Environment	Evolutionary	Accountability structures (viii), Decision making tools (vii), Purpose of accounting systems (vi), Information focus (iv)	Reorientation (1999–2008)	Radical change
Public Infrastructures	Evolutionary	Accounting basis (v), Performance appraisal (iii), Centralization of control (ii), Accountability structures (viii), Purpose of accounting systems (vi), Decision making tools (vii), Information focus (iv), Resource allocation (i)	Discontinued excursion	Incremental change
D Town				
Social Services	Evolutionary	Performance appraisal (iii), Accounting basis (v), Centralization of control (ii), Accountability structures (viii), Decision making tools (vii)	Unresolved excursion	Incremental change
Environment	Evolutionary	Centralization of control (ii), Accountability structures (viii), Information focus (iv), Decision making tools (vii)	Unresolved excursion	No change
Public Infrastructures	Evolutionary	Centralization of control (ii), Accountability structures (viii), Information focus (iv)	Unresolved excursion Inertia	No change

structures. A contingent factor that also emerges as affecting the outcome of change is the type of department and its related activity. Specifically, Public Infrastructures were embedded in a strong professional culture showing values often contradicting the managerial archetype. This conflict slowed down and even stopped the process of change. Managers and policy-makers should pay attention to the presence of possible competing interpretive schemes at the organizational level (McNulty & Ferlie, 2004; Malhotra & Hinings, 2005) and to the type of activity involved in the process of change.

A remark is also needed for one of the possible elements of the sequence, i.e. the accounting basis. Contrary to expectations, it doesn't constitute a core element to be changed in order to reach radical change. As discussed, this might signal a divide between symbolic aims and purposes of change and its actual technicalities, as well as between theory and practice. However, in Canada accruals-based accounting had already been in place since a long time before the managerial reform. This might also suggest a possible role as a precondition for radical change to happen. Further research is needed in this respect.

The present study contributes to filling the literature gap concerning the role played by the process itself in affecting the final result of change (Pettigrew et al., 2001; Hinings & Greenwood, 2002; Amis et al., 2004). In particular, differently from what previously found, the paper highlights the supremacy of the sequence of change over the other two dimensions of the process. It is the only necessary and sufficient condition influencing the achievement of radical change, irrespective of its pace and linearity. Contrary to Amis et al. (2004), this sequence of key-elements is not strictly related to decision-making tools but rather to the purpose, the accountability structures and the focus of the systems put in place. The timing and the motivation for change are also relevant.

Consistently with Amis et al. (2004), the study suggests that processes of radical change can be characterized by both a revolutionary and evolutionary pace. This contradicts previous researchers, such as Romanelli and Tushman (1994) and Hackman (1984), who posit that radical transformations need to be made throughout an organization quickly and early in the process. On the contrary, both new systems and structures and values and ideas require time to be internalized. Finally, contrary to expectations, the study highlights relatively smooth processes of change (i.e. with few stops and reversals). This partially contrasts with previous literature (Cooper et al., 1996; Mueller et al., 2003; Amis et al., 2004) that suggests the tendency for change to be characterized by oscillations and reversals.

The present findings could be extended also to contexts other than those discussed in the paper, since the pattern of the process of radical change at the organizational level does not seem to differ across countries. This is strengthened by the fact that even the presence of stops and reversals does not hamper the final change, as long as the right sequence is followed. These same patterns, however, are likely to be shaped by the specific field and the type of organizations under study. The paper, indeed, investigates a field, municipalities, which is still undergoing a process of managerialization and is characterized by high ambiguity, low output measurability and strong regulative influence (Nahapiet, 1988; Orrù, Woolsey Biggart & Hamilton, 1991). Furthermore, only big (and thus less flexible – Pugh et al., 1963; Pasmore, 1994) organizations were explored here.

While much research previously focused on high technology industries (Tushman & Romanelli, 1994; Brown & Eisenhardt, 1997), this study provides a more in-depth analysis of previous findings in a different setting and gives some hints about how public sector reforms should be designed and carried out. More research is needed to analyse specific relationships among the three dimensions of the process of change. In particular, findings suggest exploring whether different sequences of elements are associated with specific outcomes and tracks of change (for example, cases of inertia). This research opens the way to the study of the introduction of new practices, also different

from accounting, in order to assess whether the features of the process of change vary with the nature and the content of the change being attempted. Further comparisons among different countries could be useful, in this respect, to better understand also the necessity of introducing specific elements during public organizations' reforms.

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Notes

1. The names of the four municipalities have been made anonymous and rest here undisclosed as requested by the interviewees, who kindly agreed to take part in the research project.

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