

LCDB7008: Visions for the Future: Theoretical Perspectives on Management

Report: “While many areas of contemporary life have changed significantly in the 21st century, management has remained largely unchanged and rooted in 19th-century theories and paradigms.”

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1. Introduction

The claim that management has remained largely unchanged and rooted in nineteenth-century theories can be questioned rather than self-evident, however, it cannot be evaluated until the word unchanged is understood. There are three forms of continuity that are routinely merged together in this debate. The first is continuity of managerial function, which determines if organizations still require planning, coordination, authority and performance measurement. The second is continuity of assumption, which considers if management still holds the same beliefs about employee motivation, the location of knowledge within the organization and how said organizations relate with their external environment. The third is continuity of structure and practice which focuses on whether the mechanisms through which those functions are carried out have remained the same over time. Simply put, management may continue to perform its functions while reversing its assumptions. Furthermore, management terms may retain its terminology but the application in practice has changed.

A further distinction runs through the whole of this report and is stated once here. A change in management theory is a change in what scholars assume, explain or dispute. A change in management practice is a change in what organizations actually do. The two move at different speeds and sometimes in opposite directions, and evidence of one is not evidence of the other. Each substantive claim below is therefore identified as a change in theory, a change in practice, or both.

To determine whether management has genuinely changed, six key dimensions are considered: assumptions about human nature; where knowledge and expertise are located; the source and legitimacy of authority; how organizational performance is defined; and how organizations relate to their external environment; and whose interests management is exercised to serve. The sixth dimension is concerned with who benefits when the other five dimensioned are positioned in a particular way. It is included just because each of the first five can be answered without ever establishing whose service coordination, authority and measurement operate. Genuine change can be said to have occurred where a later position challenges, reverses or abandons an earlier assumption on one of these dimensions, rather than simply adding new ideas to existing ones. A clear criterion matters here. If management is defined so broadly that any approach concerned with coordination and performance counts as evidence of continuity, then it becomes almost impossible to falsify and therefore impossible to test.

To some extent, the statement that management has remained unchanged is believable. The evidence for it lies in continuity of function and of practice rather than continuity of assumption. Organizations today still rely on planning, hierarchy, specialization, standardization, performance measurement and managerial control. Fayol's (1949) management functions of planning, organizing, commanding, coordinating and controlling can still be seen in the way organizations are managed today, though his accompanying assumption that management principles apply universally has been contested (Carter, 1986). Weber's (1947) account of rational-legal authority, specialized roles and rule-governed administration also remains relevant, especially in large organizations where consistency, accountability and regulatory compliance are important.

The persistence of classical principles does not, however, demonstrate that management theory has remained unchanged. Management thought has not developed as a linear process in which each new theory displaced its predecessors; theories emerged in response to changing economic, technological, social and organizational conditions, while retaining, modifying or rejecting elements of earlier approaches. Nord & Jacobs (2004) argue that management ideas are shaped by their historical context and that newer theories do not automatically supersede earlier ones. The continued relevance of classical management may therefore reflect the endurance of the organizational problems it addressed rather than a failure of theoretical development.

The limitations of universal and mechanistic approaches became clearer as organizations grew more complex and knowledge intensive. Behavioral theories challenged the assumptions that employees were simply passive individuals motivated mainly by economic rewards, while contingency research rejected the proposition that there was one universally effective way to organize. For example, Burns and Stalker (1961) distinguished between mechanistic and organic organizational forms according to environmental stability, Woodward (1965) showed that organizational structure could be influenced by the type of production technology used. Similarly, Lawrence and Lorsch (1967) demonstrated that differentiation and integration requirements vary with environmental uncertainty. However, Drucker (1998), disputed the existence of one correct organizational structure, without concluding that hierarchy or managerial authority had become obsolete.

Twenty-first-century developments complicate the relationship further. Digital transformation, automation, artificial intelligence (AI), hybrid working and algorithmic decision-making have altered how work is coordinated, how knowledge is produced and how managerial authority is exercised.

The literature disagrees about what follows. Automation may weaken or strengthen the strategic role of middle managers (Van Doorn et al., 2023); algorithmic systems may intensify quantification and control (Lindebaum et al., 2024) or require new understandings of agency and expertise altogether (Glaser et al., 2024).

This report argues that management has neither remained completely unchanged nor experienced the complete transformation often associated with twenty-first-century organizations. Its development is better understood as gradual and layered adaptation. Traditional management concerns of efficiency, authority, coordination and control persist, but the way they are understood, applied and the interests they are held to serve has changed through behavioral, contingency, knowledge-based, critical, relational and technologically mediated perspectives. The persistence of the problems management addresses is therefore not evidence that management thinking has stood still. The fundamental questions of management may still be similar, but the assumptions behind them, the methods used to address them and the organizational conditions in which they are applied have changed significantly.

Two limitations are acknowledged from the outset. Firstly, this report relies on secondary evidence drawn mainly from peer-reviewed management literature rather than primary data collected specifically for the study. Secondly, sustainability, globalization and critical perspectives are considered only where they are directly relevant to the debate on whether management has fundamentally changed. As a result, the report does not attempt to provide a comprehensive review of every area of contemporary management theory.

2. The Historical Development of Management Theory

2.1 The Origins of Management Theory

Organized forms of management and administration existed well before the Industrial Revolution. Military, religious, governmental and commercial institutions coordinated large numbers of people, allocated resources and enforced accountability for centuries before any of it was called management. What changed was that management ceased to be regarded solely as a practical skill acquired through experience and became a field of systematic enquiry into how organizations could be governed (Nord & Jacobs, 2004). That claim, rather than the activity of managing, is what the statement under examination is really about.

Industrial expansion made the conditions for a more formal approach to management. As organizations became larger and complex, traditional methods of supervision based mainly on personal relationships and individual craft knowledge ceased to be sufficient. Larger workforces, deeper specialization and more complex production systems created problems of efficiency, coordination, accountability and control that experience alone could not resolve (Nord & Jacobs, 2004). The earliest schools addressed a common problem, how to achieve predictable performance in complex industrial organizations. However, they differed in emphasis: Scientific Management concentrated on operational efficiency through the systematic analysis of work, Administrative Theory focused on managerial functions and responsibilities and Bureaucratic Theory on formal authority, defined roles and procedural consistency.

These early management theories were influenced by the conditions in which they developed, which starts to challenge the statement that management remains unchanged. It is not yet a conclusion. The fact that theories emerged in response to specific organizational and economic conditions does not necessarily mean that later theories abandoned the assumptions of earlier ones. That requires examining if the underlying assumptions stated changed over time. It is important that the continued use of management terms not be confused with the continued use of the same ideas. The words planning, authority and control have survived, but what they denote in practice has been substantially rewritten (Castagnoli et al., 2022). That is a change in practice; whether it is also a change in theory is what the following sections try to test.

2.2 Scientific Management

Scientific Management was one of the earliest and most influential attempts to establish management as a systematic body of knowledge grounded in analysis rather than experience. Taylor (1911) argued that work should be systematically studied, measured and standardized rather than left largely to the individual judgement of skilled workers. He proposed that tasks be studied and standardized, and that planning be separated from execution and relocated to a specialized managerial function. The aspect of Taylor's approach that is important, was not simply the use of time measurement that is usually associated with scientific management but the separation of planning from the actual work done. This shifted knowledge and control of work performed from the worker to the management. Drucker (1998) notes that Taylor's influence extended well beyond the factory, observing that the earliest applications of his principles occurred in hospitals, arsenals and

public administration rather than in commercial enterprise, which suggests that Scientific Management was understood from the outset as a general theory of organized work.

Many of its mechanisms remain visible. Performance metrics, standard operating procedures, workflow optimization, process improvement methodologies and data-driven monitoring all reflect an enduring concern with efficiency and consistency (Lindebaum et al., 2024). However, the continued use of similar management practices does not necessarily mean that the assumptions behind them have remained the same. For example, performance measurement can serve learning, professional development, regulatory accountability or managerial control, and these purposes are quite different. The test on the second dimension is therefore whether contemporary systems preserve Taylor's three commitments: that planning can be separated from actual performance of work, that an optimal method exists and can be identified by measurement, and that knowledge about work properly resides with management.

Applied to contemporary practice, the answers are mixed. Lean management and continuous improvement challenge the commitment that knowledge about work belongs with management, which is a reversal of Taylor's position rather than an extension of it. Algorithmic task allocation in warehousing and platform work restores all three commitments in stronger form, since the method is derived from data the worker cannot see. Zhang et al. (2025), identify precisely this tension between transparency and opacity, and between control and autonomy, as central to that literature. Scientific Management has therefore neither remained completely unchanged nor disappeared from modern management. It has been rejected where work depends on tacit knowledge and reinforced where work can be digitally decomposed, and the direction of travel is decided by the technology of measurement rather than by the state of management theory. The sixth dimension explains why the same mechanism yields opposite readings: measurements that serve the worker's development and measurements that serve the employer's control are indistinguishable at the level of technique and differ only in whose interest the target is set. ((Van Veen-Dirks, Leliveld and Kaufmann, 2021).

The limitations of Scientific Management therefore lie more in its underlying assumptions than in the idea that the theory is simply outdated. It assumes that tasks can be separated from the individual performing them, that there is an optimal level of performance that can be measured, that knowledge should mainly sit with management, and that informal workplace relationships have limited importance. These assumptions are less applicable where work requires judgement,

creativity and collaboration, and well wherever tasks are clearly defined and measurable, which is why the approach persists in manufacturing and parts of the service sector.

2.3 Administrative Theory

Where Scientific Management addressed the efficiency of tasks, Administrative Theory addressed the organization as a whole. Unlike Taylor, Fayol (1949) asked not how work could be performed more efficiently but how organizations should be structured, coordinated and directed. His approach rested on the assumption that management is a distinct function that can be applied across different organizations, regardless of the specific work being performed. That assumption is what contemporary claims about distributed expertise, self-managing teams and algorithmic coordination, since each question whether management must remain a separate and centralized function.

Fayol's five functions of planning, organizing, commanding, coordinating and controlling provided one of the earliest systematic accounts of managerial responsibility, and most remain recognizable in management today. Commanding is the exception, and its fate is instructive. It has not disappeared, but its form has changed. In traditional textbooks, it has largely been replaced by leading; in agile teams' authority may be shared across members; and digital systems can now allocate tasks and issue instructions without direct human involvement (Glaser et al., 2024). This suggests that the basic function remains, but where authority sits, how it is exercised and who is accountable for it have changed, which is change on the third dimension in practice ahead of theory.

Reducing Fayol to a rigid and mechanistic model oversimplifies both his position and its reception. Carter (1986) argues that many criticisms directed at Fayol derive from later interpretations rather than from the original text, noting his observation that there is "nothing rigid or absolute in management affairs" (Carter, 1986, p. 455). Carter's reading is persuasive on this point rather than merely on grounds of charity: it is closer to what Fayol (1949) wrote about the need for judgement and proportion, and it accounts for the presence of initiative and equity among his principles, which a purely mechanistic reading cannot. If Fayol himself resisted universal prescription, then the view of classical management as entirely rigid and inflexible may partly reflect how his ideas have been interpreted over time.

The contrast between stable classical and dynamic modern organizations should therefore be treated cautiously, since Fayol (1949) managed a large mining and metallurgical concern through

financial difficulty and technological change. The defensible claim is not that classical organizations were stable and modern ones are not, but that the scale, speed and interconnectedness of contemporary uncertainty place greater pressure on hierarchical coordination than earlier conditions did (Burton, Obel and Håkonsson, 2018). Hierarchies can absorb isolated disruptions but become less effective when several occur at once (Sahebjamnia, Torabi and Mansouri, 2018; Napier, Liu and Liu, 2024).

The coordination problem Fayol identified has changed form rather than disappeared. Contemporary coordination increasingly takes place through platform orchestration, cross-boundary collaboration with suppliers and partners, ecosystem governance beyond the legal boundary of the firm, and interaction between human judgement and algorithmic systems (Castagnoli et al., 2022; Van Doorn et al., 2023). Administrative responsibility has therefore changed rather than disappeared.

2.4 Bureaucratic Theory

Weber's contribution differed from those of Taylor and Fayol. Weber (1947) was not recommending a particular management technique but developing an ideal type through which organizations could be understood and compared. His theory of bureaucracy explained how authority could be based on formal rules and procedures rather than tradition or personal influence. He is therefore best understood as explaining how organizations and authorities operate, rather than prescribing how managers should manage.

Three things travel under the same name and are worth separating. Bureaucracy as a structure represents defined roles, formal reporting lines and rule-governed decision-making (Weber, 1947). Bureaucratization refers to the gradual increase in rules and procedures, while bureaucratic dysfunction occurs when these create rigidity, delays and a loss of focus on organizational goals. The first can be justified where the second is controlled, and criticism of the third is frequently mistaken for criticism of the first (Stenderup, 2024). Healthcare, public administration and financial services sustain extensive formal structure for reasons of patient safety, procedural fairness and regulatory obligation that have nothing to do with managerial preference (Spicer & Alvesson, 2025).

The standard objection that bureaucracy is slow and constrains innovation is correct but incomplete. Rules also protect, and on the sixth dimension it matters that they protect the governed rather than the governor. They limit arbitrary authority, make decisions contestable, distribute

treatment consistently across cases and give employees and citizens grounds on which to appeal (Stenderup, 2024). Reducing rules may increase flexibility and speed, but it can also reduce transparency, consistency and procedural fairness. Any assessment of debureaucratization should therefore weigh its costs alongside its benefits and should ask who bears each.

These tensions have been reconfigured rather than resolved in digital organizations. Van Doorn et al. (2023) show that automation redistributes managerial responsibility according to context and task rather than eliminating managerial authority. Glaser et al. (2024) argue that algorithmic organizing distributes authority across managers, digital infrastructures and algorithmic systems rather than concentrating on hierarchical position. Lindebaum et al. (2024) caution that data-driven governance may reinforce bureaucratic control by embedding authority in opaque technical systems. Lindebaum et al.'s interpretation is the more persuasive account of current practice in my opinion, because it explains something the alternative does not, namely why the transfer of decision rights to algorithmic systems has so consistently accompanied intensified performance monitoring rather than its relaxation.

The distinction is not absolute. Weberian rules are not always fully transparent, while some algorithmic systems can be audited where regulation or procurement requires it. The main difference lies in who has access to and can understand these systems. Technical complexity, commercial confidentiality and limited access to system design can make algorithmic decisions more difficult for employees to understand or challenge, even where an audit trail exists.

Bureaucratic theory therefore remains relevant without being adequate, and the two should not be confused. It continues to explain how organizations have legitimate authority and sustain accountability, which is why it survives in regulated sectors. It gives limited attention to motivation, informal relationships and professional judgement, which is why later theories extended rather than completely replaced it.

2.5 Human Relations and Behavioral Science

Behavioral theories are often introduced as the moment management discovered people, which is inaccurate. Taylor (1911) discussed worker selection, training and incentives at length, and Fayol (1949) included equity, initiative and esprit de corps among his principles. What changed was not whether employees were considered but how they were conceived. Classical theory treated the employee as an object of administrative design whose behavior followed from correctly specified

structures and incentives. Behavioral theory treated the employee as a social and psychological actor whose motivation, relationships and interpretation of the work partly determined what the structure would actually produce. On the first dimension this is a reversal rather than an extension, and it is a reversal in theory that practice absorbed slowly and unevenly.

McGregor (1960) exemplified the shift. Theory X and Theory Y were not alternative techniques but alternative sets of managerial beliefs, and his argument was that those beliefs are self-confirming: managers who assume employees avoid responsibility design systems that remove it and then observe the avoidance they created. Nord & Jacobs (2004) argues that McGregor's enduring contribution lies in a moral conception of management that recognized employees as capable of growth and self-direction, and that later scholarship, in favoring empirically tractable contingency variables, largely set that dimension aside. The omission falls on the sixth dimension. A discipline that can measure the effect of a practice but has no vocabulary for evaluating its legitimacy will adopt whatever measures well, which is the difficulty recurring in current debates about algorithmic management.

Behavioral theories broadened management without resolving the problems that followed. Their limited attention to technological and institutional complexity should be considered in context, as these theories were developed mainly to explain individual and group behavior rather than organizational adaptation to the environment. They nonetheless supplied the foundations from which organizational behavior, leadership studies and relational perspectives developed, and it is in that lineage that contemporary leadership research belongs (Liden et al., 2025; Leroy et al., 2025).

2.6 From Universal Principles to Contextual Management

Contingency research challenged the idea of a single best approach to management by providing evidence that effective management depends on the situation. Burns and Stalker (1961) found that mechanistic structures suited stable conditions while organic structures suited changing ones. Woodward (1965) showed that effective structure varied systematically with production technology. Lawrence and Lorsch (1967) demonstrated that organizations in uncertain environments required both greater differentiation between units and stronger integrating mechanisms to hold them together. The finding was that classical management principles were not necessarily wrong, but their effectiveness depended on the circumstances. Management has developed by establishing where its traditional principles hold and where they do not, even where the principles themselves are old.

Assessed against the six dimensions, the evidence is mixed, making it difficult to argue that management has either remained unchanged or completely transformed. Assumptions about human nature were reversed by behavioral theory. The location of knowledge and expertise was reversed by knowledge-based and contingency perspectives, which placed it with employees, teams and networks rather than with management. The organization's relationship with its environment was reversed by open-systems and contingency thinking, which replaced the closed rational system with an adaptive one (Burns and Stalker, 1961; Lawrence and Lorsch, 1967). Authority and the definition of performance have proved more stable, with authority still resting largely on position and rules and performance still measured through defined outcomes (Van Veen-Dirks, Leliveld and Kaufmann, 2021; Zhang, 2025). Management has therefore changed significantly in some areas but less so in others, which explains why assessments of how far it has changed differ according to which assumptions the assessor has in view.

New technologies do not by themselves generate new theory; what they do is expose weaknesses in assumptions that previously went untested. Castagnoli et al. (2022) show that Industry 4.0 altered organizational structures and international operations without dissolving the coordination problem, and Van Doorn et al. (2023) show that automation reshapes managerial roles rather than removing them. These are changes in practice that subsequently forced changes in theory, and that sequence recurs throughout the report.

A more skeptical reading deserves attention. Spicer and Alvesson (2025) argue that critical management studies have itself become predictable, relying on one-dimensional critique that negates managerial claims without generating alternatives. Their target is the critical tradition rather than mainstream management, but the argument cuts in both directions here. This challenges the view of classical management as simply a means of control and it also exposes a limitation in the layered adaptation argument advanced here, since development has not always been smooth and the account risks understating conflict between managers and employees. This was a valid point that aligned with my initial thinking and led to further exploration in the critical evaluation below.

3. The Enduring Influence of Classical Management in Contemporary Organizations

Tracing the evolution of management ideas does not determine whether contemporary management remains rooted in nineteenth-century paradigms. That question requires evidence about current practice, and it requires the criteria to be stated in advance. Transformation is considered to have occurred where the basis of authority, the definition of performance or the purpose of management or the interests it serves has changed, rather than where only the mechanisms have changed. That test is what separates a change in practice from a change in theory, since a new mechanism serving an unchanged purpose is the former without being the latter. Digital transformation, artificial intelligence, hybrid working, globalization and sustainability pressures are examined against that test.

3.1 Classical Principles in Modern Organizations

Planning, coordination, formal authority, specialization, performance measurement and managerial accountability remain central across the public and private sectors, though they are now enacted through digital platforms, rather than through paper-based administrative systems (Castagnoli et al., 2022; Spicer & Alvesson, 2025). Their managerial purpose has proved more stable than their form. Van Doorn et al. (2023) found that automation reshapes managerial responsibility according to context, task complexity and expertise rather than eliminating it, and Castagnoli et al. (2022) reach a similar conclusion for Industry 4.0 at the level of international operations.

Their sufficiency is another matter. Reliance on innovation, collaboration and knowledge work strains the assumption that effectiveness can be secured mainly through hierarchical control, standardization and formal authority (Tiwari, 2022). Classical principles remain relevant where organizations require consistency, accountability and regulatory compliance and less so where performance depends on individual judgement, tacit knowledge, collaboration. These conditions are important, as claiming that classical principles are always insufficient would repeat the same assumption of universal applicability that this report challenges.

3.2 Digital Transformation, Artificial Intelligence and the Reconfiguration of Classical Management

The question is not whether technology has changed organizations, but whether it has replaced classical management principles or simply changed how they are applied since a change in how a principle operates does not necessarily mean that the principle itself has disappeared.

Van Doorn et al. (2023) argues that digital automation reshapes managerial work rather than replacing it, with the strategic involvement of middle managers depending on context, task

characteristics and expertise. Their findings establish variations across contexts, but do not clearly show the direction of this change or whether the same factors apply at senior management levels or across different sectors. Castagnoli et al. (2022) offer wider coverage as a systematic review but inherit the limitations of the studies they synthesize, most of which are cross-sectional and concentrated in manufacturing. What matters is not only what studies conclude but how far their methods support those conclusions. In both cases the evidence supports reconfiguration rather than replacement.

Lindebaum et al. (2024) argue that corporate big data and algorithmic decision-making risk reinforcing quantification, measurement and control, making AI-enabled management a technologically sophisticated extension of Scientific Management. Glaser et al. (2024) reject that reading, contending that algorithms redistribute organizational agency across managers, employees, infrastructures and data systems, which require management theory to reconsider expertise, authority and coordination. Glaser et al. (2024) offer the more theoretically ambitious account and Lindebaum et al. (2024) the more empirically grounded one, and the disagreement is partly explained by their objects of study: the former theorize the organization as an algorithmic form, the latter examine what happens when management research borrows corporate data.

Once that difference is recognized, the positions are less incompatible than they appear. Algorithms may genuinely redistribute agency, as Glaser et al. (2024) argue, while the purposes to which organizations put them remain control-oriented, as Lindebaum et al. (2024) warn. The distribution of responsibility and the level of managerial control are separate issues and should not be conflated. Read across the dimensions, the first is a question about authority and the second about interests, which is why both can be answered affirmatively at once his distinction is applied in the practical example below.

Treating them separately brings the governance question into view, and it is a Weberian question in contemporary form. Weber's (1947) account of rational-legal authority answered three questions that algorithmic governance currently leaves open: who holds the authority, on what grounds its exercise is legitimate, and by what procedure a decision may be contested. Where responsibility is shared across managers, designers, data and technology and none of the three can be answered, accountability has been weakened rather than modernized.

3.3 Hybrid Working, Globalization and the Relocation of Managerial Control

Hybrid and remote working test directly whether managerial control requires employees and managers to occupy the same workplace, yet this has received less theoretical attention than AI despite its wider organizational impact. Perrigino and Raveendhran (2025) theorize that organizations seek to influence where work occurs, when it occurs and where remote employees direct their attention, and that they do so by configuring policy and technology rather than by supervising a workplace. The framework is useful here because it exposes what classical management assumed without stating: that the employer determines where work happens and that observation is available as a control mechanism. With hybrid and remote working, neither assumption can now be taken for granted.

Globalization tests the fifth and sixth dimensions together. Teams working across countries and time zones rely more heavily on documented process, asynchronous communication and clearly defined outcomes than on direct hierarchical supervision. This is a partial return to bureaucratic method rather than a departure from it, since written rules travel across distance and cultures more reliably than personal supervision does. The evidence here therefore cuts against the more enthusiastic accounts of post-bureaucratic organization: where organizations disperse, they tend to formalize. What has changed is that formalization now serves coordination across boundaries rather than control within a single site, its purpose has therefore changed, even though the practice remains.

Two of the studies reviewed here support that reading and extend it. Castagnoli et al. (2022) find that Industry 4.0 technologies reconfigured international operations, supplier relationships and the location of activity without removing the coordination problem that internationalization creates, although their synthesis draws mainly on cross-sectional studies concentrated in manufacturing, which limits how far the finding travels. Liu et al. (2024) show, in Chinese state-owned enterprises, that digital transformation is shaped by institutional pressure, ownership structure and state expectation rather than by managerial choice alone. Their contribution to the present argument is that the environment to which organizations adapt is not a neutral field of competitive conditions but an institutional order that determines what counts as legitimate management in a given jurisdiction. That is a stronger claim than contingency theory makes: contingency treats the environment as a set of variables to be matched, whereas an institutional reading treats it as the source of the criteria by which management is judged.

The sixth dimension makes the most demanding point. If legitimate authority is constituted locally, the universality assumption in classical theory fails not because coordination has changed but because the grounds on which coordination may be exercised differ. Yue et al. (2023) locate those grounds in the evolving relation between actor and situation, and Sachikonye and Ramlogan (2024) in obligation to the community; neither reduces to the rational-legal warrant Weber (1947) described. Two studies cannot establish a general critique of Western management and are used here as counter-instances rather than proof. As counter-instances they suffice, because a claim of universality is defeated by demonstrated exceptions in a way a claim of prevalence is not. Globalization therefore evidences a change in theory more clearly than in practice: multinationals continue to export standardized systems, while the theoretical case for their universal validity has weakened.

3.4 The Limits of Classical Management in Contemporary Organizations

The term complexity is often used broadly in management literature and needs definition. Four conditions are relevant here: environmental uncertainty, where the range of future states is not fully known; non-linear causality, where small interventions produce disproportionate effects; multiplicity of stakeholders with legitimate and conflicting claims; and disagreement over organizational purpose. Classical management remains serviceable under uncertainty but less so where outcomes are unpredictable and interests or goals conflict.

Tiwari (2022) argues that organizational knowledge has become a strategic resource requiring continuous learning and knowledge sharing rather than administrative control alone. Tigre et al. (2025) that digital leadership depends on capabilities classical conceptions of authority do not explain; and Liden et al. (2025) that effectiveness increasingly emerges through interaction rather than position. Whether these constitute theoretical development or constructs layered onto managerial authority is a fair question. Relational and ethical leadership change how managers influence employees while leaving performance expectations and formal authority intact, and therefore extend classical management rather than replacing it.

Leroy et al. (2025) caution that the proliferation of specialized leadership constructs may make the field more fragmented without necessarily improving management practice: if the grounds of legitimate leadership are constituted differently across contexts, the assumption that management principles are universally applicable cannot be sustained in the form classical theory advanced it.

3.5 Critical Evaluation

Classical management principles remain embedded in contemporary organizations through planning, coordination, accountability and performance management, while contemporary theorists recognize that effectiveness also depends on context, knowledge, relationships, ethics and technology. The development has been one of readjustment rather than abandonment. Implication should not imply this was a smooth process. Behavioral, critical, feminist and postcolonial perspectives have challenged or rejected important classical assumptions about employees, power and whose interests' organizations serve. Development through conflict and rejection is still development, should not be presented simply as a smooth process of refinement.

The objection raised by Spicer and Alvesson (2025) retains force. A framing that emphasizes adaptation is comfortable for managers, because it implies quiet improvement rather than the repeated rediscovery of control under new names. Their critique cuts both ways: critical scholarship may be predictable, but mainstream theory is also too quick to present change as orderly progress.

For example, Braverman (1974), argued that separating the planning of work from its execution was not simply about improving efficiency, but a means of transferring control over work from labor to management. Read through the sixth dimension, that is the claim that the first five are not neutral: where knowledge sits, how authority is grounded and what counts as performance are each settled in someone's favor, and classical theory settled them in the employer's. The argument applies directly to technologies that divide, measure and monitor work. Zhang et al. (2025) show that algorithmic management can be understood in very different ways, ranging from algorithmic management as a surveillance and control system to algorithmic management as a neutral tool. Their review highlights concerns including surveillance, bias, dehumanization and employee alienation. That a field cannot agree whether the same technology is a control system or a neutral instrument is itself evidence for Braverman's point. These different interpretations demonstrate that the same management technology can be viewed differently depending on whose interests are being considered. Freeman's (1984) stakeholder theory approaches the same dimension from the opposite direction, asking not whose interests management has served but whose it ought to.

Making interests an explicit dimension changes what the layered adaptation argument can claim. It can no longer treat successive theories as improvements without asking who each improvement was for. On that test the record is uneven. Behavioral and knowledge-based perspectives improved the position of employees largely as a by-product of improving organizational performance rather

than as an end in itself, whereas stakeholder and sustainability perspectives contest the end itself. What remains unresolved is the empirical question of how far contested purposes actually alter decisions when they conflict with financial priorities.

4. Contemporary Management Theories and Twenty-First-Century Organizational Challenges

The second part of the argument considers how contemporary management theories respond to the challenges facing twenty-first-century organizations. Four areas are examined: knowledge-based perspectives tests the location of expertise; digital and algorithmic management, which challenge traditional sources of authority; contemporary leadership theories, which reconsider how managers influence employees; and sustainability and stakeholder perspectives, which broaden how organizational performance is defined. Each is assessed for what classical assumption it challenges, what problem it addresses, its limitations and whether the change it represents is one of theory, of practice, or both.

4.1 Knowledge Management and Organizational Learning

Contemporary theory recognizes knowledge as a strategic resource rather than a by-product of activity, though four terms are frequently used interchangeably and should not be. Data are recorded observations. Information is data organized for a purpose. Knowledge is the capacity to act that arises when information is combined with experience and context. Learning is the process by which that capacity changes (Kivijärvi, H. 2024). Systems that manage the first two are often described as managing the third, and the substitution matters, because data and information can be captured and transferred while knowledge in Nonaka's (1994) sense frequently cannot.

Tiwari (2022) argues that knowledge management has moved from an administrative support function to a strategic capability enabling innovation and adaptability. The argument is convincing in explaining the organizational benefits, but less clear on how knowledge can actually be managed in practice. Nonaka (1994) holds that organizational knowledge is created through conversion between tacit and explicit forms, and that the tacit component resists codification because it is embodied in practice and judgement. If this is correct, knowledge management systems may capture only explicit knowledge while overlooking tacit knowledge. They may also increase managerial control by transferring employee knowledge into systems owned and controlled by the organization. That is Taylor's separation of conception from execution operating on knowledge work rather than on

manual work and it is a change in practice that leaves the second and sixth dimensions exactly where classical theory left them.

Managerial judgement contributes several things that algorithmic analysis cannot fully provide. It supplies ethical evaluation, where the question is not what the data indicate but what may legitimately be done; contextual interpretation, where the meaning of a pattern depends on circumstances outside the dataset; responsibility, meaning an identifiable person answerable for the outcome; and the reconciliation of incommensurable organizational purposes, which is judgement rather than optimization (Glaser et al., 2024).

Organizations consequently risk confusing information abundance with organizational knowledge, and Lindebaum et al. (2024) caution that dependence on corporate data may privilege measurable information over deeper understanding. This strongly supports the report's central argument: a modern management practice can still reflect the classical assumption that organizational performance can be improved through measurement and managerial control.

4.2 Digital Leadership and AI-Enabled Management

Tigre et al. (2025) argue that digital leadership extends beyond technology adoption to the strategic, interpersonal and adaptive capabilities required to lead organizations through digital transformation. Whether this represents a distinct theory is doubtful, as it mainly adds digital capabilities to existing leadership models rather than offering a fundamentally different explanation of how leadership operates. Reframing existing competencies can still be useful in highlighting capabilities that organizations may overlook, but it should not necessarily be considered a new theoretical development.

Focusing too heavily on leadership can also oversimplify digital transformation. Where outcomes are attributed to leadership capability, structural and institutional factors become invisible: legacy systems, capital constraints, regulatory obligation, skills availability and industrial relations all shape what transformation is possible, and none is a property of the leader (Raković et al., 2024; Liu et al., 2024). These factors influence both the opportunities for transformation and the constraints within which leaders operate. Digital transformation should therefore not be explained mainly through the capability of individual leaders but as an organizational process shaped by the interaction between leadership, technology, organizational resources and the wider institutional environment (Raković et al., 2024; Liu et al., 2024).

Artificial intelligence presents a more substantial challenge, and the disagreement between Glaser et al. (2024) and Lindebaum et al. (2024) discussed earlier, bears directly on the third dimension. Whether algorithmic systems redistribute authority or re-concentrate it in opaque technical form is not settled empirically, and the answer determines whether this is a change in theory as well as in practice.

Van Doorn et al. (2023) demonstrates that automation neither eliminates managerial work nor guarantees effectiveness. Its impact depends on context, expertise and the activities automated. Their study is the most useful of the three for practicing managers because it identifies conditions rather than asserting a direction of travel. Its limitation is that contingency theory explains why management approaches vary across situations but provides less guidance on how organizations should create the conditions needed for success.

4.3 Contemporary Leadership, Organizational Complexity and Contextual Management

Liden et al. (2025) trace the movement of leadership scholarship from traits and behaviors towards relational, ethical, follower-centered and context-sensitive perspectives. However, the evidence is limited, as a single review cannot establish how far shared, distributed and complexity leadership approaches have replaced traditional position-based leadership. Leroy et al. (2025) provide a partial corrective by arguing that leadership should be understood within the institutional and societal systems that shape practice rather than through isolated models.

It is less clear whether relational, ethical and servant leadership actually reduce power inequalities or simply provide a more positive way of exercising managerial authority. Ethical leadership may constrain the exercise of managerial power by subjecting it to justification but may also make existing authority appear more acceptable without changing who ultimately holds power. Where no such means exist, these approaches may change the style of leadership without significantly redistributing authority. This is where the earlier critical perspective becomes particularly relevant to contemporary leadership theory.

Leroy et al. (2025) are right that theoretical progress should be judged by explanatory power and practical relevance rather than conceptual novelty. However, practical relevance should extend beyond its usefulness to managers. A leadership theory may be highly relevant to employee wellbeing, ethical governance or environmental sustainability even where they offer no immediate

practical tool for managers. Relevance should therefore not be judged solely by managerial usefulness.

4.4 Sustainability, Stakeholders and the Purposes of Management

Sustainability challenges one of the most enduring classical assumptions: how organizational performance is defined. Classical management focused largely on achieving measurable and efficient outcomes for owners, an assumption that remained largely unchanged through behavioral and contingency theories. Freeman's (1984) stakeholder theory disputed it directly by arguing that the firm should be managed for those who affect and are affected by it, which changes not the mechanism of management but its object. Sajjad et al. (2024) synthesize the sustainability leadership literature into a multilevel framework linking individual, organizational and societal mechanisms, while recognizing the competing priorities and tensions that organizations must balance rather than focusing only on traditional performance measures.

Sustainability provides one of the strongest examples of genuine change examined in this report, and it is the clearest case in which the fourth and sixth dimensions move together. If performance is redefined to include outcomes for parties who are not the organization's principals, then coordination, authority and control are being exercised towards a different end, and in a different interest, which tells against the claim that management has remained unchanged. Sajjad et al. (2024) nonetheless describe the field itself as scant and fragmented, lacking conceptual coherence and theoretical integration. It also remains unclear whether sustainability commitments significantly influence organizational decisions when they conflict with financial priorities. The change is therefore established in theory and unevenly evidenced in practice, which is the answer to the question left open in section 3.5.

4.5 Application in Practice: Algorithmic Performance Management in Warehouse Logistics

Theoretical evaluation gains force when tested against an identifiable practice in a single setting. Warehouse logistics is used here rather than platform work or contact centers, because task structure differs materially between them and treating them as equivalent would weaken the analysis. In large distribution centers, handheld terminals and warehouse management systems allocate picking tasks, set expected completion times derived from historical data, track pace continuously and generate comparative performance rankings. The managerial purpose is one Taylor (1911) recognize: measure the work, standardize the method and raise the predictability of output.

Three observations follow from the framework developed above. Firstly, the underlying principle is classical rather than novel, since what has changed is the mechanism and not the intent, which supports Lindebaum et al.'s (2024) contention that data-driven governance extends the measurement logic of Scientific Management. Secondly, the practice nonetheless behaves in ways classical theory cannot explain, because agency becomes distributed as Glaser et al. (2024) describe: the system, its designers, the data it ingests and the managers who act on its outputs jointly determine decisions, so accountability no longer rests cleanly with a post holder in the way Weberian authority assumed. Thirdly, the outcome is contingent rather than determined, since Van Doorn et al. (2023) show that automation strengthens some managerial roles and erodes others depending on task characteristics and expertise, which implies that two organizations deploying identical systems may produce opposite effects on managerial capability. Taken together, these observations describe a change in practice on the third dimension that has not been accompanied by any change on the sixth, since the objective the system optimizes remains the employer's.

For managers, particularly HR professionals, accountability must be clearly defined when systems are designed, as technology itself cannot determine who is ultimately responsible for decisions. Five questions make that concrete. Who approves the algorithm and on what evidence of validity? Who validates the data on which its expectations are built, and how often? Who monitors output for unequal effects across groups of workers? Who holds the authority to override a decision, and is that authority recorded? To whom may an affected employee appeal, within what period, and with access to what information? The sixth dimension asks whose interests the system's targets are designed to serve, and whether those interests are clearly stated or simply assumed. Tigre et al. (2025) identify the capabilities required for digital leadership but provide limited guidance on these governance arrangements. An organization may therefore have digitally capable leaders while still operating a performance system with unclear accountability.

The limitation of the illustration should be acknowledged. It draws on the settings reported in the cited studies rather than on primary evidence and generalization to sectors with different task structures is not established. A stronger version of this analysis would benchmark two organizations within a single sector, comparing how each has reconciled algorithmic measurement with managerial accountability, and would test whether the contingencies identified by Van Doorn et al. (2023) hold in a workforce of technical professionals rather than administrative staff.

4.6 Overall Critical Evaluation of Contemporary Management Theory

These contemporary perspectives do not contribute equally. Sustainability and stakeholder approaches represent the most significant challenge to classical management because they question how performance is defined and whose interest's management should serve. Critical and non-Western scholarship follows, since it disputes the legitimacy and universality of managerial authority rather than its techniques. Knowledge-based perspectives are next, having relocated expertise away from management while leaving the definition of performance intact. Contemporary leadership theory and digital leadership extend classical concerns rather than challenging them, elaborating how influence is exercised without disturbing what it is exercised for. Algorithmic management presents a mixed picture, introducing new ways of distributing decision-making while often maintaining traditional goals of measurement and control. The ranking is itself an application of the sixth dimension: the perspectives that rank highest are those that contest the ends of management rather than its means.

The tensions remain unresolved. Lindebaum et al. (2024) question whether algorithmic decision-making reinforces classical assumptions about control, while Glaser et al. (2024) argue that digital technologies require new conceptions of agency. Leroy et al. (2025) caution that construct proliferation may substitute for cumulative progress, Yue et al. (2023) and Sachikonye and Ramlogan (2024) challenge the dominance of Western assumptions, and Spicer and Alvesson (2025) question whether critique itself has become formulaic. A discipline that continues to question its own assumptions cannot reasonably be described as unchanged since the nineteenth century, even if some of its traditional concepts remain.

5. Conclusion

The argument that management has remained largely unchanged and rooted in nineteenth-century theories is partially supported and, as usually stated, imprecise. Tested against the six dimensions adopted here, management has reversed its assumptions about human nature, relocated knowledge and expertise away from managerial hierarchy, and replaced a closed rational conception of the organization with an adaptive one. Authority and the definition of performance have changed less, which lends the statement some support. On the sixth dimension the position differs again: whose interests management serves has become a live question in theory, contested by critical, stakeholder and sustainability scholarship, without a corresponding settlement in practice.

Development has not proceeded through complete theoretical revolutions, but neither has its development been a smooth and gradual process. Contingency research established that classical principles were conditional rather than wrong. Behavioral theory displaced classical assumptions about employees against resistance. Critical, postcolonial and sustainability scholarship rejects rather than extend parts of the classical settlement, disputing whose interest's management serves and what organizations are for. Management has developed through disagreement and rejection as well as gradual improvement, and both should be recognized when assessing its development.

Contemporary theorists have contributed substantially, if unevenly. Knowledge-based perspectives established intellectual capital and organizational learning as strategic concerns; work on algorithmic management has opened debates about agency, governance and accountability; leadership scholarship has broadened the basis of influence beyond position; and sustainability and stakeholder perspectives have reopened the question of organizational purpose. The treatment offered here is proportionate rather than comprehensive, and institutional theory remains a gap this report acknowledges rather than closes.

Overall, management has changed significantly in its theories and practices, while its core concerns with coordination, control, performance and authority remain. The continued existence of these concerns should not be taken as evidence that management thinking itself has remained unchanged. The more defensible position is that the problems have proved durable while the assumptions and approaches used to address them have changed. Coordination, authority and accountability remain the questions; what has changed, decisively, is the range of organizational, technological and cultural circumstances under which any answer must now hold and the seriousness with which the discipline now asks in whose interest that answer is given. Whether that constitutes sufficient progress is a further question, and one on which the critical tradition represented by Spicer and Alvesson (2025) is entitled to remain unpersuaded.

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