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## **FROM SCIENTIFIC MANAGEMENT TO PARADOXICAL THINKING: A HISTORICAL EVOLUTION OF MANAGEMENT PARADIGMS**

Management paradigms shape how organizations operate and adapt. Over time, each paradigm has solved specific problems but introduced fresh constraints. In a hyperconnected era, many older frameworks no longer address the pace of transformation. Thomas Kuhn's theory of paradigm shifts explains how dominant models yield once anomalies accumulate [7].

This abstract aims to:

- Examine key management paradigms and their influence on change management.
- Highlight Paradoxical Thinking as a modern approach to complexity and uncertainty.
- Show the relevance of paradox-based strategies in rapidly evolving fields like IT.

Below is a concise overview of major paradigms, their core ideas, achievements, and inherent gaps.

Recent approaches view contradictions as sparks for innovation. Paradoxical Thinking and Polarity Management adopt a “both/and” approach rather than “either/or” [8; 9]. Instead of “resolving” contradictions, organizations manage them, since each polarity brings both benefits and drawbacks [3; 6].

Key features:

- Core Principle. Opposing forces – stability vs. change or short-term vs. long-term goals – can coexist.
- Relevance to IT. Many IT firms juggle reliability with rapid innovation, preserving operational quality while chasing new solutions.
- Conceptual Shift. Paradoxical Thinking tackles complexity from multiple angles, boosting resilience against sudden market shocks [8; 9].
- Leadership. Leaders who embrace the “both/and” mindset handle uncertainty better, fostering change and motivation [3; 6].

– Cultural Factors. Success hinges on openness to ambiguity and ongoing learning, often requiring deeper transformations [11].

Table 1

### Evolution of management paradigms

Paradigm (Key Contributors)	Key Idea	Key Achievements	Major Anomalies
1	2	3	3
Scientific Management (Taylor, Gilbreth) [14]	Maximize productivity via standardization	Higher manufacturing efficiency. Mass production model. Time-motion metrics.	Neglect of human factors. Worker dissatisfaction. Mechanistic labor view.
Administrative School (Fayol, Weber, Gulick) [5]	Universal principles to standardize practices.	Structured hierarchy. Bureaucratic framework. Operational consistency.	Limited flexibility. Overlooked motivation. Slow adaptation.
Human Relations (Mayo, Follett, Barnard) [11]	Prioritize social factors and employee well-being.	Emphasis on job satisfaction. Participative leadership. Cultural focus.	Overemphasis on social aspects. Difficult large-scale implementation. Hard to quantify.
Behavioral Science (McGregor, Maslow, Herzberg, Argyris) [10; 12]	Leverage behavioral science in management.	Motivation models. Employee development focus. Self-actualization concept.	Context-dependent. Team goals sometimes neglected. Complex application.
Systems Thinking & Contingency (Bertalanffy, Lawrence, Lorsch) [2]	Organizations as adaptive interconnected systems.	Holistic view of complexity. Resilient designs. Cross-functional integration.	High analytical demands. Overgeneralization. Challenging implementation.
Lean Management & TQM (Deming, Ohno, Shingo) [4; 13]	Waste elimination and continuous improvement.	Efficiency gains in manufacturing. Just-in-time processes. Higher product quality.	Cost-focus limiting innovation. Cultural adaptation issues. Limited scalability.

1	2	3	4
Agile Methodologies (Beck, Cockburn, Beedle) [1]	Flexibility and responsiveness via iterative development.	Shorter cycles. Collaborative problem-solving. Faster market responsiveness.	Possible strategic depth loss. Misapplication risks. Team burnout.
Paradoxical Thinking and Polarity Management (Lewis, Smith, Brughmans, Johnson) [3; 6; 8; 9]	Contradictions as asset. Managing interdependent polarities.	“Both/And” mindset. Tension-based innovation. Adaptability, resilience.	Significant cognitive and cultural shifts. Resistance in rigid cultures.

Historically, management thought has struggled to balance efficiency, adaptability, and innovation. Paradoxical Thinking reframes contradictions as opportunities, crucial for fast-moving sectors like IT. Shifting from “either/or” to “both/and” spurs adaptability, drive innovation, and supports sustainable growth. Future research might explore paradoxical leadership across different industries and cultural contexts, refining both theory and practice.

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